

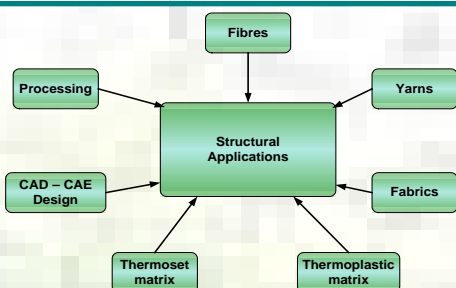
NATURAL ALIGNED FIBRES AND TEXTILES FOR USE IN STRUCTURAL COMPOSITE APPLICATIONS

SEVENTH FRAMEWORK PROGRAMME

THEME 4 - NMP-2007-4.0-2

Application of new materials including bio-based fibres in high-added value textile products

SUMMARY



NATEX focuses on the **development of aligned textiles from natural fibres that are suitable for use as high-strength reinforcing fabrics to produce structural composite materials and components.** This will include the incorporation of orientated woven natural fibres in bio-derived thermoplastics and in bio-derived thermoset resins, to produce high-tech products with great added value from completely renewable resources.

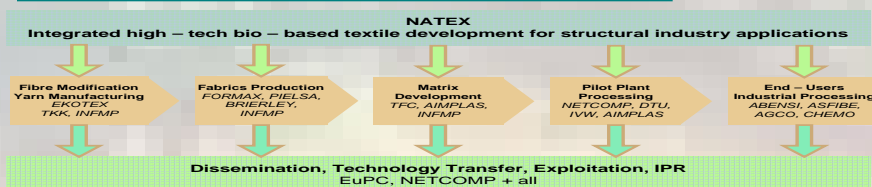
MAIN INNOVATIONS

- Development of new and innovative chemical/enzymatic treatments to obtain desired interface properties when combined with polymer matrices;
- Specific treatment of the yarn (chemical & natural) and new methods for low twist yarn production, film stacking and commingling;
- Natural fibres' modification with the aim of enhancing yarns' mechanical properties;
- Development of new weaving techniques to improve fibre impregnation by the polymer and obtaining of innovative 3D textiles;
- Control of resin viscosity by using thermal conductive additives while increasing their compatibility with natural fibres by using coupling agents and surfactant additives

CASE STUDIES



CONSORTIUM



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