Session 7	**Scale-up of novel biomaterials and processes, powered by INN-PRESSME**
Pitch Title	**Tailorable piloting environment for thermoplastic materials**
Company	VTT Technical Research Centre of Finland Ltd
Speaker	Johanna Lahti
Keywords feedstock	polymer
Keywords technology	extrusion
Keywords End-Product	packaging

Abstract:

VTT does application driven research and development of materials and processes which are economical and based on circular economy principles. We tailor the processes known in plastic and packaging industry using e.g. natural fibres, thermoplastic materials and side streams as raw materials to develop novel solutions for carbon neutral, recyclable or biodegradable future products.

VTT provides easy-access material development, piloting and demonstration facilities with world class material experts and unlimited material possibilities, including biopolymers, biocomposites and multilayer structures.

At our Plasco R2R pilot line we can upscale and demonstrate mono and multilayer structures from early R&D to pilot-scale and product-development showing applicability of new, more sustainable materials. The pilot line has versatile possibilities for creation of different types of material combinations of e.g. bio-based thermoplastics and fibre materials for different applications like packaging, printed electronics and construction industry. The pilot line operations include application of water-based (dispersion) coatings and primers, (co)extrusion casting and coating, lamination and machine directional orientation of films. At this unique pilot environment, we can develop and demonstrate sustainable materials solutions for the future in a scale that provides relevant information for the industrial processes.