

# OPPORTUNITIES AND CHALLENGES FOR FOREST PRODUCTS INDUSTRIES

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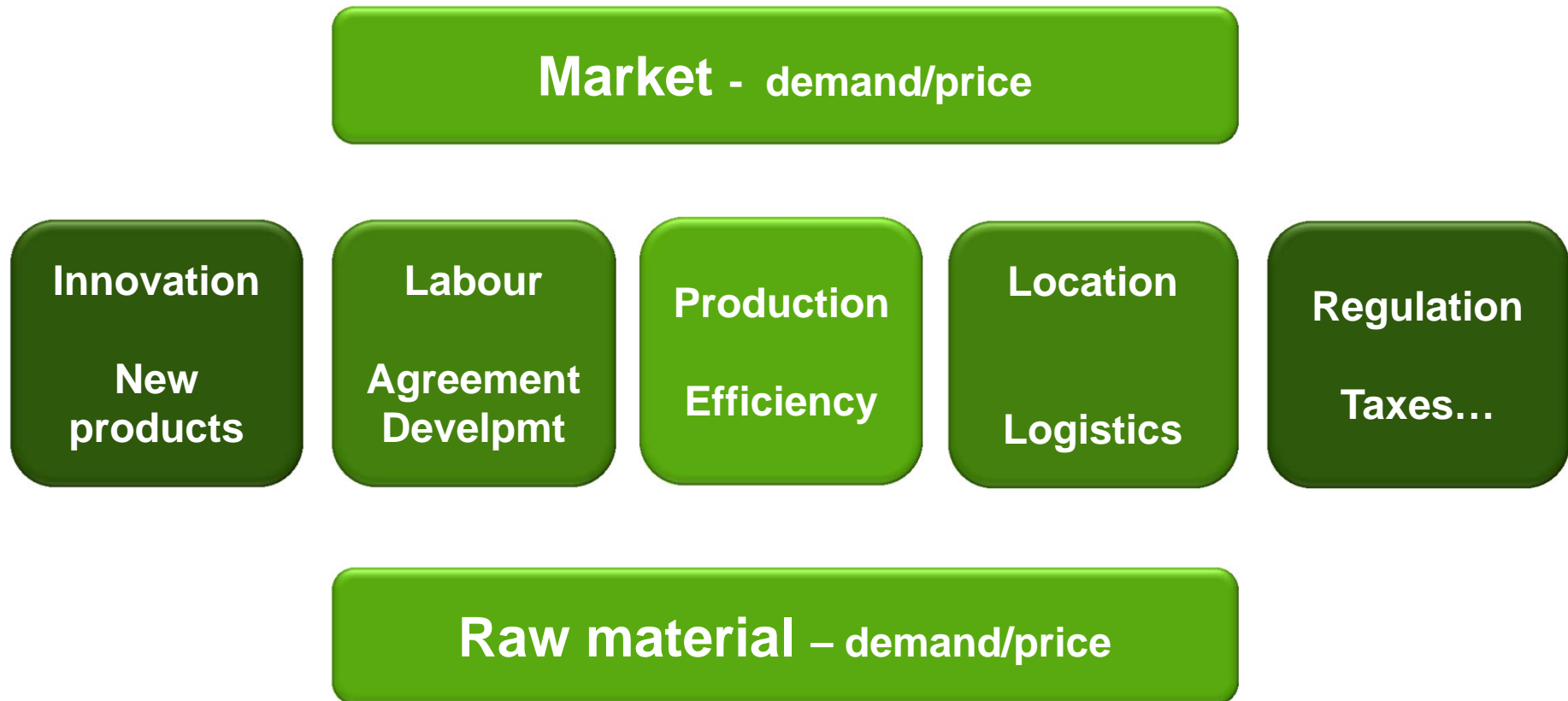


