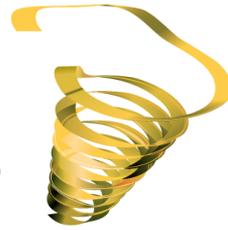


# Forest-based Sector

Technology Platform



**Johan Elvnert**  
*FTP Managing Director*

FORMEC 2017 | Romania

26 September 2017 | Brasov | Romania

## Innovation in motion

Vision 2030 & RDI Agenda for the European Forest-based Sector

# Perceptions of the forest-based sector...

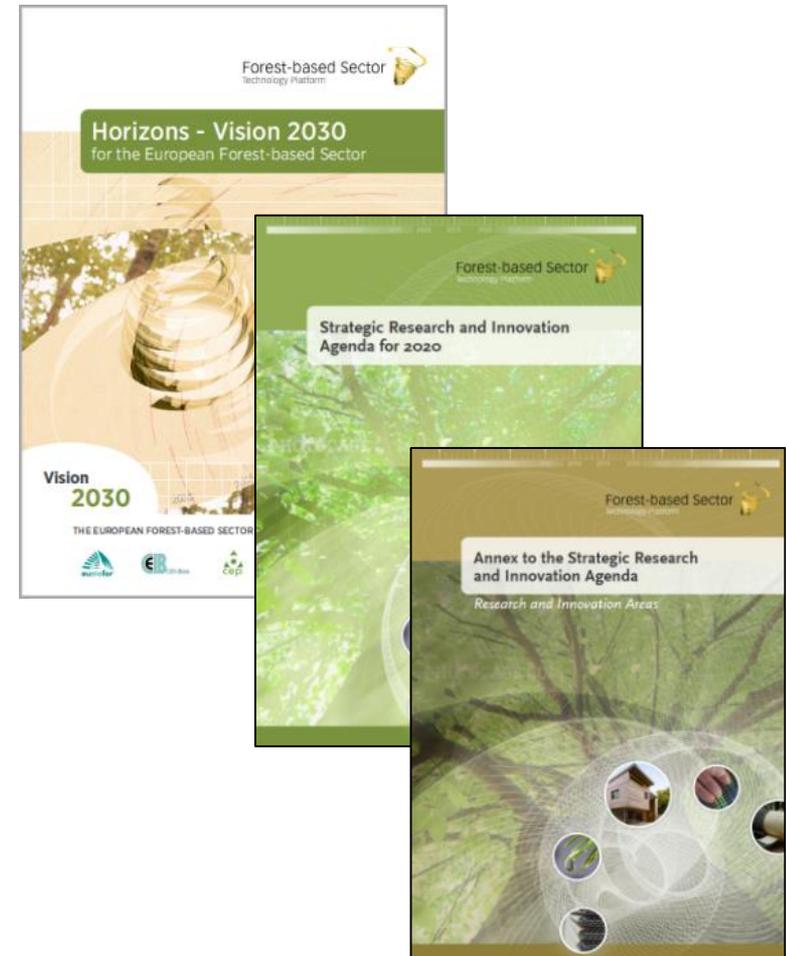


# The role of the European Forest-based Sector Technology Platform (FTP)

## Mission

To implement the **European Strategic Research and Innovation Agenda (SRA)** for the benefit of the forest based sector's actors

- Create opportunities for cooperative research and innovation on a European level
- Set ambitious targets for research & innovation
- Mobilise a critical mass of research & innovation



