



*Integrated human resources development and monitoring system for adding innovation capacity of labour force and entrepreneurs of the metal engineering, machinery and apparatus sector*

MEMO

Verbania, Sala Monastero, Hotel Il Chiostro

29<sup>th</sup> -30<sup>th</sup> of June 2006

#### **4<sup>th</sup> MEETING OF THE LdV INNOMET II FOLLOW-UP PROJECT**

Participants (in order of registration): Kadri Orula (TUT), Laidi Lembaru (TUT), Ferenc Boór (BME), Per Johansson (KTH), Mattias Larsson (KTH), Jaanus Vahesalu (TCEB), Ingrid Hindrikson (TCEB), Piero Botto (IAL), Filippo Laurenti (IAL), Eileen Browne (IAL), Tauno Otto (TUT), Māris Balodis (LMA), Alvaro Oliveira (Alfamicro), Kirke Maar (EML/InterAct), Jüri Riives (EML)

**Day 1** (29 June 2006)

*Welcome and Opening by Eileen Browne (IAL)*

*Opening by Jüri Riives (EML)*

*Work Package 2 by Jüri Riives (EML)*

Main part (result) of WP2 is in appendix 5 (see the figure below).

Explanations concerning WP2 results:

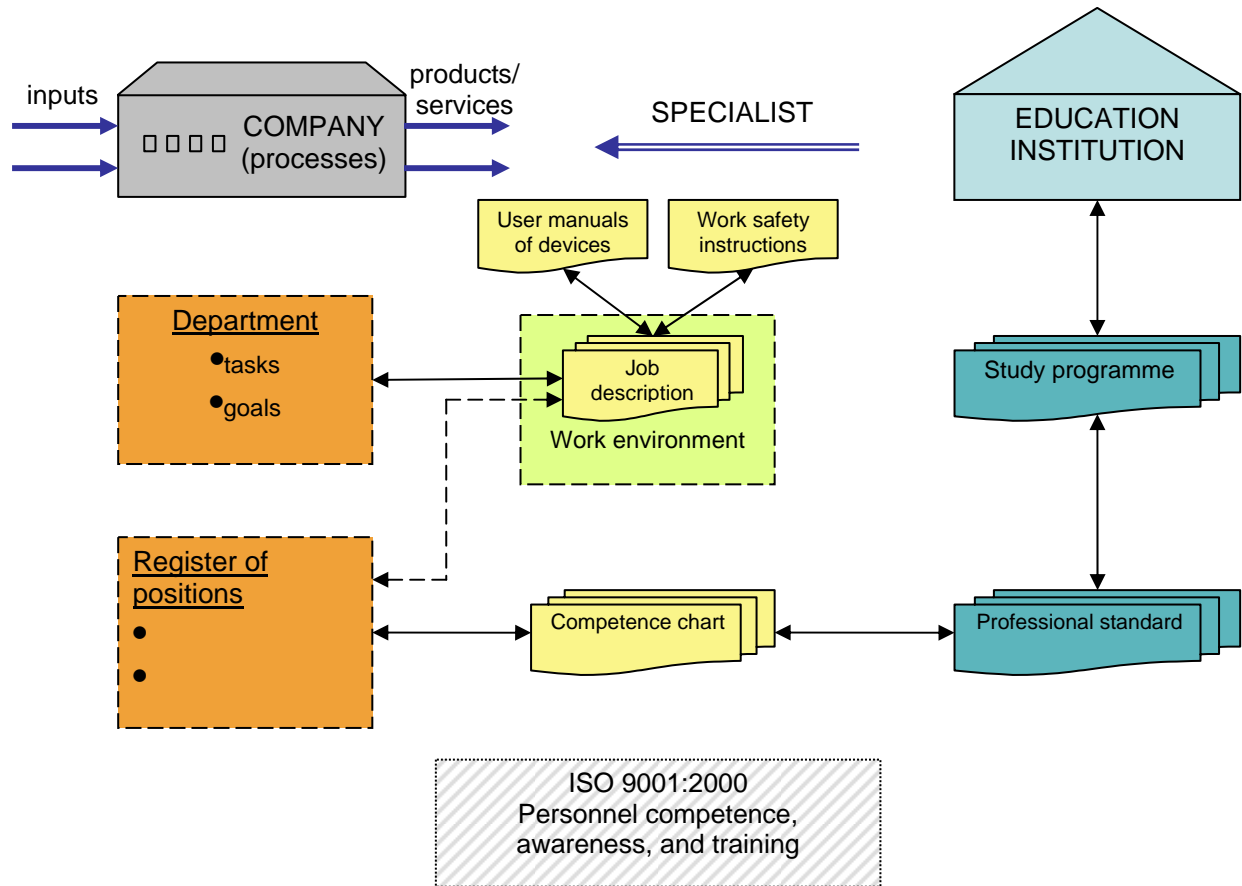
In INNOMET system we have 3 main institutions: companies, educational institutions, certification body. The main part of the system is competence chart development process:

- 1) register of positions based on list of professions (each country prepare its own list).  
One example is written in WP 2 (testing in Estonian nowadays) (see chapter 3.)
- 2) departments in companies have tasks and goals, based on that list of skills and knowledge (this list is unified, divided by groups)

If company wants to create competence charts, it can make a selection from the list of skill and knowledge. It is connected with job descriptions (see "CNC Tool Operator in report, chapter 4) as a document. As an example, a professional standard of CNC Tool Operator, is described in report as well.

WP2 report presents estimations for existing skills and knowledge, basic rules that helps put down the marks.

Professional standards are connected with curricula. Standards are therefore necessary for educational institutions. If standards are prepared, these could be used in educational institutions.



Some comments to some figures of the report:

1.4 Basis from where the things have arised.

1.5 Explains, where we need HR development.

2.4 HPWS?

2.5 Question: what is the difference between wants like / feels like?

Answer: It is a general picture, not considered with certain levels.

2.6 Shows how professional standards are connected to curricula and studying process.

2.7 Levels (I-III workers, masters; IV-V engineer levels).

3.1 Register of job titles (each country has its own)

Question: There are 3 levels in register of job titles, but 5 levels in professional standard.

Answer: Jobs in register of job titles are not divided according to professional standard levels.

3.2 Basics of description of the knowledge and skills – it is the part of system. We can make a selection form the list to create a competence chart. There are also typical competence chart in system which can be modified, if wanted.

Question: what is the meaning of numbers (1, 2, 3, 4)?

Answer: It shows the practical way (step 1, step 2, step 3, step 4) of competence chart finalizing process. Basis of professional standard we can create a job description and basis of it the competence chart (can be different in companies).

4.3 Evaluation of the Required Level – depends on products.

4.5 Methods of Personnel Evaluation – different companies use different methods.

Appendix 1. Professional standard of CNC Machine Tool Operator - compiled in Estonian INNOMET project (based on competences)

Appendix 2. Job description of CNC Machine Tool Operator – created by a company (basis on ISO-9001 rules)

Comment: WP1 is connected with WP2, so the evaluation part of WP2 (see Figure 4.8) should be check once more in connection with taxonomies offered in WP1 (see chapter 3.2.2). Understanding taxonomies help to understand competence evaluation. It has to be one system (more connection with WP1 and WP2).

About INNOMET system:

We can demonstrate the system in Portugal meeting in October. Estonian system has been demonstrated to educational institutions and companies (will be translated into English). Estonians were satisfied with the (preliminary) system.

Please see the report\*\* of WP2 for further information.

*INNOMET functionality list (brainstorming) lead by Jüri Riives (EML)*

*Conclusions of brainstorming*

\* Please see files “New functional requirements figured out during test-use and preliminary test” and “Updated INNOMET system analysis” for further information.

System possibilities:

- 1) descriptive part;
- 2) analysis part;
- 3) system testing - feedback of this how a) to develop users interface and b) what kind of analysis is useful / what is necessary (most suitable for us).

Question: what about users interface?

