

## COMET: K1 Centre

<b>Pro<sup>2</sup>Future – Products and Production Systems of the Future</b>	
<b>Main location</b>	Linz, Upper Austria (at Johannes Kepler University Linz)
<b>Other locations</b>	Graz, Styria (at TU Graz); Steyr, Upper Austria (at Profactor GmbH)
<b>Research programme</b>	The Pro <sup>2</sup> Future initiative builds on top of the consortiums expertise in <b>mechatronic systems, networked embedded systems, cyber-physical systems, smart/pervasive/ubiquitous systems, systems of systems, big data analytics</b> and <b>data-driven predictive models, semantic and intelligent systems</b> , and will explore <b>innovative ICT</b> (Information and Communication Technologies) for production systems and future products. The main emphasis is on cognitive systems.
<b>Planned realisation and outcomes</b>	
Pro <sup>2</sup> Future attempts for next generation products and manufacturing machinery ( <b>holistically</b> combining <b>batch</b> and <b>continuous process industries</b> ), with embedded <b>cognitive capabilities</b> so as to <b>perceive, understand, interpret, learn, reason</b> and <b>deduce</b> , and <b>act</b> in an <b>autonomous, self-organized</b> way together with humans. This includes <b>three major scientific areas</b> , each taken from foundational and goal-oriented research disciplines related to cognitive systems, namely <b>(i) Perception and Aware Systems, (ii) Cognitive Robotics and Shop Floors</b> and <b>(iii) Cognitive Decision Making</b> , ultimately delivering the technological underpinning of (iv) <b>Cognitive Products</b> and (v) <b>Cognitive Production Systems</b> .	
<b>History of establishment</b>	The competence center founded in 2017 is endorsed by the <b>Provinces of Upper Austria</b> and <b>Styria</b> , Austria's <b>strongest provinces in industrial leadership</b> . The two provinces together take a 42% share of all Austria's industrial production, employing 45% of all Austria's industrial employees – at R&D quota of 3.18% (Upper Austria) and 5.16% (Styria), compared to the average of 3.09% (Austria, 2015). Pro <sup>2</sup> Future is concerted with established Austrian <b>COMET K1 (SCCH, WOOD, KNOW, RCPE)</b> and <b>K2 (LCM, Mobility)</b> Centres, is part of the <b>National Platform Industrie 4.0</b> , and is an essential player within the <b>Linz Institute of Technology (LIT)</b> and the <b>Smart Factory Initiative of TU Graz</b> .
<b>Selected company partners</b> (max. 10 )	<b>Selected scientific partners</b> (max. 5) 1. Johannes Kepler University Linz (JKU Linz) 2. Graz University of Technology (TU Graz) 3. PROFACOR GmbH 4. Austrian Research Institute for Artificial Intelligence (OFAI) 5. evolaris next level GmbH  <b>Selected international partners<sup>1</sup></b> (max. 5) 1. German Research Center for Artificial Intelligence (DFKI) 2. Technische Universität München, Germany 3. University of Stuttgart, Germany 4. Université de Lorraine, France 5. Uppsala universitet, Sweden
1. AMAG Austria Metall AG 2. AVL List GmbH 3. EPCOS OHG – TDK 4. FRONIUS International GmbH 5. KEBA AG 6. Poloplast GmbH & Co KG 7. Siemens AG 8. Trumpf Maschinen Austria GmbH & Co KG 9. voestalpine Stahl GmbH 10. Wacker Neuson Beteiligungs GmbH	
<b>Duration of the K1 Centre</b>	COMET K1 4 <sup>th</sup> Call: April 2017 – March 2021 (4 years, 1 <sup>st</sup> funding period)
<b>Staff employed at the Centre</b>	56.5 FTE (thereof 42 scientists)
<b>Total costs</b>	COMET K1 4 <sup>th</sup> Call: EUR 17.3 Mio (4 years, 1 <sup>st</sup> funding period)
<b>Management of the Centre</b>	Univ.-Prof. Dr. Alois Ferscha, JKU Linz, CEO & Scientific Director Mag. Heimo Theuretzbacher-Fritz, CEO & Business Director
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<sup>1</sup> Partners with headquarters outside Austria