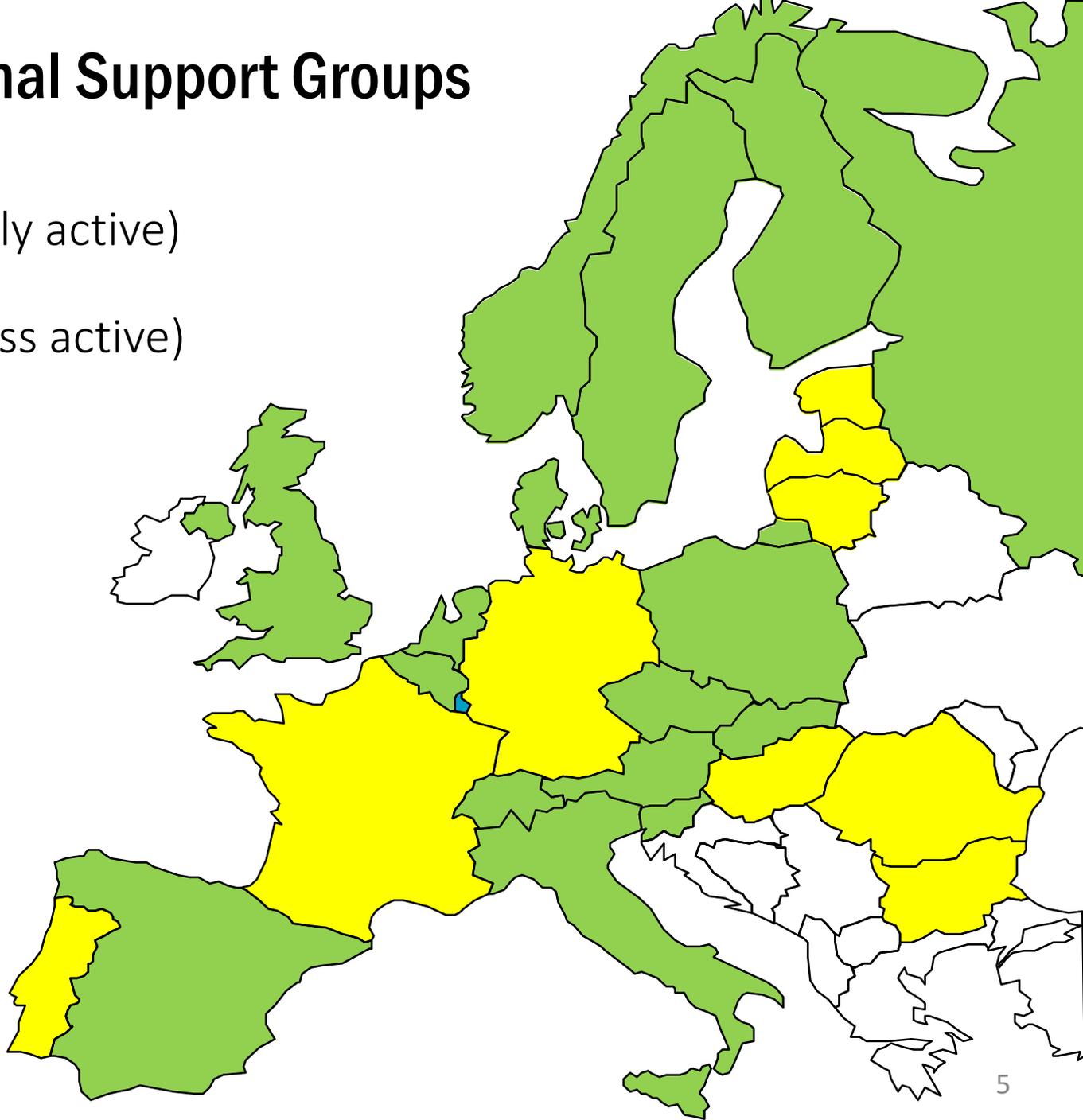
# Bottom up approaches



**FTP National Support Groups mobilise a critical mass of knowledge on the sector's RTD&I needs**

# FTP National Support Groups

-  FTP NSGs (fully active)
-  FTP NSGs (less active)