Answer: It will be introduced in Portugal meeting.

**Main task:** analysis of the system!

When the system is ready, every country can implement its own version. In this project just a main ideology is created.

**NB!** New members should read through Use Case report updated by Mattias Larsson (Updated INNOMET system analysis). It describes basic functionalities of the system.

Some comments about the document (Use Case report):

There are 3 users (company user, educational institution user and certification authority user) + administrator in the system.

Possibilities for different user types:

- 1) Educational institutions – course management, study program management
- 2) Company users – possibility to answer questionnaires

New scenarios:

- 1) To replace “skill management” with “competence management”
- 2) Picture from the INNOMET system
- 3) Keyword management (glossary/dictionary for definitions)
- 4) Class diagrams
- 5) Function specification for INNOMET

We are going to present new requirement list and the system in Portugal. Testing after the Portugal meeting.

### Work Package 3: Comparative analysis by Eileen Browne (IAL)

Comparative analysis introduce European policies and strategies concerning education and training, the development of the European qualifications framework (working for transparency), transparency of qualifications and competences (the ECTS system), concept of europass and the competence models in Italy, Regione Piemonte, France, Spain and United Kingdom.

The core of the European Qualifications Framework (EQF) would be a set of common reference points, referring to learning outcomes-located in a hierarchy of 8 levels.

In Italy, to define and to develop standards for competence is the responsibility of each region. The Regione Piemonte model is called COLLEGAMENTI ([www.collegamenti.org](http://www.collegamenti.org)) and is based on the following elements: professional profile, areas of activities and actions (AoA), competence and ability. To make further clearer the relationship between AoA and competences: the areas of activities and actions are the tasks to be carried out. The competences are “how” these tasks are carried out.

Comments: things are in progress, that is why the report can not be final. There are different ideas in countries.

Professional standards presented in report, come from the training centres. Regions are very different.

France was one of the first countries who started work with competences. United Kingdom came after France. Work is in progress.

Question: how many levels should we keep (measuring levels, qualification levels)?

Answer: up to end of this project we keep 5 levels.

Qualification levels: level 8 = level 5, level 1 = level 0 (*weak – said in EU Commission document*).

Levels are not standardized and finalized. If the number of levels will be agreed in European level, we have to chance the number maybe.

There are 6 competence evaluation levels (transferred to WP2). We use qualification levels. In professional standard levels are described. Competences grow up from lower to higher (not described in INNOMET system).

Please see the presentation\* and report\*\* for further information.

#### Consortium agreement by Tauno Otto (TUT)

Purpose of the consortium agreement: specify the organisation of the work between the partners, organise the management of the project, define the partners' intellectual property rights.

As the confidential information is considered the INNOMET system, any information related to the INNOMET system. INNOMET system is the integrated on-line advisory system for educational and industrial needs in the field of engineering which consists of a database, business logic and user-interface.

Comments: having INNOMET as a trademark is good. In Estonia, a separate body will be created for administer INNOMET.

All the partners have rights to promote and sell it in their own country (only national/domestic sell, not outside the country!).

The agreement contains information about the intellectual property.

For detailed information please see the presentation (sent by e-mail).

#### **Day 2 (30 June 2006)**

#### Work Package 4: INNOMET for engineering professions by Tauno Otto (TUT)

Planned activities: development of INNOMET system in the field of engineering professions (definition of skills, structure of qualifications, training needs) and sample 2 re-training courses developed in the field of engineering based on industry needs for KTH and TUT.

From WP 1:

- INNOMET II extends the definition by stating that competence is the sum of knowledge and skills and by introducing the concept of competence modules.
- The definition of a competence module makes it possible to distinguish between *knowledge*, *skills*, and *competence*.

Working methods and techniques:

- The results of system enhancement for competence management are analysed for engineering levels. Needed skills are defined for engineering qualification levels.
- Two re-training courses are developed for engineering levels, using e-learning methodology and platforms.

