



LIFELONG LEARNING PROGRAMME

LEONARDO DA VINCI
MULTILATERAL PROJECTS - TRANSFER OF INNOVATION 2011,

Project n.: CZ/11/LLP-LdV/TOI/134005

Project name: Vocational Training in Assessment of Existing Structures

Minutes

**of the second plenary meeting of partners
held at the University of Pisa, via Diotisalvi 2, on March 8 – 9, 2012,
and tri-lateral meeting of P1, P3 and P5 on March 10, 2012**

Participants:

P1 (contractor) – CTU KI: M. Holický, Jana Pallierová

P2 - SPSS: apologized

P3 – HR: Dimitris Diamantidis

P4 – IETcc: Angel Arteaga

P5 – UOP: Pietro Croce, Paolo Formichi, Maria Luisa Beconcini

P6 – TNO: Ton Vrouwenvelder

P7- PAU: apologized

Thursday March 8, 2012, 6 p.m.

1) Opening of the meeting

P1 (M. Holický) opened the meeting and welcomed the participants.

P2 (R. Gottfried) and P7 (S. Senel) apologized for time and health reasons.

2) Upcoming deadlines and duties

Then basic administrative rules and upcoming deadlines and duties of all the partners were reminded by P1 (J. Pallierová), namely the documentation that all partners are supposed to submit to P1 (KI) with Interim Report by October 2012 (see the PPT presentation “Leonardo - admin + fin rules”, which forms a part of these minutes).

3) Printing of the handbooks

Then partners set responsibilities for editing and printing the handbooks.

HB 1 – P3 (HR) – September 2012 / P1 (KI) - Czech version

HB 2 – P5 (UOP) – June 2013 // P1 (KI) - Czech version

HB 3 – P2 (SPSS) – June 2013

P1 (J. Pallierová) will find out prices for printing the handbooks in the Czech Republic and will inform the partners at the next plenary meeting in Barcelona.

4) Budget

Foreseen unavoidable expenditures by partners were summarized with respect to the budget and the rules for possible re-allocation between direct cost categories were reminded.

Friday March 9, 2012, 9 a.m.

5) Discussion of the Handbook 1:

Partners agreed that HB 1 will contain about 200 pages and will be released in 400 hard copies - books (in English and Czech version) and on 400 CDs. Deadline for its completion and printing is September 30, 2012. Nevertheless, by the time of the 3rd plenary meeting in Barcelona, June 14-15, all chapters of HB 1 should be ready for printing.

Texts should basically be theoretical, material independent, with practical examples (not case studies). There should be interconnections between chapters.

P3 (D. Diamantidis) will ask Michael Faber as the respective author of the book of JCSS regarding the frequent references made to this book.

Chapter 1 – Basic concepts – P1 (KI)

Formulae (4), (5), (6) will be transferred to “Verification” section in Chapter 6.

Third dash point “Other decision parameters” will be added to Summary for attaining compatibility between the Summary and text. P3 (D. Diamantidis) will send to P1 (M. Holický) his comments on the topic.

P6 (T. Vrouwenvelder) recommends to extend the second paragraph of Section 7, (page 8).

P1 (M. Holický) will send a pre-final draft of the chapter to all partners by May 4, 2012.

Then, by May 18, P1 will send the improved draft of the chapter to P3 (D. Diamantidis).

Chapter 2 – Current standards – P3 (HR), P6 (TNO)

By April 15, T. Vrouwenvelder will send his comments to D. Diamantidis.

P3 (D. Diamantidis) will send a pre-final draft of the chapter to all partners by May 4, 2012.

Chapter 3 - Requirements on performance – P1 (KI)

Partners agreed that the terms *criterion* and *requirement* should be clearly defined and distinguished. Further, they agreed that the so far used term *design working life* should be replaced with the term *residual working life*. M. Holický will make changes according to these two objections and send the adapted text to D. Diamantidis by April 15, 2012.

Then, by May 18, P1 will send the improved draft of the chapter to P3 (D. Diamantidis).

Chapter 4 - Reassessment process – P3 (HR), P6 (TNO)

The title will be changed to “Assessment process”. D. Diamantidis will shorten the text and omit the duplications and make references to Chapter 1 and ISO documents 13822 and 2394 (Figure 2 is adopted from ISO 13822).

