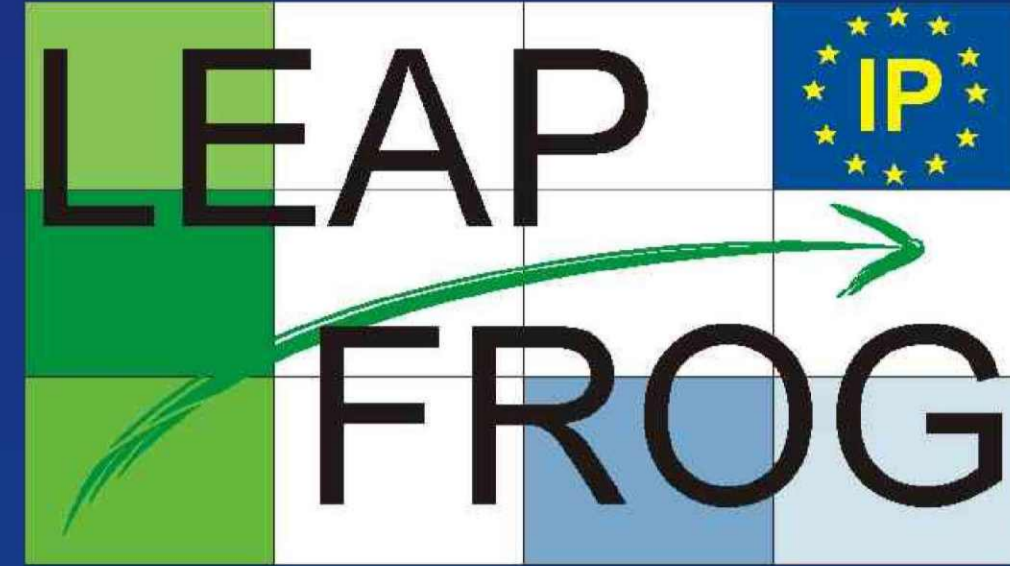# Leadership for European Apparel Production From Research along Original Guidelines

LEAP FROG IP

The Integrated Project is articulated through three Research Modules focused respectively on Advanced Materials, Automated Garment Assembly and Virtual Prototyping
A Networking Integration Module is intended for designing a holistic organizational framework for the knowledge based, dynamically networking Extended Smart Garment Organization

Creation of new knowledge in the areas of multifunctional nematic elastomers and inorganic/organic water soluble nano-coatings
Research Module A: Fabric Preparation

LEAPFROG breakthrough

Creation of new knowledge in the area of automatic handling of limp materials and intelligent manufacturing
Research Module B: Automated Garment Assembling

Integration of knowledge into the extended Smart Garment Organisation(xSGO) **Integration Module: The knowledge based, dynamically networking xSGO**

Creation of new knowledge in the area of 3D Design and Virtual Prototyping, garment simulation and body interaction
Research Module C: Rapid Garment Design & New Retail Concepts

Research Module C
2DFlattening
3D Design
Fit & Comfort Simulation/Animation
Morphotypes

Research Module A
Nano-particles for permanent stiffening of fabrics
REPLACE
2D fabrics can be modified and shaped
Scaffold like temporary structures by water soluble bio-degradable polymers
Temporary conditioning of fabric edges

Research Module B
Robotic handling and gripping
Robotic sewing machine
Reconfigurable mould

Integration Module

The garment industry
Retail
Service Provider
The textile industry
Fabric — Finished fabric
Garment
Distribution/Retail
Type 1
Type 2
....
Type n
Private Consumption
Industrial Use
Other industries
- Automotive
- Building
- ...
xSGO - Extended Smart Garment Organisation

CONSUMER