The Global Polypropylene Fiber Value Chain
The objective of FiberVisions is to meet and surpass customer demands and expectations. Being highly perceptive and identifying customer demands and requirements, FiberVisions constantly provides the customer with enhanced fibers that can be transformed into a superb quality and reveal new product opportunities.

We focus on:
- Developing and manufacturing synthetic fibers for the nonwoven and technical textiles industries.
- Developing fibers in consideration of functionality and productivity together with our customer.
- Constantly improving our performance in quality, logistics, and service related areas.

We strive to constantly develop our competence to remain a value-adding business partner at all times.

**Strategy**

**Custom made fibers**

FiberVisions offers a wide range of fiber types as the adjustments we have developed and built into our long spin fiber technology enable us to tailor and individualise the fibers to the customer needs. Customers get fibers with superior processing capabilities, addressed to their special production conditions, which have a positive impact on the end products.

- In the carding process FiberVisions fibers card faster than any other fiber available in the market - without affecting the overall characteristics of the carded web: a soft and uniform surface, balanced strength and elongation properties, and liquid transportation features.
- In the wetlaid process FiberVisions fibers are easily dispersed and mixed with cellulose fibers to form a very uniform product, which can be embossed, laminated or heat-sealed and still retain a soft texture with a good strength.

FiberVisions has developed a modular fiber system, which makes it possible to combine the properties of more fibers and thereby create new product features and address new fields of application. This gives the customer the opportunity to get a unique fiber with targeted properties and performance.

**What can we supply?**

**Fibers for hygiene applications**

The hygiene fiber family consists of a range of products, which covers all demands for fabrics for hygienic disposable products such as diapers, sanitary napkins, and incontinence products.

The fiber types are developed with a specific view to the demands for different performance characteristics in the numerous product applications. Accordingly, FiberVisions is able to supply material for almost every component of a hygiene product.

**Fibers for technical applications**

The technical fibers emerge from the standard hygiene fibers and feature the same basic qualities: virgin raw materials, high hygiene standards in production, strict quality requirements regarding toxicological behaviour, safety, and environmental considerations.

The technical fibers are tailored to cover the demands of:
- Paper and wetlaid nonwoven products: cut quality, high dispersability and sealability.
- Filter products: pore, pressure drop, and electrostatic properties.
- Spunlace and needlefelt: the ability to entangle and create a uniform web.

**Performance/price competitiveness**

The polypropylene fiber has demonstrated the fastest growth in the last 3 decades in the textile industry. It has a higher performance/price ratio than other fibers, and over the years it has replaced many synthetic and natural fibers in numerous applications.

Low density (0.91 g/cm³), good strength and elongation, thermal properties, chemical and biological resistance, wet-stability, and price (polypropylene resins always range among the cheapest plastic materials) are some of the reasons for the growing popularity of polypropylene fibers.
How does a business relationship develop?

Example 1:

Production economy in the manufacture of consumer goods

FiberVisions assisted a nonwoven manufacturer and a branded global consumer goods manufacturer to improve performance. This involved several areas of activities:

• We improved the supply and demand planning in order to reduce the supply chain lead times, achieve enhanced responsiveness and a substantial reduction of the inventory value.
• We developed new fibers with a better processability (higher carding speed), which translated into production savings, increased nonwoven capacity, and a better distribution of the overhead costs.
• We targeted the fabric functionality demand by incorporating polymers with additional features, which made the nonwoven product distinctly better than similar products in the market.
• Our quality assurance co-operation (exchange of statistical data) resulted in narrow specifications, which led to reduced stop-time and waste and a better production economy for the nonwoven manufacturer.

Example 2:

Technology provider

FiberVisions assisted a leading nonwoven manufacturer in developing a new fiber with improved performance properties. Initially, the company's requirements were assessed by means of the FVDC-techniques. Afterwards, a number of development partners in the polymer, chemistry, and machinery industries were contacted and together we developed a fiber. By combining the results of this project into a single fiber concept, the goal was achieved: a fiber, which performs up to 30% better than any existing fiber in terms of productivity.
Today's supply chains are very complex. FiberVisions is actively involved in establishing proactive systems to ensure that the customer benefits from:

- Sourcing from multiple facilities (FiberVisions has production facilities in four locations world wide).
- Supply/demand planning.
- Logistics and distribution planning, warehouse management, transportation, and handling of import/export duties.
- Experience in supply chain strategy and integration, electronic procurement, and current product process improvement.

**Quality assurance**

FiberVisions is aware that a consistent quality is essential to our customers. However, we also realize that quality is not a static issue, and this is the reason for the continuous enhancements we implement year after year.