Tasks:

- Definition of skill lists for engineering fields
- Development of two re-training courses
- Development of engineering levels at INNOMET system

Course modularisation:

- Existing courses should be evaluated by taxonomies
- Creation of a single e-course including all levels is impossible
- Modularised e-courses are not supported by university curricula

Comments:

- E-learning courses are expensive!
- Dropbox: these who learn, can enter answers, statistics: shows who are working who are not.
- WP1 module - it is not an easy to create a course according this. INNOMET may help universities concerning this.
- Questionnaires created in INNOMET I reflect our opinion.
- On Estonian national INNOMET project has come out that companies' demands are different than offers by educational institutions.
- Keywords are defined – how the system could be functioned.
- In Estonia, one e-learning course is developed (product engineering) in the frame of ESF INNOMET II, one course is prepared in English (manufacturing)
- In KTH one course is also developed (design and information management)
- TUT is going to use existing texts to create the courses.
- If something is ready, it will be presented in wiki.

Question: contents of courses will be created too?

Answer: 2 courses will be created.

Comment: Also wiki sample can be used (it is not a full course, but a module for the course). We took a course and then decide what kind of competence module we need in the system.

Please see the presentation\* for further information.

INNOMET book lead by Tauno Otto (TUT)

Comments:

- Amount 500 exemplars? Enough? It is amount, what can be printed in one time.
- Time from preparation to printing is ~6 months.
- In the title, there should be definitely 2 words: **innovation** and **knowledge!**
- Editorial committee? 3 members? Tasks: looking material through, the order of chapters etc.
- Chapters could be connected with WP-s somehow – easier to compile the book
- **NB!** It is not a manual.
- **Target group:** target group contains possible users of the system, possible partners. Main users are probably educational institutions and public sector. These could be **governmental and academic institutions**, because mainly we give a picture how important human resource development is nowadays. It is a task of development – we can show what problems we have solved during the project and through the system. We have to explain HR development needs in modern society and practical ways to carry it out.
- There could be also a very short practical chapter about INNOMET system in Estonia.
- Some questions to think about: what could be the price for book after the project? How to sell it (Amazon?)? Is e-book a reasonable alternative too? If e-book is ready, how it will be distributed?

- The book has to be as interesting as possible (maybe a practical part based on companies etc.)
- We can also use materials from the brochure.

After that, feedback concerning the development of the book is sent by the partners, preparation of writing will start (in September). First draft will be introduced in Portugal.

Please see the presentation\* for further information.

Dissemination and valorisation by Jaanus Vaahasalu (TCEB)

Comments to the presentation:

- Current activities: dissemination plans are available on website.
- By the end of year 2006 common list of activities will be created by Jaanus.
- Do not forget to add the website address to dissemination materials!
- If possible, try to publish some articles in newspapers (no matter what kind of newspaper, could be some organisation internal newspaper as well), on internet sites.
- Distribution of brochures – please do the list of places/events (very generally) where have been distributed (how many copies).

Please see the presentation\* for further information.

*Next meeting in Portugal*

5<sup>th</sup> meeting of INNOMET II project will take place on the 19-20<sup>th</sup> of October 2006 in Cascais (30 km from Lisbon)

**Agreed activities and deadlines:**

<b>Activity</b>	<b>Deadline</b>	<b>Responsible partner</b>
<b>INNOMET system</b> (descriptive part, <b>analysis part</b> , system testing, users interface) Questions-comments (especially connected with analysis part) to <a href="mailto:innomet@staff.ttu.ee">innomet@staff.ttu.ee</a> Kadri forwards to Jüri.	Continuously	All partners / EML, TUT
<b>Functionality list:</b> Discussion with system developer: results presented to partners	ASAP	EML, TUT
<b>Book of INNOMET:</b> - Jüri and Tauno make decision in materials about book development - Questions and feedback about the book from partners	ASAP  By the end of August	EML, TUT in cooperation with other partners All partners

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\* Please see presentation ([www.innomet.ee/innomet](http://www.innomet.ee/innomet) Project Introduction/ Meetings)

\*\* Please see report: <http://www.innomet.ee/innomet/deliverables.html>