

The Center for Resource Recovery and Recycling (CR³): K.U.Leuven as European academic partner

B. Blanpain¹, T. Van Gerven¹, K. Van Acker¹, P.T. Jones¹, B. Mishra², D. Apelian³

¹K.U.Leuven, ²Colorado School of Mines, ³WPI



Abstract

The Center for Resource Recovery and Recycling, initiated by two outstanding engineering schools of the USA, WPI (Worcester Polytechnic Institute) and CSM (Colorado School of Mines), is since the beginning of 2010 an official Industry University Cooperative Research Centre (I/U CRC). The vision of CR³ is: 'To be the premiere industry-university alliance serving consortium members' needs, by establishing the needed knowledge base, and by educating future leaders of the industry in the research area of resource recovery and recycling. We are dedicated to the Sustainable Stewardship of our Earth's Resources'. The approach is to engage in the development of technologies and their transfer to industry with the goal of achieving materials sustainability. Resource productivity and societal sustainability demand that materials recovery and recycling be included from initial product design through manufacture to end-of-life disposition in a manner that yields both energy savings and profitability.

The academic partners (4/2011)

Currently three universities are academic partner of the CR³:

- Worcester Polytechnic University (WPI)
- Colorado School of Mines (CSM)
- K.U.Leuven (from 5/2011)

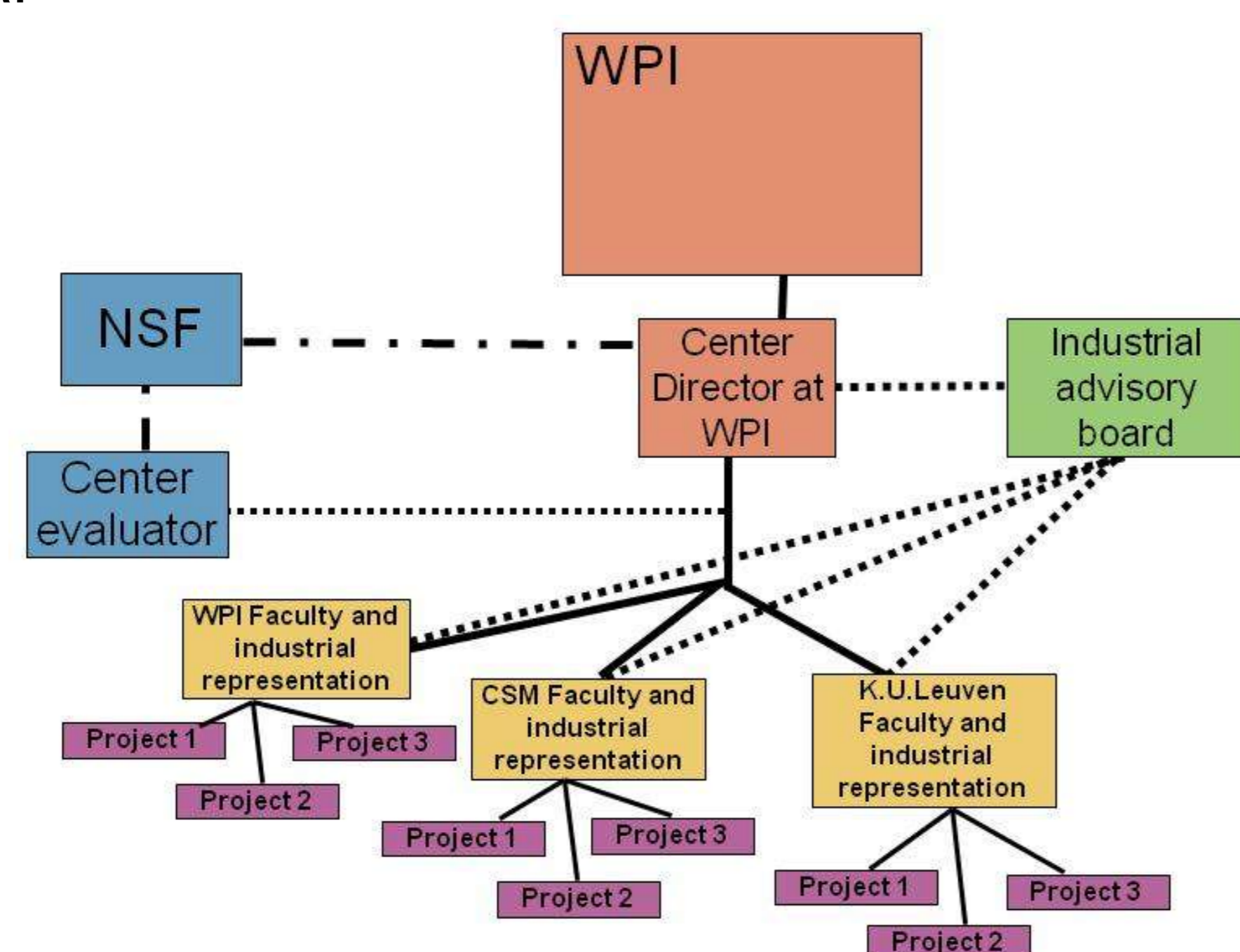


The industrial members (4/2011)



Concept

Pre-competitive projects defined by academics and CR³ members and selected by the IAB
 Projects under guidance of industrial focus groups
 Research results of all projects available to CR³ members through royalty free licenses
 Cost: \$30K/year



Current projects

At WPI:
 Optoelectronic sensing of molten metal composition
 Metal recovery via automated sortation
 Development of Aluminum-dross based materials for engineering applications

At CSM:
 Recovery of rare earths from phosphor dust
 Beneficiation of photovoltaic and other functional coatings
 Recovery of binder and silica from bag-house dust

The NSF I/U CRC Program

The NSF Industry/University cooperative research center (I/U CRC) program has currently 56 Centers active in a variety of disciplines. More information is available at <http://www.nsf.gov/eng/iip/iucrc/>



More information

<http://www.wpi.edu/academics/Research/CR3/>

Diran Apelian (Center Director, WPI), dapelian@wpi.edu

Brashendra Mishra (Site Director CSM), bmishra@mines.edu

Bart Blanpain (Site Director K.U.Leuven), bart.blanpain@mtm.kuleuven.be

