



Inštitut za celulozo in papir
Pulp and paper Institute

Opportunities and Challenges for Paper Industry in New Development and Innovation Programmes 2014 to 2020

New Times for Traditional Paper Industry

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Investment in Research and Innovation



Challenges for the industry

- Global competition
- Availability of resources
- Cost and energy efficiency
- Environmental requirements and standards.

Demand for continuous innovation

- In processes – new technologies, energy efficiency, flexibility, productivity
- In materials - efficient use of materials, reduction of environmental impact, advanced materials
- In products - diversification, market trends, new functionalities, added value

= The need for development of new interdisciplinary knowledge and competences

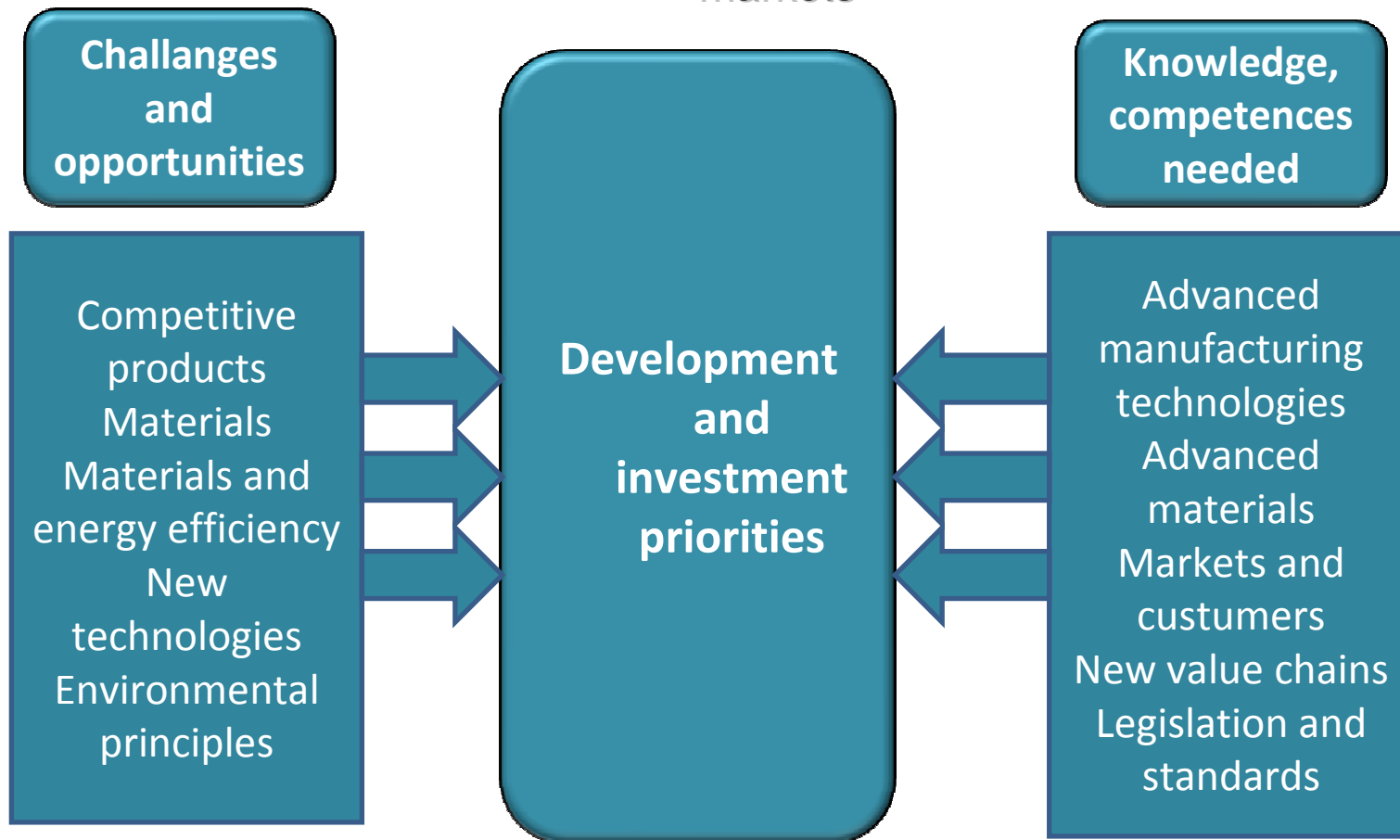
= Participation in value chains

= Strategic approach



Strategic Decisions of Firms

Investment in research and innovation for competitiveness, new products and new markets.