# UPM structure

<b>UPM Biorefining</b> 	<ul style="list-style-type: none"><li>• Pulp (3.3 million tonnes p.a.), incl. plantation operations</li><li>• Biofuels</li><li>• Timber</li></ul>
<b>UPM Energy</b> 	<ul style="list-style-type: none"><li>• Power generation (1,721MW), incl. UPM's hydropower plants and shareholdings in energy companies</li><li>• Physical and derivatives trading</li></ul>
<b>UPM Raflatac</b> 	<ul style="list-style-type: none"><li>• Self-adhesive label materials for product and information labeling</li></ul>
<b>UPM Paper Asia</b> 	<ul style="list-style-type: none"><li>• Fine papers in China</li><li>• Label papers</li><li>• Total capacity 1.5 million tonnes p.a.</li></ul>
<b>UPM Paper ENA</b> 	<ul style="list-style-type: none"><li>• Magazine papers in Europe and NA</li><li>• Newsprint and fine papers in Europe</li><li>• Total capacity 10.3 million tonnes p.a.</li></ul>
<b>UPM Plywood</b> 	<ul style="list-style-type: none"><li>• Plywood and veneer products (1 million m<sup>3</sup> p.a.)</li></ul>

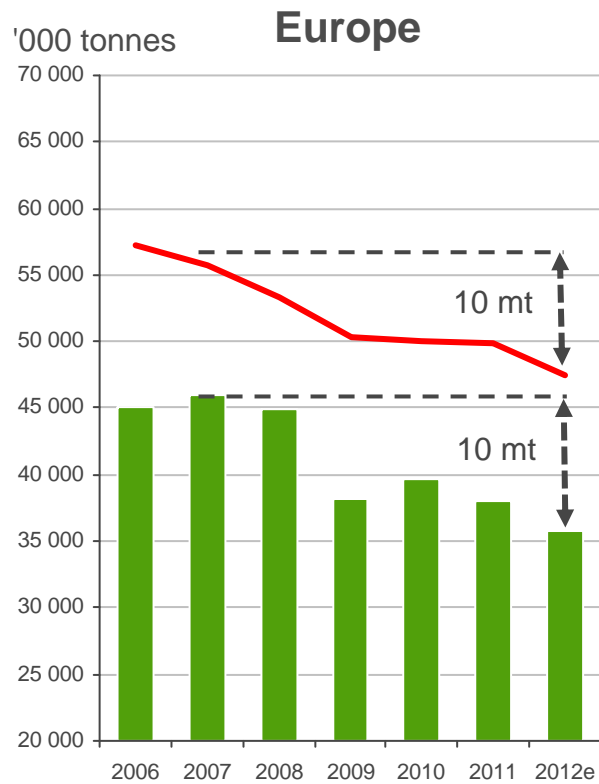
**Other operations:** Forests (over 900,000 hectares of forests) and wood sourcing, New Business Development and Group services