<table>
<thead>
<tr>
<th>Hygiene polypropylene fibers</th>
<th>Dtex range</th>
<th>Elongation</th>
<th>Optimum thermal bonding between</th>
<th>Carding speeds</th>
<th>Surface characteristics</th>
<th>Typical applications</th>
<th>Fine fibers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.7-2.2</td>
<td>1.7-6.7</td>
<td>1.7-2.2</td>
<td>&gt; 300 m/min</td>
<td>H'philic</td>
<td>Topsheet, backsheet</td>
<td>0.9-1.7</td>
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<tr>
<td></td>
<td>1.7-6.7</td>
<td>1.7-2.2</td>
<td>1.7-6.7</td>
<td>&gt; 200 m/min</td>
<td>H'philic</td>
<td>Topsheet, backsheet, fem. care, cosmetics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.7-10</td>
<td>2.2-6.7</td>
<td>2.2-6.7</td>
<td>&gt; 250 m/min</td>
<td>H'philic</td>
<td>Backsheet, leg cuffs</td>
<td></td>
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<tr>
<td></td>
<td>1.7-2.2</td>
<td>320-400%</td>
<td>146-157°C</td>
<td>&gt; 200 m/min</td>
<td>H'philic</td>
<td>Topsheet, acquisisiton layer</td>
<td></td>
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<tr>
<td></td>
<td>0.9-1.7</td>
<td>1.2-10</td>
<td>1.7-6.7</td>
<td>150 m/min</td>
<td>H'philic</td>
<td>Hygiene, filters</td>
<td></td>
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<tr>
<td></td>
<td>1.2-10</td>
<td>1.7-6.7</td>
<td>1.7-2.2</td>
<td>&gt; 100 m/min</td>
<td>H'philic</td>
<td>Wipes, medical, substrates</td>
<td></td>
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<tr>
<td></td>
<td>1.7-15</td>
<td>1.7-10</td>
<td>1.7-2.2</td>
<td>&gt; 150 m/min</td>
<td>H'philic</td>
<td>Fem. care, coversheet leg cuffs</td>
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<tr>
<td></td>
<td></td>
<td>1.7-15</td>
<td>1.7-2.2</td>
<td>&gt; 200 m/min</td>
<td>H'philic</td>
<td>Hygiene, soft lightweight fabrics</td>
<td></td>
</tr>
</tbody>
</table>

Tailor-made to customer requirements

Spin finish: Permanent hydrophilic, hydrophilic, hydrophobic, FDA compliance.

Pigments: Raw white or colored fibers.

Additives: Optical properties modifiers, surface properties modifiers, antibacterial and lowmelt additives, aloe vera, etc.
Why do customers choose FiberVisions?

Because FiberVisions is based on the following:

- Thorough experience and core competence in fiber spinning; especially in polypropylene and bicomponent fibers.
- Focus on hygiene and technical applications from drylaid, wetlaid and airlaid web formation systems to all known web consolidation techniques (heat bonding, ultrasonic bonding, needlepunching, stitchbonding, spunlacing, etc.).
- A research and development organisation with excellent pilot facilities.
- Readiness to enter into development projects with customers: FiberVisions tailor-makes each fiber according to customer requirements and production facilities (optimizing the fiber functionality).
- Long spinning fibers developed to suit nonwoven processes.
- Proprietary technology and processes, which ensure fibers of a high, uniform quality.
- ISO 9001 and ISO 14001 certification.
- Well established support services covering pre-sales service, delivery, commercial, quality, and technical customer service, and after-sales service.
- Well trained and motivated employees continuously work on enhancing the quality of products, know-how and services:
  - A step ahead.
  - For the benefit of the customers.
  - A dependable product manufactured by proud employees.
FiberVisions’ profile

FiberVisions is the world leader in the manufacture of polypropylene staple fibers used in nonwovens:

- For carded, thermal bonded fabrics used in disposable hygiene products.
- For nonwovens and paper fabrics used in technical (textile) applications.

FiberVisions also produces olefin fibers, filaments and yarns for the textile and industrial markets (used in automotive, geotextile and decorative fabrics) in the USA.

FiberVisions is globally present with four plants: Covington and Athens, GA, USA, Suzhou, P.R.China, and the European plant in Varde, Denmark.

FiberVisions Americas
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Sales and production of:
- Polypropylene staple fibers
- Bulk continuous filaments
- Partially oriented yarns (PP)
- Partially oriented yarns (PE)
- Bicomponent (PE/PP) fibers

FiberVisions Americas holds an ISO 9001 quality system certificate and an ISO 14001 environmental system certificate.

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Sales and production of:
- Polypropylene staple fibers
- Carded, thermal bonded nonwovens

FiberVisions (China) holds an ISO 9001 quality system certificate.