

**FP7 INFORMATION DAYS for Research PPPs on 11+12 July 2011**

**Template project ideas**

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<b>Project information</b>			
PPP <input type="checkbox"/> Factories of the Future <input type="checkbox"/> Energy-efficient Buildings <input type="checkbox"/> Green Cars			
<b>Topic/Title</b>	<b>Intelligent and added-value tooling for Metal Forming and Casting Processes</b>		
<b>Project idea, objectives</b>	<p>This proposal focuses on a new approach to provide superior properties and added value to tooling for metal forming and casting processes by using Additive Manufacturing Technologies to manufacture forming and casting die inserts.</p> <p>The Additive Manufacturing technology of choice for tooling applications is Laser Melting, which enables direct, one step digital manufacturing of components in typical tooling material (steel) with similar mechanical properties as in conventional tool making.</p> <p>Project objective is to develop tooling with added value, additional functions and intelligence through laser melted die inserts. These added values shall be found in</p> <ul style="list-style-type: none"> <li>- improved thermal management (cooling &amp; heating of dies)</li> <li>- integrated in-process media supply (e.g lubrication) in tooling</li> <li>- sensor and actuator integration in tooling</li> </ul> <p>These added value shall provide superior properties and quality the the tooling by means of</p> <ul style="list-style-type: none"> <li>- cycle time reduction in tooling employment</li> <li>- improved quality of manufactured parts</li> <li>- increased process robustness and flexibility</li> <li>- extension of the tool life</li> <li>- reduced resource consumption (energy, lubricants) in tooling employment</li> </ul>		
<b>Partner search description</b>			
<b>Type = Company/SME/Research organisation/university</b>			
<b>+ desired skills/knowledge</b>			
<b>Partner Types</b>	Company, SME		
<b>Desired Skills/Knowledge</b>	Metal Forming, Die Casting, Tool, Die and Mould Manufacturing, Additive Manufacturing		