# FTP long-term agenda: Vision 2030 and the Strategic Research & Innovation Agenda 2020

## Vision for 2030 and 10 Vision Targets



## Strategic Research & Innovation Agenda 2020 (SRA)

- 19 Research & Innovation Areas
- 174 R&I Actions to undertake until 2020



# Vision and Strategy of the sector has to match societal concerns

## Societal concern: use of forest biomass for energy

**In EU** >> Intensive soil exploitation; harvesting exceeding forest stock

>> Land use competition with agriculture crops

**Global** >> Import of wooden logs from other global regions increasing risk of deforestation and biodiversity loss

## Societal concern: reduction of GHG emissions

**In EU** >> compliance with Effort-Sharing regulation bill

>> **LULUCF**: reduce GHG emissions by 40% below 1990 levels by 2030

>> Intensive soil exploitation; harvesting exceeding forest stock

**Global** >> cap global warming; 2°C target; compliance with Paris Agreement



## Example: FTP Vision Target #2



**“.... Bearing in mind the full range of demand and production constraints\*, harvesting possibilities in Europe have increased by 30% (until 2030), enabling forest owners to manage their forests more efficiently and sustainably. “**

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\* In many regions specific forest growth is increasing and management is optimised for additional harvesting possibilities. In other regions, especially in the Mediterranean area, where the impact of climate change is predicted to be severe, creating resilient, stress-tolerant forest is particularly important. In some landscapes the main aim is nature conservation and providing ecosystem services.



# Benefits for society?

## Some figures...

+120 Million m<sup>3</sup> timber harvested each year

+ 5 bn Euro value for forest owners\*

Or alternatively\*:

+20 days of EU's total petroleum products consumption

+ ca 20 bn Euro value

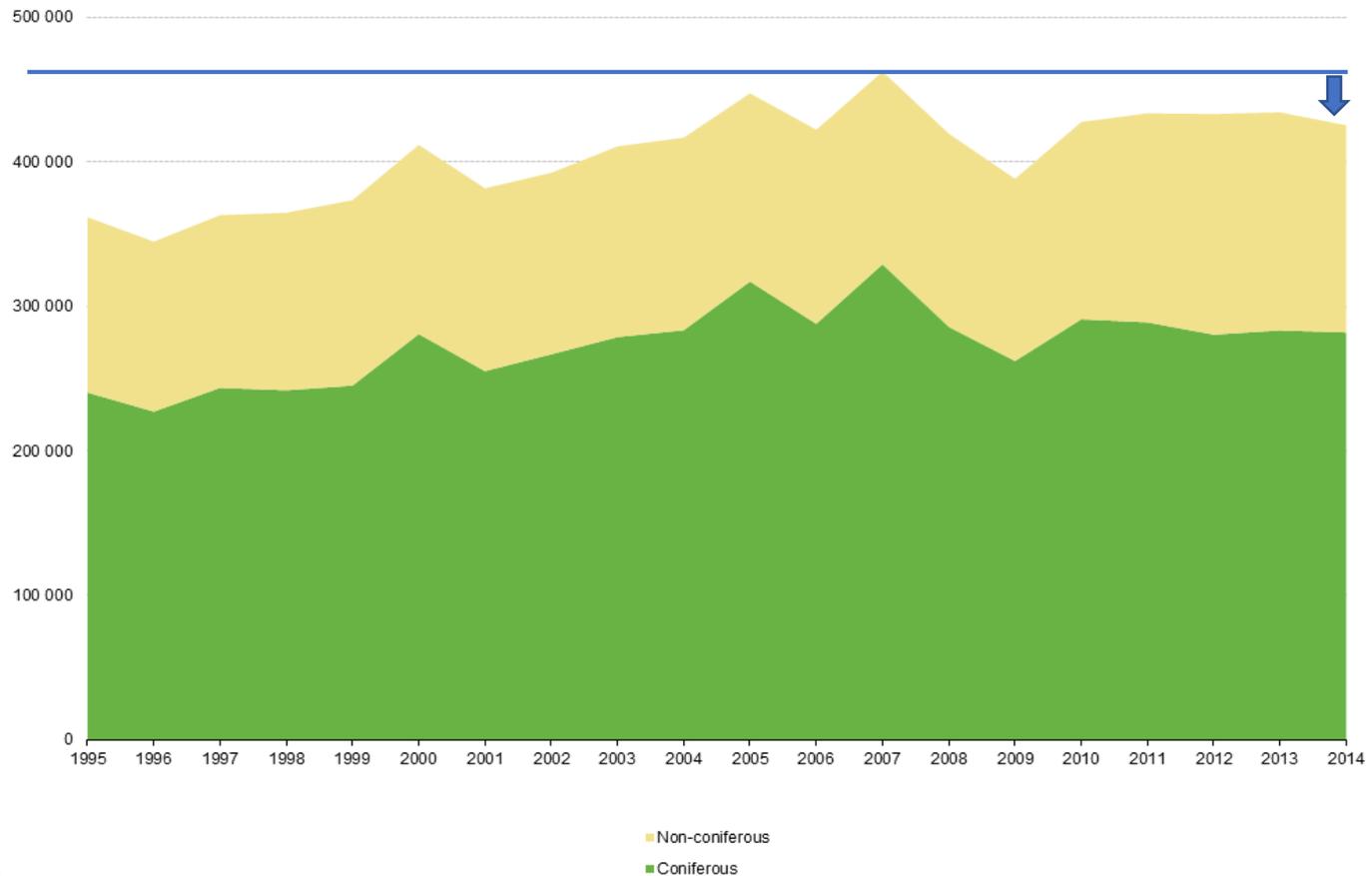
**But if the timber is utilised by the forest-based industries\* = +75 bn Euro in value**