# Competitiveness of the forest sector

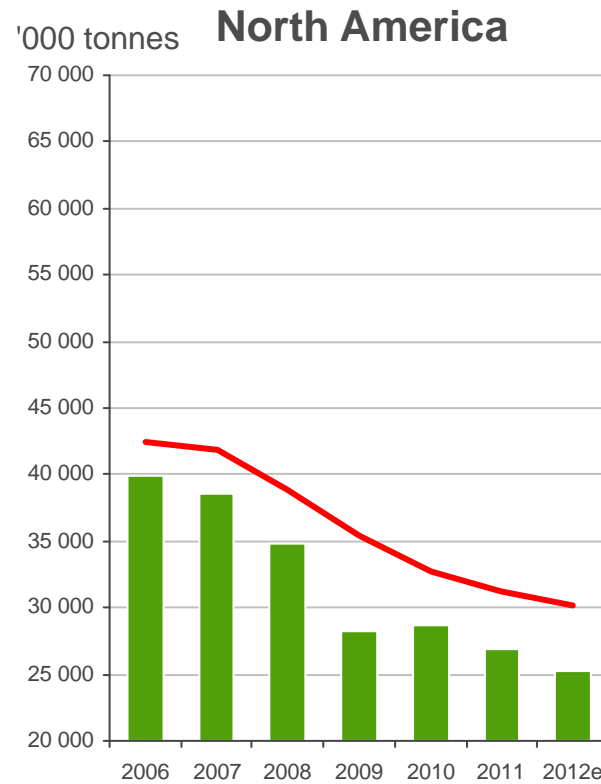


# Asia is the largest market

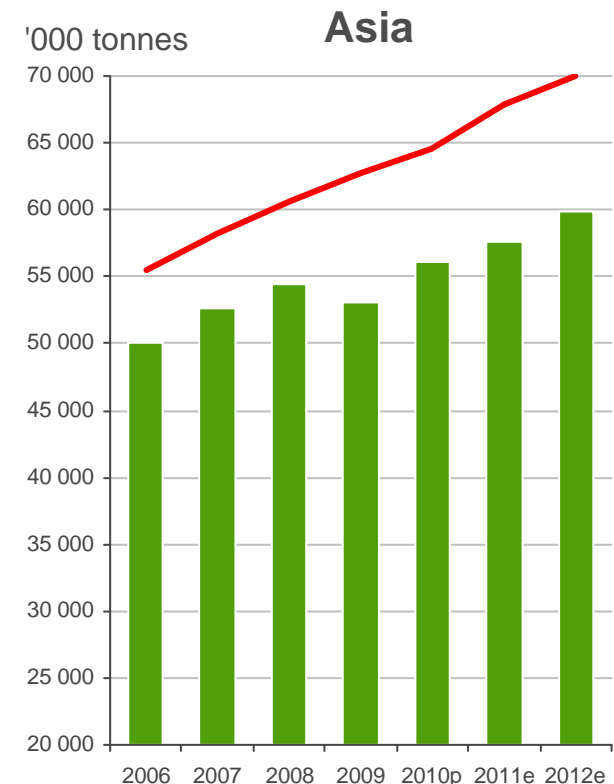
## European capacity reduction in line with demand



