Objective

The requirements on production systems are continuously being shifted towards higher flexibility and adaptability. The ReCaM-project will demonstrate at TRL 7 a set of integrated tools for the rapid and autonomous reconfiguration of agile production systems, both at operational as well as managerial levels, integrated with the existing production planning and scheduling tools (MES). This approach is based on intelligent plug-and-produce capable self-describing mechatronic objects, which are able to auto-program and self-adjust to the required task by utilizing parametric capabilities. These next generation flexible production systems and the proposed set of enabling ICT tools will allow a rapid and cost-efficient reaction to dynamic market changes, also in small-lot production contexts, reducing the efforts needed to switch
between product types and production quantities. ReCaM-solutions are expected to allow increasing the amount of variants and decreasing the lot sizes by 50% in an economically feasible way. Also, at least 30% reduction in set-up and changeover times and costs are expected. The integrated planning tool will take into consideration the energy consumption of the specific resources and try to minimize it by smart production scheduling, utilization of integrated operating-point switching of mechatronic objects, and reconfiguration. Thus, at least 5% reduction in energy consumption is anticipated. The project will ground on existing de-facto standards and specifications regarding reconfigurable system architectures, resource data models, control architectures and interfaces, and will provide and supplement new specifications for the missing aspects. The ReCaM consortium sees strong involvement of SME’s to RTD and demonstration activities and two end-users from major EU sectors, thus enabling proper exploitation of the demonstrated results worldwide.

Field of science
/social sciences/economics and business/economics/production economics

Programme(s)

Topic(s)

Call for proposal

H2020-FoF-2015

Funding Scheme

IA - Innovation action

Coordinator

ROBERT BOSCH GMBH

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Activity type
Private for-profit entities
(excluding Higher or Secondary Education Establishments)

EU contribution
€ 1 027 585
## Participants (8)

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<th>Organisation</th>
<th>Country</th>
<th>EU Contribution</th>
<th>Address</th>
<th>Activity Type</th>
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<td><strong>FUNDACION TECNALIA RESEARCH &amp; INNOVATION</strong></td>
<td>Spain</td>
<td>€ 577 250</td>
<td>Parque Científico Y Tecnológico de Gipuzkoa, Paseo Mikeletegi 2, 20009 Donostia/San Sebastian (Gipuzkoa)</td>
<td>Research Organisations</td>
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<td><strong>POLITECNICO DI MILANO</strong></td>
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<td>€ 609 375</td>
<td>Piazza Leonardo Da Vinci 32, 20133 Milano</td>
<td>Higher or Secondary Education Establishments</td>
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<td><strong>TAMPEREEN KORKEAKOULUSAATIO SR</strong></td>
<td>Finland</td>
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<td>Kalevantie 4, 33100 Tampere</td>
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<td><strong>NXTCONTROL GMBH</strong></td>
<td>Austria</td>
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COMPANIA ESPANOLA DE SISTEMAS AERONAUTICOS SA
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€ 504 525
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€ 515 112,50
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EU contribution
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Activity type
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**EU contribution**  € 338 187,50

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