*\* These figures are calculated using theoretical values and trade statistics. Precision is not guaranteed*



# Annual production of roundwood, EU28

circa 650 m3 annual  
increment below bark





# Practical challenges when producing forest biomass

- Large collection areas and fragmented ownership (dispersed operations)
- Regeneration periods measuring ca 50-100 years
- Influence of climate and biotic disturbances (storms, drought, fire, pests)
- Need to respect additional roles of forests (biodiversity, recreation, soil, hunting, foraging, water protection etc)
- **Micro-climate variations (e.g. elevation)**
- **EU has no regulatory mandate on forests**
- **3D-challenge: Operations & logistics take place with spatial restrictions**
- **Rural business**
- **Open skies advantage**

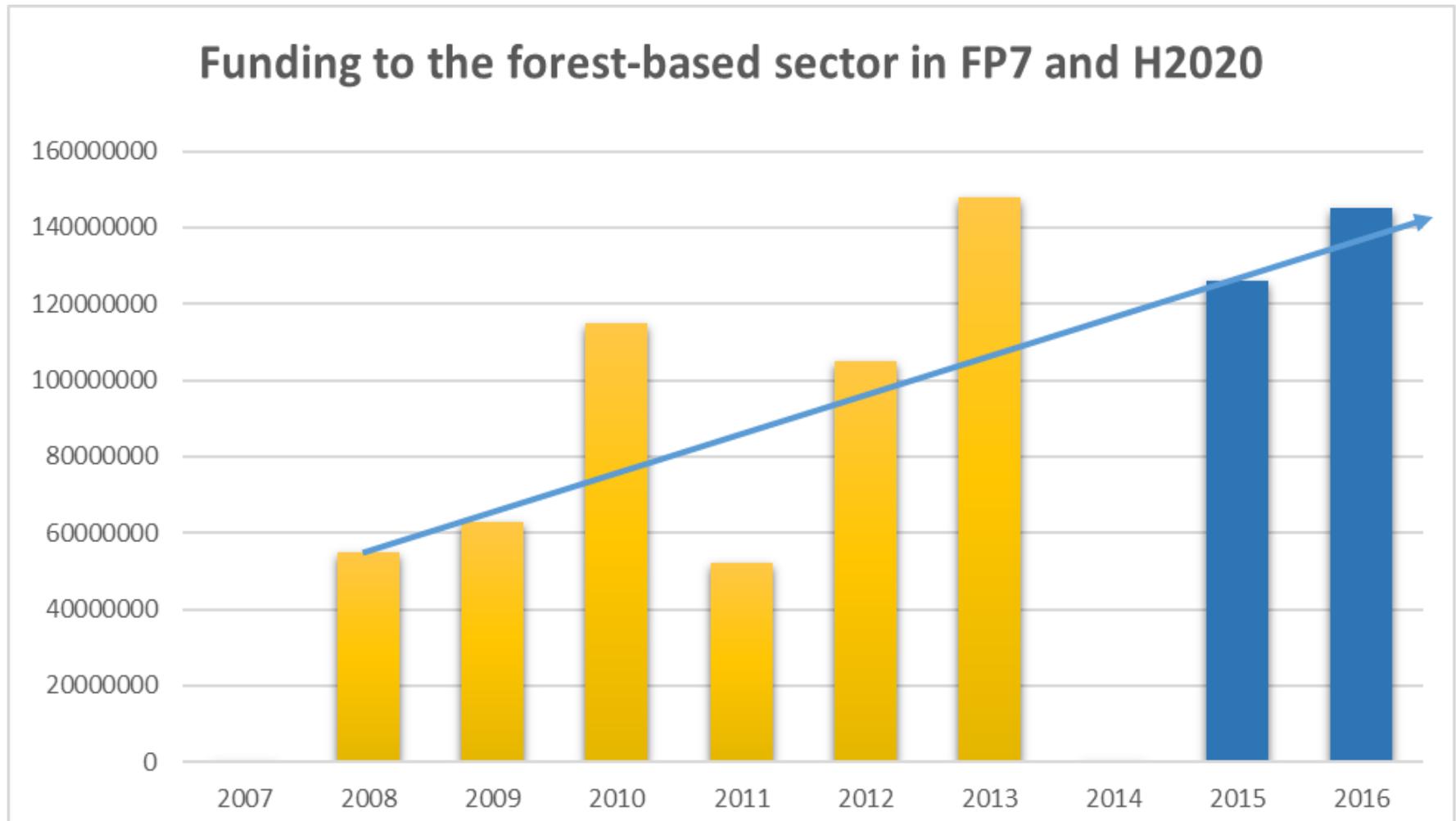


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# Results of the FTP Strategy: EU-funding and EU-funded projects



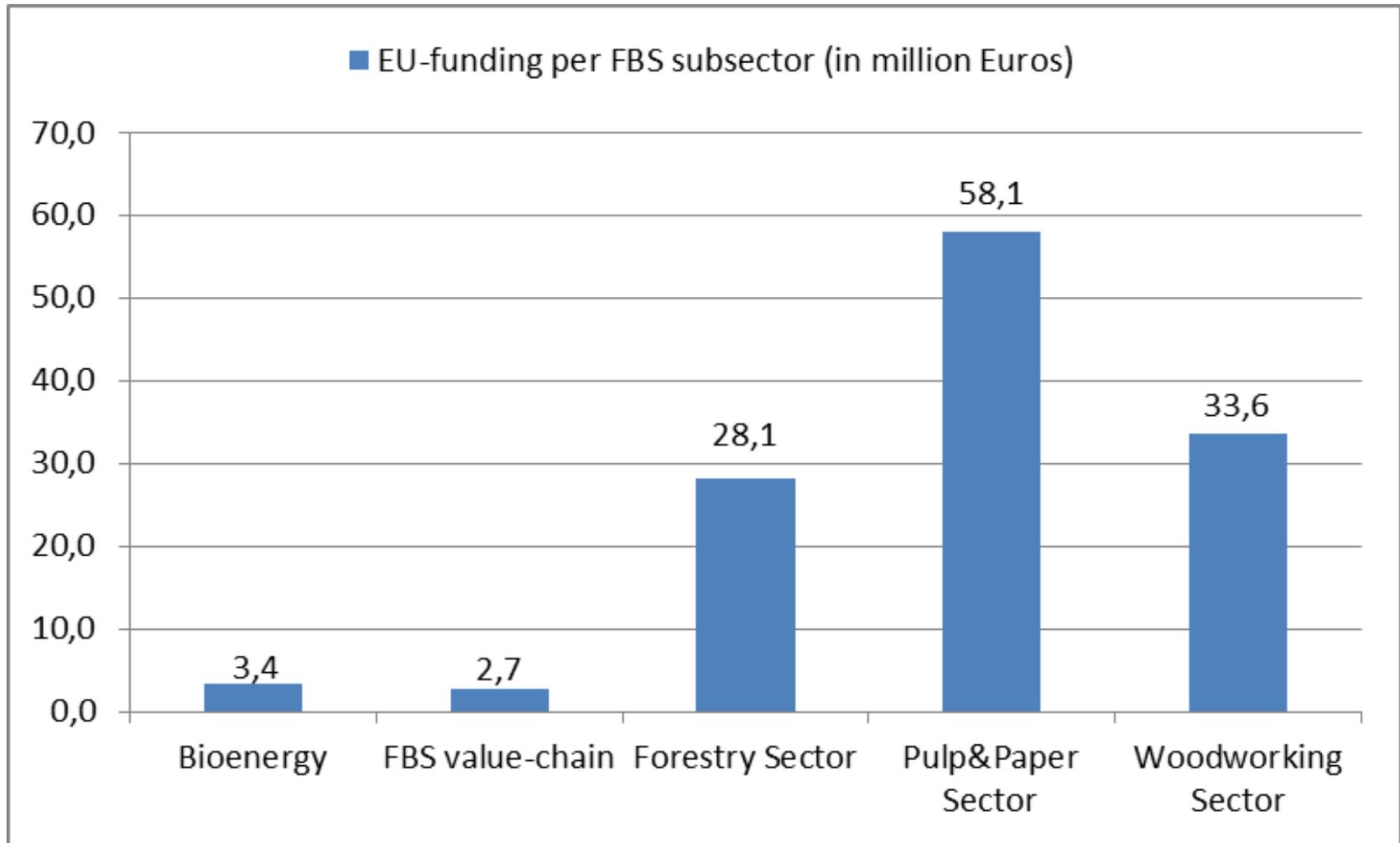
# EU R&D funding to the forest-based sector is increasing