P3 (D. Diamantidis) will send a pre-final draft of the chapter to all partners by May 4, 2012.

Chapter 5 - Structural reassessment – P5 (UOP)

Partners agreed that the chapter will be discussed in more detail tomorrow.

Chapter 6 - Probabilistic assessment – P1 (KI)

Formulae (4), (5), (6) from the Chapter 1 will be added in the text of the Chapter 6. Section 5 “Target reliability” (page 20) will be confined to minimum and a reference will be made to Chapter 8, which will be, on the contrary, extended by this material.

In Example 9 on the page 19 Sk for *skewness* will be used.

By May 15, Ton Vrouwenvelder will send to M. Holický some more text to be added to the draft of the chapter.

P1 (M. Holický) will send a pre-final draft of the chapter to all partners by May 4, 2012.

Then, by May 18, P1 will send the improved draft of the chapter to P3 (D. Diamantidis).

Chapter 7 - Reliability updating – P1 (KI), P3 (HR)

D. Diamantidis will undertake part of the text. The number of case studies can be reduced. Case studies 1 and 2 on page 18 – examples - can be extended and used in the Handbook 2.

On pages 6, 7 the use of symbol θ will be checked.

Text of evaluation of the example on pages 8, 9 will be simplified. T. Vrouwenvelder will send his recommendations to M. Holický.

On page 12, g instead of M will be used.

On page 15, *fractile* instead of *percentile* will be used.

P1 (M. Holický) will send a pre-final draft of the chapter to all partners by May 4, 2012.

Then, by May 18, P1 will send the improved draft of the chapter to P3 (D. Diamantidis).

Chapter 8 - Acceptance criteria – P3 (HR), P6 (TNO)

Relative costs of safety measures should be emphasized in the text. They are often omitted in the JCSS, fib and ISO documents, with mentioning only the consequences of failure.

D. Diamantidis will extend some part of the text regarding global failure and failure of a large part of a structure.

P3 (D. Diamantidis) will send a pre-final draft of the chapter to all partners by May 4, 2012.

Chapter 9 - Life cycle optimization – P1 (KI)

T. Vrouwenvelder will send some editorial comments on remaining life of a structure to M. Holický.

P1 (M. Holický) will send a pre-final draft of the chapter to all partners by May 4, 2012.

Then, by May 18, P1 will send the improved draft of the chapter to P3 (D. Diamantidis).

Chapter 10 (previously Chapter 11) – Proof loading – P4 (IET), P7 (PAU)

P4 (A. Arteaga) will complete the text and send it to all partners by May 4, 2012.

Then, by May 18, P4 will send the improved draft of the chapter to P3 (D. Diamantidis).

Chapter 11 (previously Chapter 12) - Seismic retrofit of structures – P7 (PAU), P4 (IET)

So far, the text is material oriented, not really consistent with the rest of the Handbook 1.

Section 2 will become Annex C of the Handbook 1.

Section 3 will be handled in Handbook 2.

Section 4 will be extended to fulfill the scope of Chapter 12.

P7 (S. Toprak) will send a pre-final draft of the chapter to all partners by May 4, 2012.

Then, by May 18, P7 will send the improved draft of the chapter to P3 (D. Diamantidis).

Chapter 12 (previously Chapter 13) – Heritage structures – P5 (UOP)

Partners agreed that the chapter will be discussed in more detail tomorrow.

Chapter 13 (previously Chapter 10) – Verification methods – P1 (KI), P3 (HR)

It can possibly be re-allocated to Handbook 2.

Chapter 14 - Concluding remarks – P3 (HR)

Annex A – Terminology

Annex B – Bayesian method

Annex C – Earthquake analysis will be developed by partner P7.

By the time of the plenary meeting in Barcelona (June 14-15, 2012), the chapters should be ready for printing.

6) Discussion of the Handbook 2

Handbook 2 in more detail will be discussed tomorrow at the meeting of P1 (J. Pallierová), P3 (D. Diamantidis) and P5 (P. Croce). Partners agreed that HB 2 will contain more case studies than Handbook 1, about 200 pages and will be released in 400 hard copies - books (in English and Czech version) and on 400 CDs. Deadline for its completion is May 31, 2013.

