

## **PRO-STEP OÜ**

**EU48685 Smart manufacturing and material technologies competence centre**

### **Applied research: Knowledge base for 3D model based manufacturing process design and redesign (PR1.4)**

**Period of the sub-project:** 01.09.15.-30.06.19.

**Amount of support:** 141000 EUR

#### **Description of the sub-project**

The automatic preparation of technological processes based on 3D features is divided into three stages:

- Recognition of manufacturing features based on 3D model
- Choosing appropriate technologies, using predefined rules
- Generation of manufacturing operations

Recognition of manufacturing features is configurable and it is possible to add user-specific forms there.

Using the knowledge base to save rules helps to accumulate knowledge and then re-use it in standardized way.

Operations are generated using the CAM system NX.

#### **The objective and result of the sub-project**

The objective of the sub-project is to increase the efficiency of production processes and optimize the technological parameters. The use of feature based machining software in preparation of a technological process significantly increases the speed of preparation and provides better quality technology. This will be achieved by:

- Using standardized technological processes; and
- Avoiding human mistakes.

The sub-project results in a knowledge base configured for local conditions to generate manufacturing processes in metal cutting industry.

**Supporting fund:** EU Regional Development Fund

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