*\*2014 was the initial year of the Framework Programme. Funding is allocated in the following year.*



## 2. EU-funding per FBS sub-sector in 2015



# Three examples of Horizon2020 research projects

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## Raising the bar of sustainable forest management in Europe

# 1. Forest harvesting Machines

Three main challenges of forest terrain transport:

1. Cost/productivity
2. Accessibility (Seasonal and weather-induced impediment of mobility)
3. Damages to ground vegetation and soil

## OnTrack - Innovative solutions for increasing efficiency and reducing environmental impacts of future wood supply

- Budget 2.028.593,00 €
- The OnTrack Forwarder will increase machine utilization rates for contractors and contribute to a more consistent wood supply with economic benefits the forest-based value chains.
- Number of partners: 8
- Countries: Germany, Sweden, Latvia, Finland



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## 2. Forest Management Models

- **ALTERFOR - Alternative models and robust decision-making for future forest management**
- Budget 3.999.998,00 €
- 19 partners
- Sweden, Netherlands, Ireland, Portugal, World, Germany, Italy, Belgium, Slovakia (Slovak Republic), Lithuania
- ALTERFOR's goal is thus to facilitate the implementation of forest management models FMMs better suited to meeting the challenges of the 21st century by: (1) Identifying and developing FMMs to deliver ecosystem services and overcome projected socio-ecological risks and uncertainties; (2) Assessing the impact of different FMM combinations and (3) Facilitating the implementation of desired forest management models and improving cross-national knowledge transfer regarding their benefits, costs, management, and utilization.



### 3. Remote Sensing and Informatics

- **LORENZLIDAR / Classification of Forest Structural Types with LiDAR Remote Sensing Applied to Study Tree Size-Density Scaling Theories**
- 195.455,00 €
- The main goal of this research is to develop an objective methodology for monitoring forest structural complexity by airborne laser scanning (ALS) remote sensing.... The laser partly penetrates the forest canopy, therefore providing an opportunity to study the establishment of natural regeneration in the understory layers.

