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# Helsinki contribution 2012–16 to CLIC / Technical development area

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University of Helsinki & Helsinki Institute of Physics

## Contribution to

- **CLC–TBM WP: Two-Beam Module development**

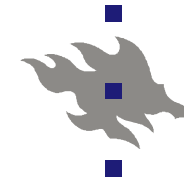
NB! contributions mainly manpower



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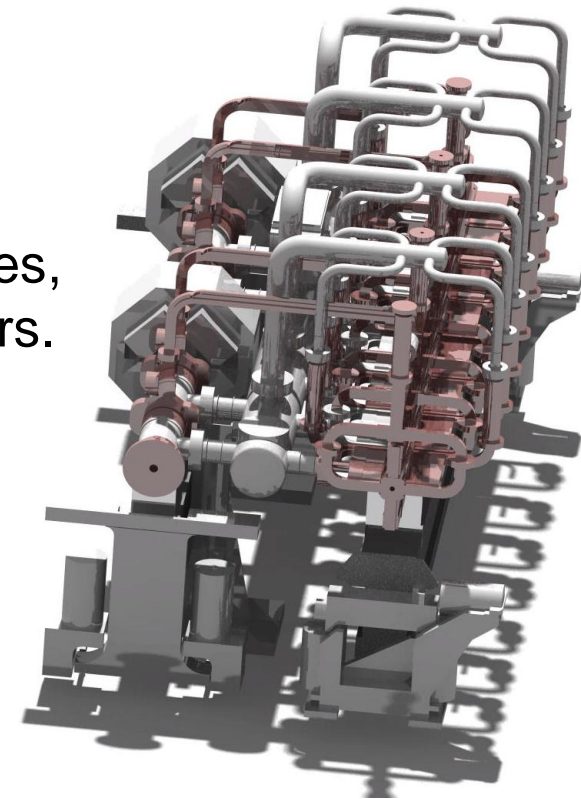
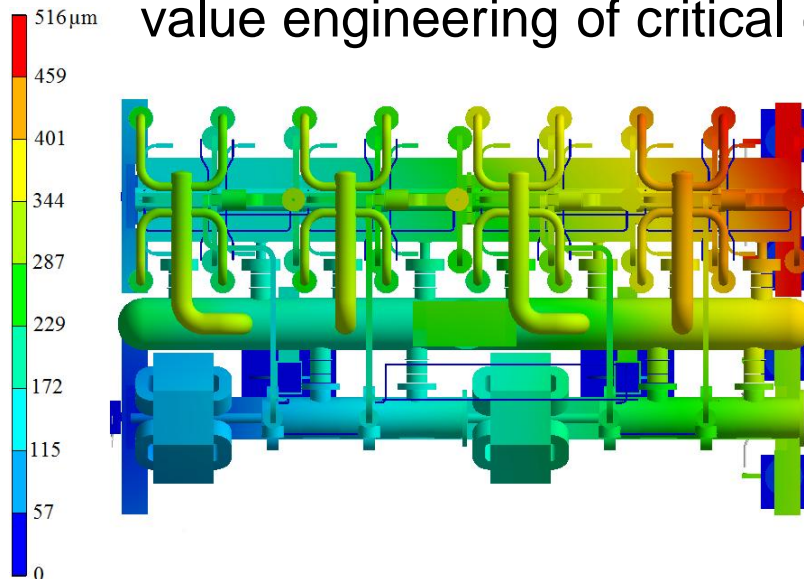
# TBM modelling & industrialization



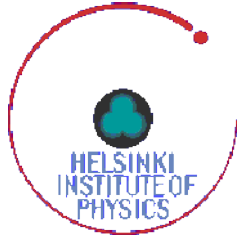
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Task 2: Finite element simulations and Task 5: Industrialization  
(common with Implementation Studies/IS-PIP/Task 2: Value estimate)  
also Task 3: Experimental comparison of predicted and modelled performance

**Subjects:** Development of TBM modelling, Modelling of TBM in different configurations; TBM optimization; comparison of model with measurements and feedback to model, cost study and optimization especially RF structures, value engineering of critical cost drivers.



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# TBM modelling & industrialization: resources



## **Senior support**

- K. Österberg
- staff at Tampere Univ Technology
- **Post-docs/students/engineers:**
- post-doc to be recruited
- R. Raatikainen (-6.3.2012)
- PhD student in mechanical engineering (2012-14)
- MSc eng. student (replacing J. Turunen)

## **In Finland:**

**1 PhD student 50 % of time  
+ senior support (0,1 senior)**

## **At CERN:**

**0,5 post-doc (2 years)  
1 PhD student 50 % of time  
1 MSc eng student**

**Funding 2012–13 OK  
Funding 2014–16 open**

Funding from HIP, Department of Physics (UH), EU (EuCARD & MeChanICs), Academy of Finland...



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