■ Eur demand — Capacity



■ NA demand — Capacity



■ Asia demand — Capacity

# Integration of current operations and competencies into new knowledge and operations

Current businesses  
&  
competencies



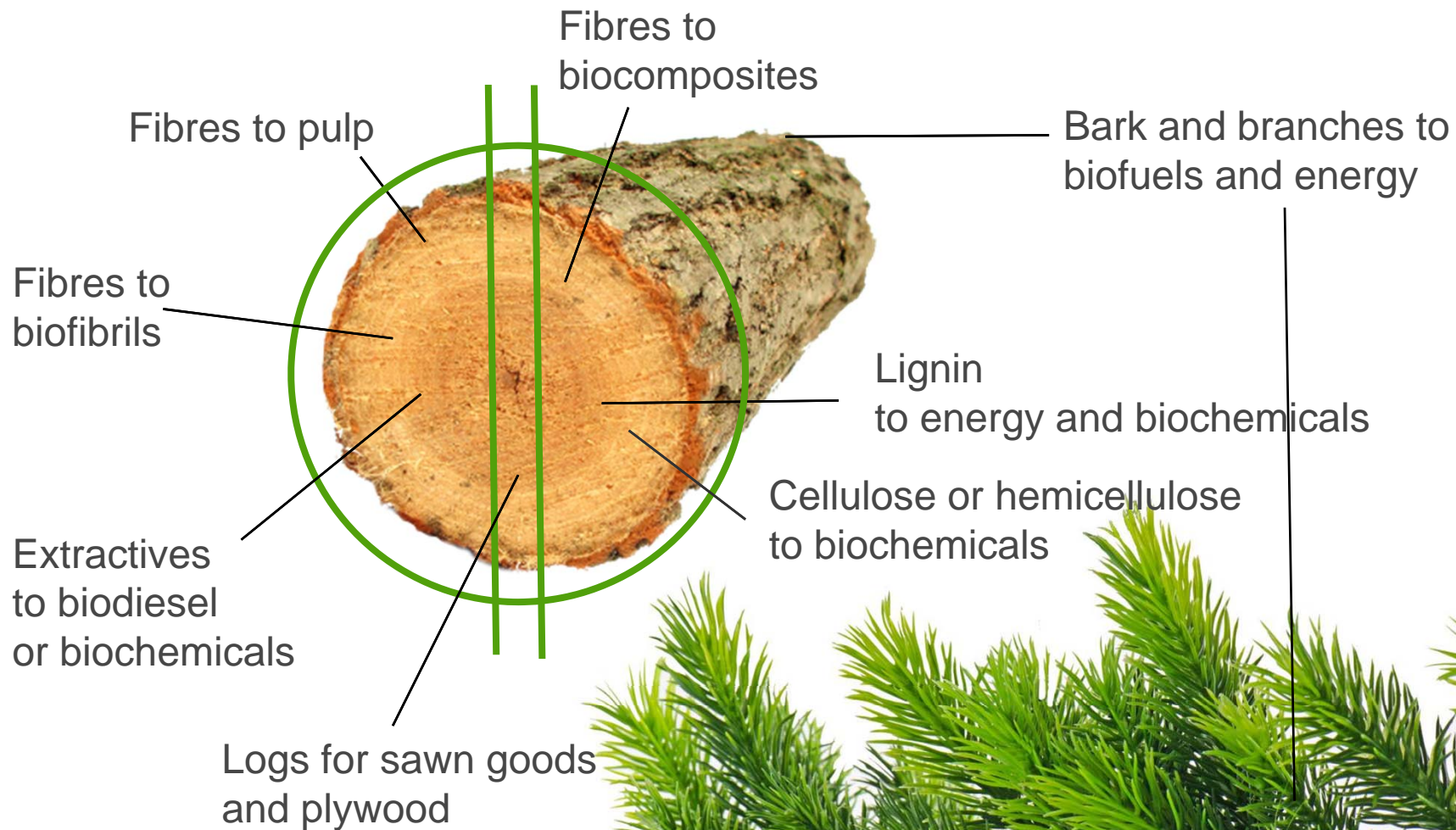
New knowledge  
&  
new businesses



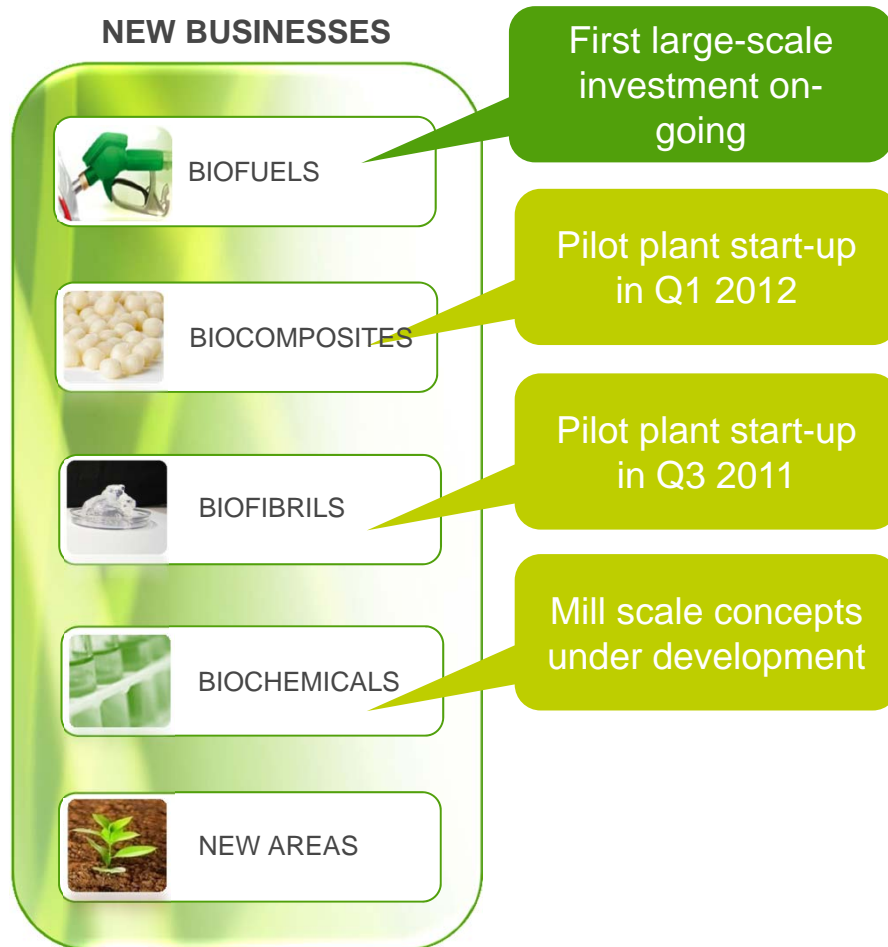
New  
forest industry



## Wood raw material for many products

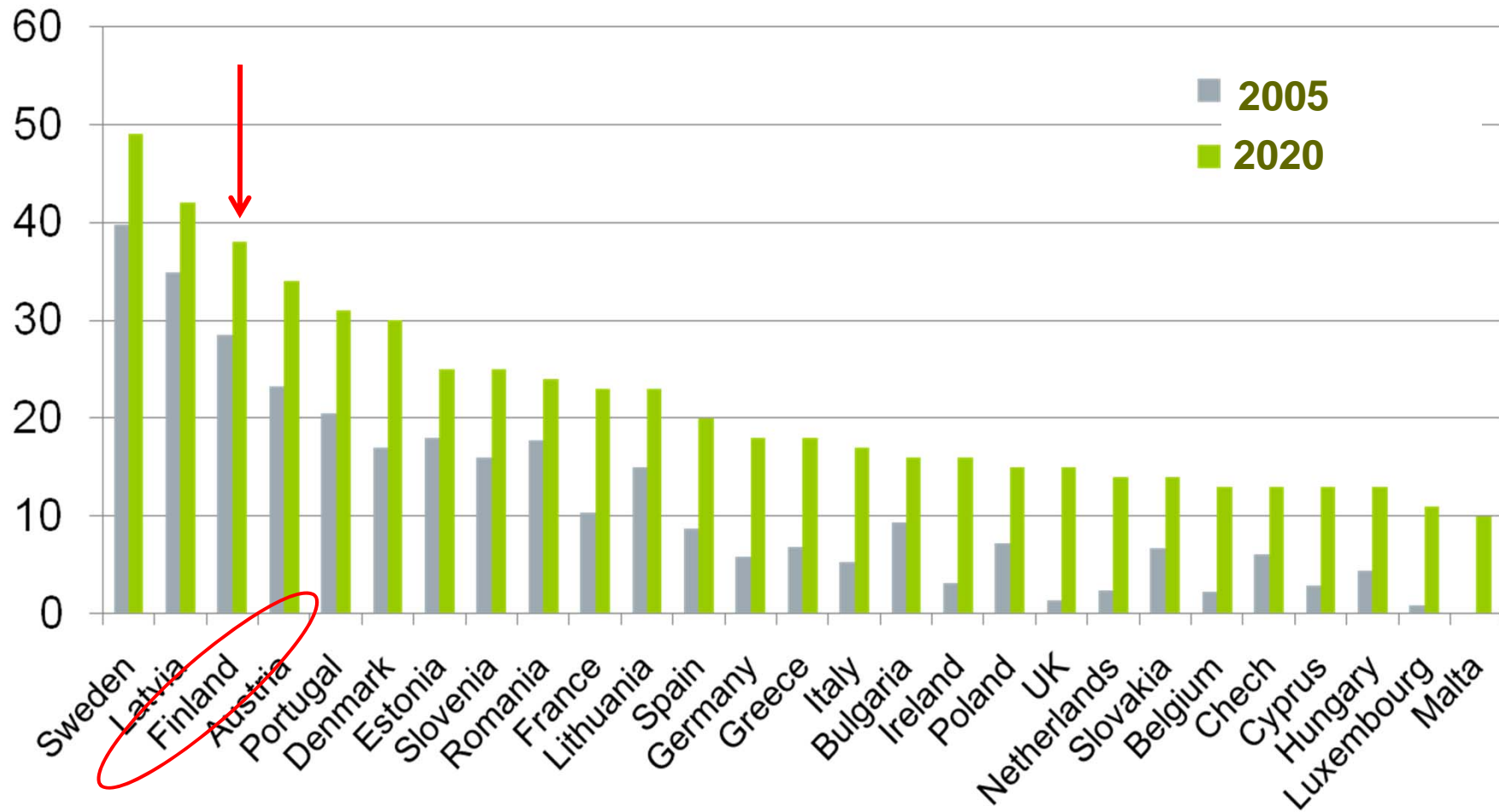


