DSM Dyneema | The world’s strongest fiber™

Golnar Motahari Pour - President DSM Dyneema
Safe harbor statement

- This presentation may contain forward-looking statements with respect to DSM’s future (financial) performance and position. Such statements are based on current expectations, estimates and projections of DSM and information currently available to the company. DSM cautions readers that such statements involve certain risks and uncertainties that are difficult to predict and therefore it should be understood that many factors can cause actual performance and position to differ materially from these statements. DSM has no obligation to update the statements contained in this presentation, unless required by law.

- A more comprehensive discussion of the risk factors affecting DSM’s business can be found in the company’s latest Annual Report, which can be found on the company’s corporate website, www.dsm.com
Dyneema® | The Greenest Strength™

- Dyneema® combines:
  - Light weight with incredible strength
    - 15x stronger than steel
    - 40% stronger than aramid
  - High Abrasion and Cut resistance
  - Incredible durability
  - Ballistic performance
  - Lowest carbon footprint per unit of tenacity
Unique integration from polymer to downstream form factors

Stamylan

UHMwPE Polymer

Fiber

Fiber Technology Platforms

Dyneema® Unidirectional Sheets

Woven and knitted Fabrics with Dyneema®

Dyneema® Composite Fabrics

Dyneema® Carbon composites

Strength: unique integration from polymer to downstream form factors
A versatile portfolio of markets

- **Life protection**
- **High Protective Textile**
- **Commercial Marine & Sport**
- **Performance Fabrics**
Strategy 2018 | Growth in markets where continuous high performance is of utmost importance

- Accelerated growth
- Growth
- Maximize returns

DSM’s capability to extract value

Market growth

Low

High

Dyneema®
Fiber Solutions

Dyneema® Life Protection
DSM Dyneema is outgrowing the market

Life Protection shifted to a higher quality and more resilient portfolio
DSM Dyneema aims to continue its growth through strong, lightweight and sustainable solutions

1. Growth through innovation (in existing markets)
   - Lead in markets through unique innovative technologies
     - Dyneema® Diamond Technology for comfortable cut protection
     - Dyneema® Force Multiplier Technology for outstanding ballistic performance
     - Dyneema® Max Technology for exceptional creep behavior

2. New applications
   - Capture value through new form factors
     - Dyneema® Flexible Composites for light weight durable strength
     - Dyneema® Synthetic Chains for lifting and lashing
     - Dyneema® Carbon Composites for improved crash performance
Life Protection

Highest ballistic protection with 30% reduced weight
Highest comfort and flexibility
## Lightweight protection for people and vehicles

<table>
<thead>
<tr>
<th>Vehicle armoring</th>
<th>Insert</th>
<th>Helmet</th>
<th>Plate carrier</th>
<th>Fragment protection</th>
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</thead>
<tbody>
<tr>
<td>Unidirectional sheet</td>
<td>Unidirectional sheet</td>
<td>Unidirectional sheet</td>
<td>Composite Fabric</td>
<td>Knitted Fabric</td>
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<tr>
<td>Police &amp; VIP cars</td>
<td>French &amp; German police</td>
<td>Defense</td>
<td>Police &amp; Defense</td>
<td>Defense</td>
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<td>police</td>
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<td></td>
<td>Defense</td>
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### Dyneema® Force Multiplier Technology for outstanding ballistic performance
Commercial Marine & Sports

Lightest weight for highest strength
Reduced system and installation cost
Increased worker’s safety
More durable, lighter weight and safer solutions to industrial markets

<table>
<thead>
<tr>
<th>Product</th>
<th>Stiffness &amp; durability</th>
<th>Safe and fast installation</th>
<th>Highest level of fatigue and mechanical performance</th>
<th>Low weight &amp; durability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seismic ropes</td>
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<tr>
<td>Lifting Slings for Wind Farms</td>
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<td>Deepwater Installation Crane Rope</td>
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<td>Mooring lines for Floating Wind farms (piloting)</td>
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High growth opportunities by steel substitution
High Protective Textiles
Enhanced cut protection with continued comfort
Dyneema® Diamond Technology | Highest Comfortable Cut Protection

Key industries: Glass & metal handling, Pulp & Paper, Automotive

Exploring new markets

Dyneema® Diamond Technology for highest comfortable cut protection
Performance Fabrics

High durability
Increased protection
Heat and sweat management
## Dyneema® Composite Fabrics and Dyneema® Denim | New form factors opening new markets

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Material Compositions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breathable jackets</td>
<td>Composite Fabric</td>
</tr>
<tr>
<td>Ultra lightweight Backpacks</td>
<td>Composite Fabric</td>
</tr>
<tr>
<td>Durable &amp; Motorcycle Denim</td>
<td>Fabric, Dyneema® Denim</td>
</tr>
<tr>
<td>Ultra lightweight tents</td>
<td>Composite Fabric</td>
</tr>
<tr>
<td>Abrasion resistant sports garments</td>
<td>Knit, Fabric</td>
</tr>
</tbody>
</table>

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*Industrial validation for Dyneema® Composite Fabrics in progress...*
Technology can be tailored for strength and modulus in multiple directions
Synthetic Chains
Massive leap forward in lifting and lashing technology
Synthetic Chain for lifting and lashing based on Dyneema® Max Technology

- IP Protected Technology based on Max Technology
- Proprietary design (Möbius twist)

- 6-8 time lighter than steel
- Rapid installation, less damage, simplify process, less injuries, better ergonomics, no noise
DYNEEMA® CARBON HYBRID COMPOSITE

Increases impact and energy absorption by up to 100%
Removing the Risk of Shattering
Vibration Dampening
TU Delft Forze VII Hydrogen racing car

- Side panels
- Bottom plate
  - High impact resistance
  - Improved crash performance
Dyneema® Carbon Composites

Several partners being evaluated

Developing key partnerships
Innovation will continue to drive growth

- DSM Dyneema’s unique technologies will continue to:
  - Enable higher performance, sustainable materials
  - Spur solutions that can substitute steel and aramids
  - Drive innovative solutions that are lighter and stronger
  - Create new applications and segments for the world’s strongest fiber™

DSM Dyneema is well-set to **outgrow existing markets** and **create new segments**