# Forests - a resource for human creativity

**A knowledge-based society,  
sustained in every way by  
growing European forests**



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# Forest-based Sector

## Technology Platform



*The European hub for research and innovation in the forest-based bioeconomy*



[www.forestplatform.org](http://www.forestplatform.org)



[@ForestETP](https://twitter.com/ForestETP)



[johan.elvnert@forestplatform.org](mailto:johan.elvnert@forestplatform.org)

# Vision and Strategy of the sector matching societal concerns

## Societal concern: reduction of GHG emissions

- In EU**
- >> compliance with Effort-Sharing regulation bill
  - >> **LULUCF**: reduce GHG emissions by 40% below 1990 levels by 2030
  - >> Intensive soil exploitation; harvesting exceeding forest stock
- Global** >> cap global warming; 2°C target; compliance with Paris Agreement

## Concern of forest owners today



Based on quantitative data **the forest-based sector has proven to be one of the major mitigators of excessive CO<sub>2</sub> concentrations in the atmosphere.** The forest-based industries have developed new products and service concepts, which are produced with zero net-carbon emissions; they are able to replace a large number of products based on fossil and non-renewable resources. |

**The best strategy to immediately fulfil the Paris COP21 Climate Agreement is to build with wood!**





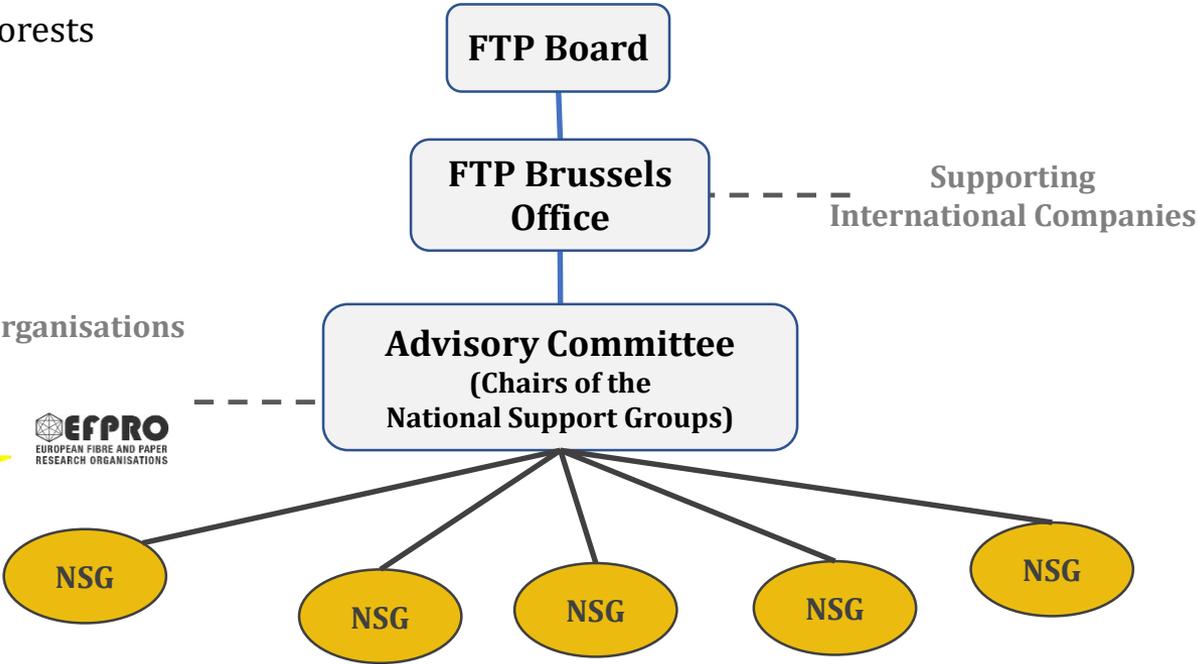
## 2. Organisation and stakeholders

# Organisation

**4 European Confederations**  
covering  
Woodworking Industries  
Pulp & Paper Industries  
Private Forest Owners  
State Forests



**FTP Owners**



**25 National Support Groups (NSG)**

National Federations, Companies, Forest owners, Funding Agencies, Researchers