7) 1st international seminar in Barcelona, June 14, 2012 (afternoon)

Partners scheduled the program of the seminar – see the PPT presentation “Leonardo 2 Pisa”, which forms a part of these minutes.

Drafts of the PPT seminar presentations (including the LLP logo) should be sent to all partners by June 1, 2012.

Seminar programme

Thursday June 14, 9:30 a.m.

1. Opening and introduction (15 min.) – AA, MH
2. Codes and recommendations (20 min.) - DD
3. Basic concepts (20 min.) - MH
4. Reliability aspects (30 min.) - TV
5. Assessment and procedures (20 min.) - DD

Coffee break (20 min.)

6. Case studies (3 x 20 min.) – PC, PT, ST
7. Closure and discussion (30 min.) – AA

8) Following plenary meetings and international seminars

- 3rd plenary meeting will be held in Barcelona on June 15, 2012, the day after the first international seminar. Meeting is supposed to reflect the seminar and to be focused mainly at the final discussion of HB1.

- 4th plenary meeting and 2nd international seminar will be held in Regensburg on October 11-12, 2012. Meeting is supposed to reflect the seminar and to be focused mainly at the discussion of a zero draft of HB2 and Interim report.

- 5th plenary meeting and 3rd international seminar will be held in Pisa in April, 2013. Meeting is supposed to reflect the seminar and to be focused mainly at the discussion of a first draft of HB2.
- 6th plenary meeting and 4th international seminar will be held in Denizli, Istanbul or Izmir in June, 2013. The place and date will be fixed at the meeting in Barcelona (Istanbul or Izmir is preferred). P1 (Jana Pallierová) will send an inquiry about the location to P7.
- It was suggested by P6 (T. Vrouwenvelder) to organize mini symposium during the IABSE conference in Rotterdam (May 6-8, 2013). P6 (T. Vrouwenvelder) will send to all partners proposal of its program.

Saturday March 10, 2012, 10 a.m.

Participants:

P1 (contractor) – CTU KI: Jana Pallierová
 P3 (HR): Dimitris Diamantidis
 P5 (UOP): Pietro Croce

Discussion of the Chapters 5 and 12 of Handbook 1

Chapter 5 - Structural reassessment – P5 (UOP)

The term “assessment” shall be applied instead of “reassessment” throughout the chapter.
 P5 (P. Croce) will send a pre-final draft of the chapter to all partners by May 4, 2012. Partners agreed that the chapter will be discussed in more detail tomorrow.
 Then, by May 18, P5 will send the improved draft of the chapter to P3 (D. Diamantidis).

Chapter 12 (previously Chapter 13) – Heritage structures – P5 (UOP)

Reference will be made to Annex I of ISO 13822.
 P5 (P. Croce) will send a pre-final draft of the chapter to all partners by May 4, 2012.
 Then, by May 18, P5 will send the improved draft of the chapter to P3 (D. Diamantidis).

Discussion of the contents of Handbook 2

Preliminary contents of the Handbook 2 was reminded and discussed, regarding the possible changes suggested during the meeting (examples 1, 2, p.18 in Ch.7 of HB1 extended to a case study, Ch.13 and section 3 of Ch.11 of HB1 1 will probably used here in the Handbook 2). The book shall contain a lot of case studies.

- Review of operational methods (structural, probabilistic) P5, P2
- Verification procedure (specification of partial factors, other) P3
- Updated Actions and action effects P4
- Updated Material properties P4
- Updated Geometric data P4
- Evaluation of measurements/tests/inspection planning P1, P2
- Case studies
 - bridge P5
 - concrete building P4
 - pipeline P7
 - heritage structure P5, P7

Discussion of dissemination possibilities

The following possibilities of the project results dissemination were outlined and discussed

- presentations/lectures on project results at European Universities
- preparation of common papers
- implementation of project results in consultancy cases
- implementation of project training material in courses (master courses)
- discussion in national committee meetings and with national organizations

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Pisa, 10/3/2012

Minutes prepared by P1 (J. Pallierová)