## New opportunities for the future



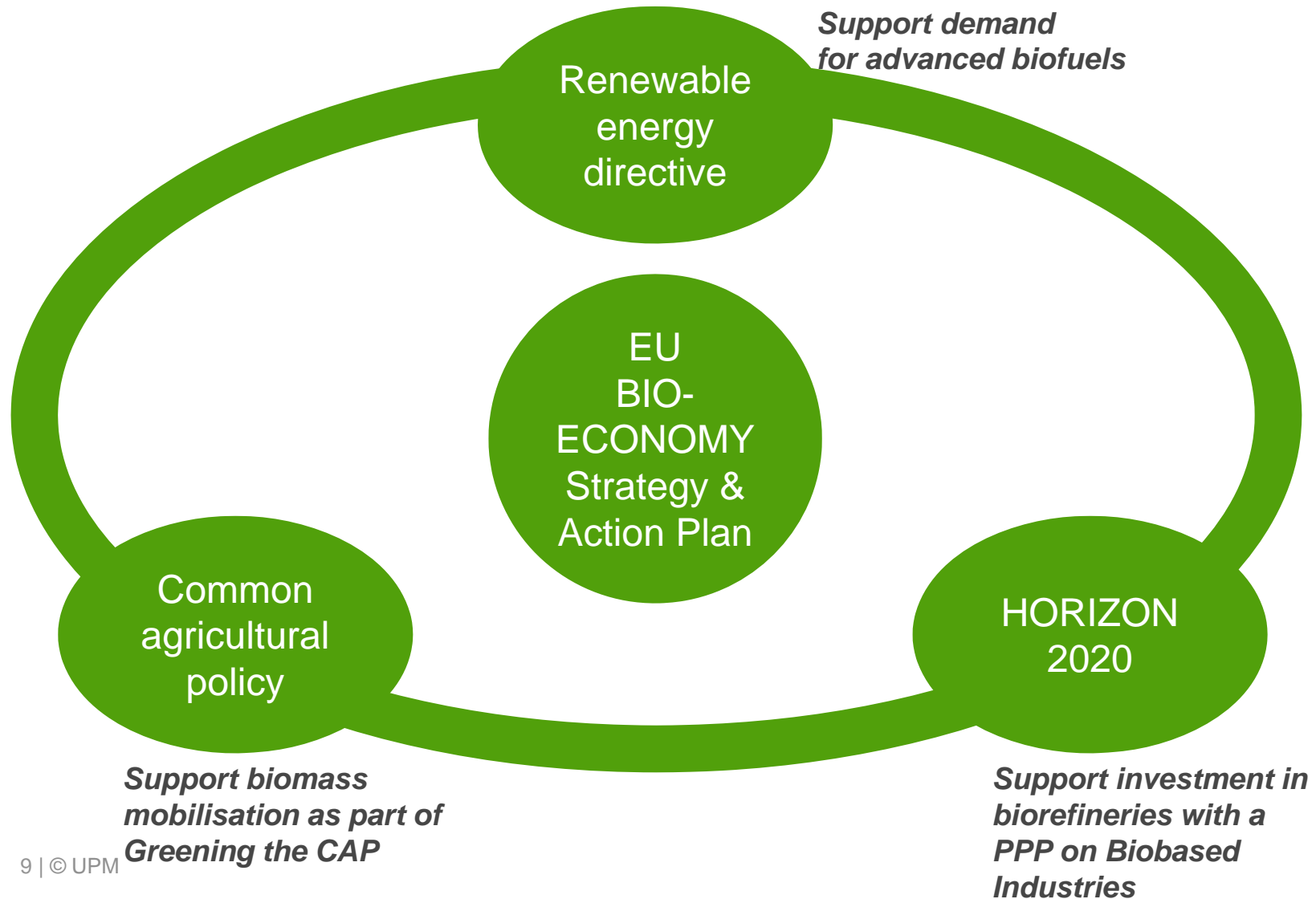
- UPM is developing a range of new businesses
- Potential for increasing value added in UPM's value chain
- Large target markets with potentially healthy profitability and sustainable competitive advantage
- New businesses based on UPM's in-house development and synergies with existing businesses

# Renewables targets to replace fossils with renewables





# Europe offers a variety of policies that are relevant to the biobased economy and can trigger its development by 2020



# Biorefinery attractive growth investment based on UPM's competitive advantages

### Competitive raw material

- Crude tall oil, a residue from pulp production
- Steady supply partially from own sources
- Outside food value chain
- No indirect land-use change

### Efficient production process

- Technology based on UPM innovations
- Efficient use of raw material
- Integrate synergies
- Industrial infrastructure

