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Strong foresight for future manufacturing in Finland: What are the next breakthrough technologies in the field of automation 3D printing and distributed manufacturing and analyze them to find the technologies with the best fit and feasibility for Finland.

Creation of technology for supporting future manufacturing: How will future technologies such as 5G-networks, 360o cameras, augmented reality, and haptic interfaces affect the competence of human laborers vis-a-vis fully autonomous systems?

Creation of better intelligent decision-support methods: How to fuse imprecise information emanating from multiple sources among which are humans (natural language), artificial agents, and raw sensor data? How to create an analytical connection between probability theory and possibility theory.

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Understanding what business models will work for Finland: What kind of digital manufacturing business models can be shown to be robustly successful in the long run?

Creation of new ideas for how to organize and execute education: How education should be developed for better matching the new requirements of the labor markets caused by the manufacturing revolution?

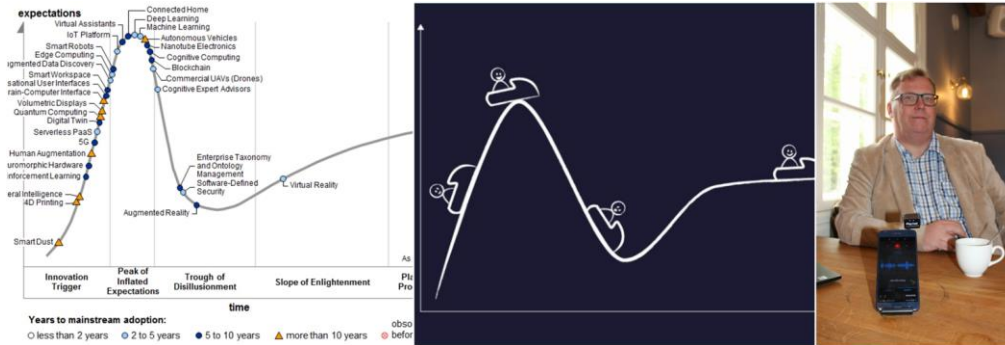
Development of social security models: What are the emerging needs for social protection and employment promotion in the new labor markets of 2030? Which solutions for social security models and delivery can be found?

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WP 1 – Future research

lead by Dr. Jari Kaivo-Oja, University of Turku (UTU)



“We create tools for identifying emerging fields of technology that have potential for revolutionary products and in which of these are suitable for Finland.”

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WP 2 – Automation and distributed manufacturing
lead by **Dr. Heikki Handroos, Dr. Antti Salminen, and Dr. Kari Ullakko,**
Lappeenranta University of Technology (LUT)



“We investigate the emerging technologies of Manufacturing 4.0 that empower humans in manufacturing. These include industrial automation, remote operation technology, additive manufacturing and smart materials solutions.”

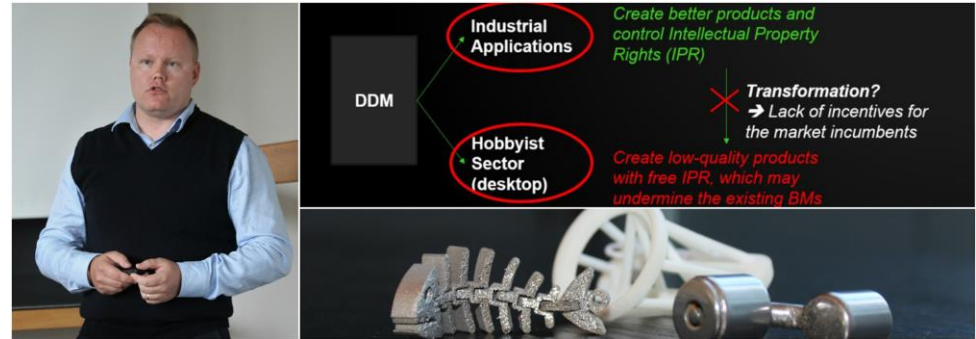
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WP 3 Decision-making, potential, and business models

lead by Dr. Mikael Collan, Lappeenranta University of Technology (LUT)

“We study business models and information fusion for Manufacturing 4.0 Future manufacturing business models will combine digitalization and additive manufacturing on a global scale with many existing industries and in many new ways.”



Smart new ways to fuse information allow us to make better and more accurate judgments and better predictions to support manufacturing decision-making and automation.”

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WP4 – Education

lead by Dr. Juhani Rautopuro, University of Jyväskylä (JYU)



“We concentrate on educational needs of those adults who have difficulties to meet the new demands of working life due to the increase of level of automation. Education systems are analyzed and developed to create a better match for the future demands of labor.”

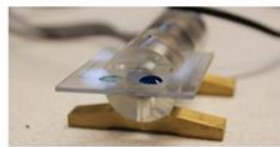
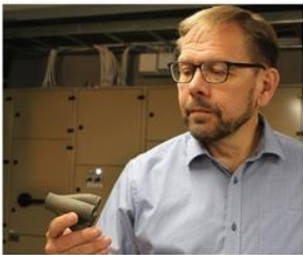
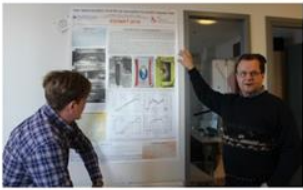
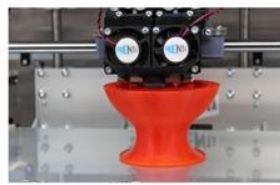
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WP5 – Reshaping social policies
lead by Dr. Heikki Hiilamo, University of Helsinki (HEL)



“How should digital disruption change the current Social Security system in Finland and which are the upcoming challenges and new ways of delivering flexible, innovative, transparent and bespoke social security solution by 2030?”



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