

COMET-Centre (K2)

LCM Center for Symbiotic Mechatronics	
Main location	Altenberger Straße 69, Science Park 1, 4040 Linz
Other locations	na
Research programme	<p>The strategic focus of the research program is on:</p> <p>Virtualization – multiphysics modeling, active virtual twins, autonomous systems</p> <p>Integration – embedded sensors, integrated models for industrial cyber physical systems</p> <p>Connection and distribution – wireless sensor and localization networks</p> <p>Predictive and assistive systems – smart data mining and machine learning</p> <p>Holistic design – modeling, simulation & optimization of complex systems</p>
Planned realisation and outcomes	
<p>The LCM Center for Symbiotic Mechatronics will enable optimization and autonomous operation of complex multi-physics systems, and their interaction with changing environments. Efficient models and advanced numerical methods will be used to address such systems. Systems will capture their environment and communicate with related systems. They will estimate the outcome of their decisions. Advanced actuators will implement those virtual decisions into real world processes. The goal is to enable new applications and improve value creation in a broad spectrum of industries. A symbiotic approach between the system, its human operators and the surrounding physical and digital environment will be established to enable mutual benefit.</p>	
History of establishment	<p>Linz Center of Mechatronics GmbH was established 2001 as affiliated company of “Verein der wissenschaftlichen und industriellen Partner des Linz Center of Competence in Mechatronics” and “UAR GmbH”. In 2013 the K2 center ACCM was merged into Linz Center of Mechatronics GmbH.</p>
Selected company partners	<p>Selected scientific partners</p> <ol style="list-style-type: none"> 1. Johannes Kepler Universität Linz 2. Technische Universität Wien 3. TU Graz 4. ETH Zürich 5. Deutsches Zentrum für Luft- und Raumfahrt (DLR) <p>Selected international partners¹</p> <ol style="list-style-type: none"> 1. Flanders Make v.z.w 2. SICS – Swedish Institute of Computer Science 3. Massachusetts Institute of Technology 4. Fraunhofer Darmstadt 5. GE Healthcare
Selected company partners	<ol style="list-style-type: none"> 1. AVL List GmbH 2. Bernecker + Rainer Industrie Elektronik Ges.m.b.H. 3. Engel Austria GmbH 4. Hanning Elektro-Werke GmbH & Co KG 5. Primetals Technologies Austria GmbH 6. Salvagnini Maschinenbau GmbH 7. SKIDATA AG 8. STIWA Automation GmbH 9. Trumpf Maschinen Austria GmbH + Co. KG 10. Voestalpine Stahl GmbH
Duration of the COMET-Centre	January 2018 – December 2021 (4(+4) years)
Staff employed at the Centre	105 FTE (thereof 91 scientists)
Total costs	1 st Funding period: EUR 48 Mio (4 years)
Management of the Centre	Dr. Johann Hoffelner, LCM GmbH, CSO – Chief Scientific Officer
Contact:	<p>Altenberger Straße 69, Science Park 1, 4040 Linz</p> <p>+43 732 2468 6002, johann.hoffelner@lcm.at, www.lcm.at</p>

¹ Partners with headquarters outside Austria