### High quality product

- 2<sup>nd</sup> generation biodiesel fully compatible with current diesel motors
- 80% reduction in greenhouse gas emissions
- High energy content
- No blend wall issues

# FOREST OF NEW OPPORTUNITIES

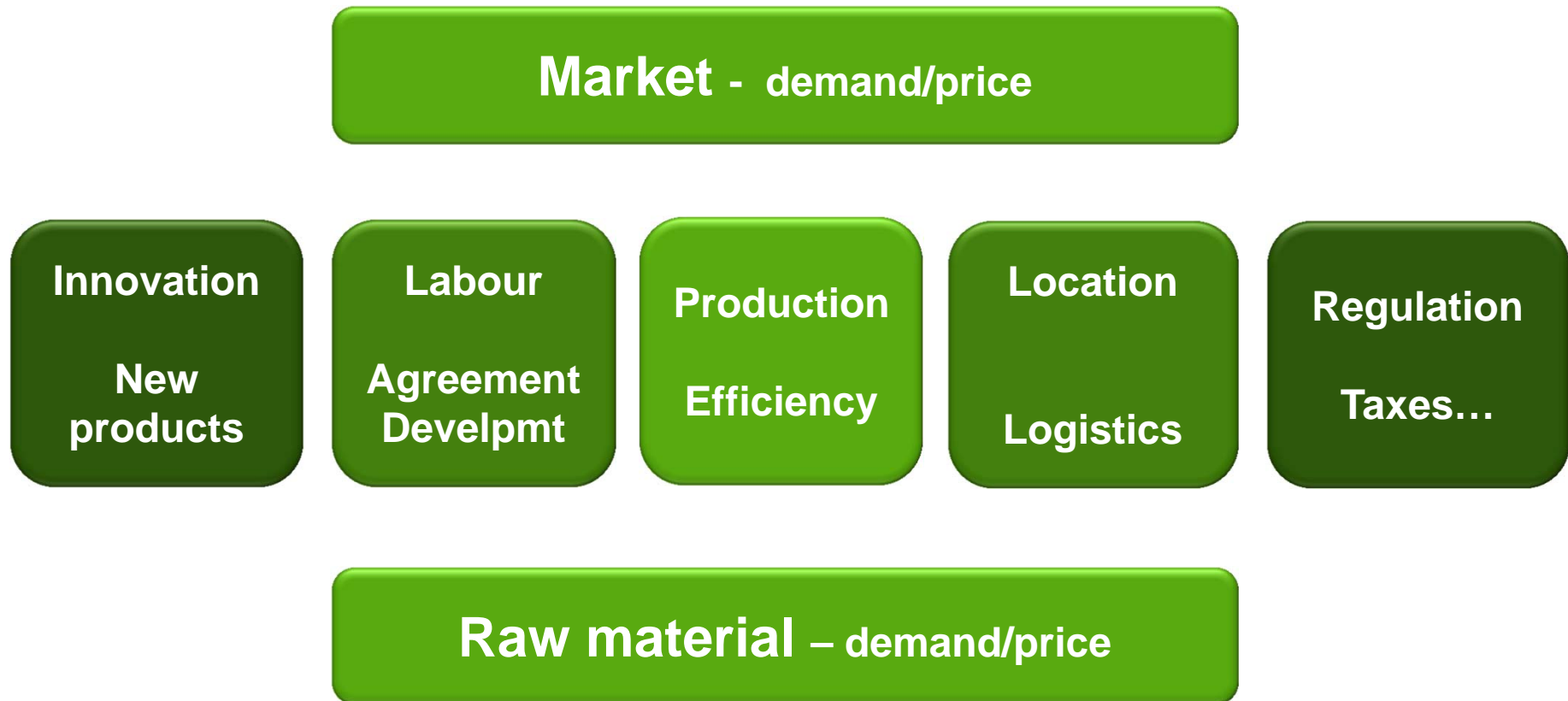
## World is changing

Resource scarcity  
Power shift in global economy  
Climate change  
Digitalisation

## Biofore growth and competitiveness

Materials and energy efficiency  
Renewable and recyclable products  
Innovation and new businesses

# Competitiveness of the forest sector



# European Union long term targets will be implemented through various means





**UPM**

The Biofore  
Company