

Title of the Abstract

“From Trend to Product - Open Innovation approach using the example of high performance reusable diapers”

Abstract

Kelheim Fibres GmbH

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Scarce natural resources, a growing world population and the increasing pollution of oceans and landfills are pressing challenges that need to be addressed cross-industry. Especially petroleum-based hygiene products contribute to tremendous amounts of non-biodegradable waste going into landfill and incinerators. Brands are under great pressure to rethink their product strategy since nowadays consumers are becoming more and more conscious regarding their ecological footprint. The ability to anticipate changes and future trends and to react proactively to the resulting change is therefore becoming increasingly crucial to companies' competitiveness. The presentation will point out how the open innovation approach using the example of reusable diapers, can positively impact the innovation development via the dialogue among players in the value chain:

Especially for diapers parents are keen to buy sustainable, healthy, performing and stylish products for the baby care. The market for reusable diapers is currently valued at 53 billion US\$ and rising at an annual growth rate of 5%, showing a substantial commercial impact. However, currently available products often lack product reliability. Due to the high volumes of fluids involved (>350ml in total and up to 40ml each time) a highly absorbent construction with fast acquisition and optimized fluid distribution is required to deliver no leakage and low rewet to the skin.

To create such a product Sumo GmbH, a German based Start-Up, and the German speciality viscose fibre manufacturer Kelheim Fibres GmbH combined their unique expertise. The Sumo Diaper is a fitted cloth diaper that consists of a waterproof cover and absorbent inserts, specifically engineered for sensitive baby skin. The cover is sewn in such a way that a pocket is formed: this is where the absorbent pad is inserted to prevent slipping. To make sure that the applied absorbent pad provides highest performance, nonwoven constructions based on Kelheim Fibres' functionalized speciality viscose fibres with adjusted cross sections have been integrated. The innovative outcome, a high-performance absorbent pad that uses no fossil materials, shows how Nonwovens based on sustainable and innovative speciality viscose fibres can find their way into reusable diapers and how they push the performance of those products to a new level.