Workplaces of the future: the new people-centred production site

MetNet Seminar, February, 21-22, 2012
EU FP7: NMP topics for FoF PPP in WP 2013 DRAFT of 22/12/2011

**Objective:** FoF.NMP.2013-3 Workplaces of the future: the new people-centred production site

**Funding scheme:** Small or medium-sized collaborative projects

**Estimated deadline of the call:** June 2012.
Objective of this FP7 call

Technical content/scope:

The workplaces of the future will give much more importance to the human dimension. **Putting people** at the **centre of future factories** will provide a **stimulating environment for the employees**, and **make the most from their knowledge, skills and cultural background**, in particular **through life-long learning and training**.

Those **new workplaces** should **effectively** be **integrated** into the **social** (e.g. urban/rural) **environment** in order to **sustainably respond to the needs of the citizens** (e.g. **quality of air, level of lighting and noise, traffic congestions**, etc.) and, at the same time, **provide extended services to the workers** in terms of:

- security,
- accessibility and
- work satisfaction.
Objective of this FP7 call

Technical content/scope:

This approach would lead European manufacturing industry to make a qualitative leap towards new people-centred production workplaces which take into account the safety requirements and the constraints of the work force, for example those of aged workers.

The workplaces of the future should, therefore, be based on methodologies for enhancing flexible smart automation, while maintaining a level of employment with highly satisfied and skilled workers and, at the same time, ensuring competitiveness.
Objective of this FP7 call

Special features:

This topic is particularly suitable for collaboration at international level, particularly under the IMS scheme. Project partnerships that include independent organisations from at least three IMS regions are therefore encouraged.

IMS (Intelligent Manufacturing Systems) is an industry-led, global, collaborative research and development programme, started in 1995 as the world’s only multilateral collaborative R&D framework: [www.ims.org](http://www.ims.org)

The current member regions of IMS are the:
- European Union,
- United States of America,
- Korea,
- Mexico and
- EFTA states of Norway and Switzerland.
Expected impact:

1. **In economic terms**, an **increase of above 20%** in the **productivity rate** due to an optimised use of human resources, reduction of absenteeism in the workplace and by increasing the pool of potential workers through widening the skill profile.

2. **In environmental terms**, a more friendly integration of the factory in the social environment, with drastic reduction of total lifecycle environmental impacts.

3. **In social terms**, an improvement in the working conditions in factories and in the attractiveness of the working environments for the right-skilled people due to knowledge-based ergonomic approaches to manufacturing.
Research activities

... should be multi-disciplinary and address several of the following areas:

1. **New approaches** to integrate the **European factories** of the future in their social (urban/rural) environment **including urban transport, parking, shopping and entertainment centres, support to families**, etc.

2. **New methods and technologies** for an **optimised use of workers’ knowledge** (e.g. acquisition, transmission, data handling) in order to achieve a more **human centred** and **safe workspace**.

3. **New technologies** to enhance the **ergonomny of the working areas** by the optimisation and personalisation of working environment parameters (e.g. **indoor/outdoor lighting, temperature, and humidity**), taking into account **worker’s age, experience** and **physical condition**.
4. **New technologies** for enhanced cooperation of the **human operators** and the **production systems**, in a **flexible and dynamic way**, to carry out tasks interactively. They should take into account, in particular, the **skills, capabilities** and **knowledge** of the human operator.

5. **Methodologies to guarantee** an **efficient transition** from **current to future models** in relation to the definition of future worker tasks (e.g. **multidisciplinary involvement of single workers** in **operations, maintenance, logistics** and **quality control**).
Research activities

!!! Screening of existing national/international standards (e.g. safety regulations) and of the needs for new standards is required.

Other standardisation, regulation and pre-normative research aspects should also be considered.
In order to ensure the **industrial relevance** and **impact of the research effort**, the active participation of **industrial partners**, including SMEs, represents an added value to the activities and this will be reflected in the evaluation, under the criteria Implementation and Impact.

**The projects** are expected to cover **demonstration activities**, **including pilot implementations in industrial settings**, and this will be likewise reflected in the evaluation.
**Project idea 1**

**Topic:** FoF.NMP.2013-3 Workplaces of the future: the new people-centred production site

**Key aim:**

The workplaces of the future will give much more importance to the human dimension. **Putting people at the centre of future factories** will provide a stimulating environment for the employees, and **make the most from their knowledge, skills and cultural background**, in particular **through life-long learning** and **training**.
Project idea 1

Proposal points:

Focus on
- multi-criteria optimisation.
- Life cycles, sustainable approach
- metallurgical plants for demonstration

Initial work: HAMK

Potential partners: Jukka Laitinen
                   Arja Sinkko
                   Stelian Brad

Others? ..
Project idea 2

Topic:

Key words:

Core skills required for setting up the demonstrator:

Challenges:
Project idea 2

Potential partners:

.......................... – project coordinator [proposal]

RTD performers:

[...]

Industrial partners:

[...]

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