New Development Programmes Europe 2020 Strategy

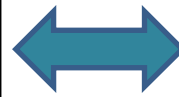
- Response to the decreasing competitiveness of the Europe's economy.
- Towards “Smart, Sustainable and Inclusive Growth”
- Priority investment in research, development and innovation
 - Targeting innovation and market,
 - Investment in key enabling technologies and fields with the highest potential for growth
 - Increased effectiveness of investment; combination of financial resources, better access for all, support in all development phases
- Consistency between European and national development programmes.



EU2020 Programmes

Investment in Research and Innovation

Horizon 2020
Priority: Smart Growth



EU Cohesion Policy
Priority: Sustainable Growth

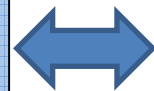


Cohesion Fund: infrastructure development
EU Regional development Fund: competitiveness
EU Social Fund: employment

National Smart Specialization Strategy
- 60 % of ERDF funds to be invested in research, innovation and competitiveness for SME's
- 20 % to be invested in energy efficiency.

Slovenian Development Policy

- Industrial Policy
- Research and Innovation Strategy
- Operational Programmes



National funds for investment in research, innovation and competitiveness.



Horizon 2020



- **Comprehensive programme for research and innovation, about 80 billion EUR for the period 2014-2020**
 - Investment for growth and employment
 - Response to global societal challenges
 - Strengthening EU global position in research, innovation and technologies.
- **Focus on innovation**
 - Leading role of industry
 - Support in all phases, from knowledge to the market
 - Development of small and medium size enterprises.
- **Focused investment**
 - In key technologies and fields with the highest impact
 - Demand side measures.



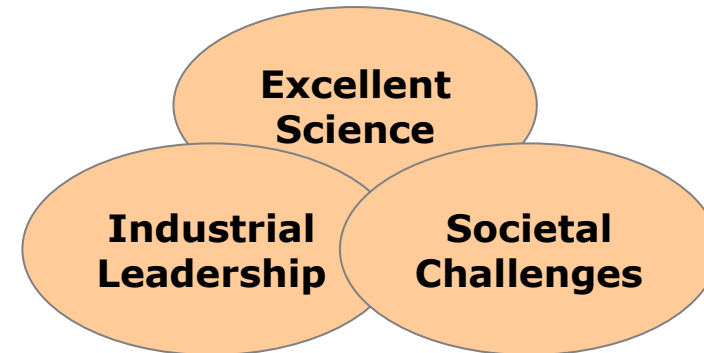
Key changes

FP7

Cooperation	Ideas
People	Capacities

+ CIP + EIT

Horizon 2020



- **Unique programme** that combines three previous separated ones (FP7, CIP, EIT)
- **More innovation**, from research to the market, support to all forms of innovation
- **Focus on global challenges**, like food and health, clean energy, sustainable transport, environmental protection,....
- **Complementing financial resources**, subsidies, credit and venture investment, public procurement
- **Easier access for all** companies, universities, institutes in all countries
- **Simple application and management processes**; unique rules of participation, 2-stage applications, 8 month from application to the contract, less controls, more funds for companies (not state aid) .



Societal Challenges

Industrial Leadership

in mio EUR

Health, demographic changes and well-being	8.028
Safe food, sustainable agriculture and bio-economy	4.152
Safe, clean and efficient energy	5.782
Smart, sustainable and comprehensive transport	6.802
Climate action, resource efficiency	3.160
<i>Inclusive, innovative and safe society</i>	3.819

Enabling and industrial technologies (<i>IKT, nano-technology, materials, biotechnology, manufacturing technologies, space</i>)	13.781
Access to venture capital <i>Excellerating private and venture investment in research and innovation</i>	3.538
Innovation in small and medium size enterprises	619



National Research and Innovation Programmes

- **Objectives and orientations**

- Slovenian Research and Innovation Strategy
- Slovenian Industrial Policy
- EU Cohesion Policy in Slovenia

- **European structural funds in Slovenia**

- Operational programs for the use of EU funds in preparation
- Funds available amount to 3,3 billion EUR

- **Smart specialization strategy**

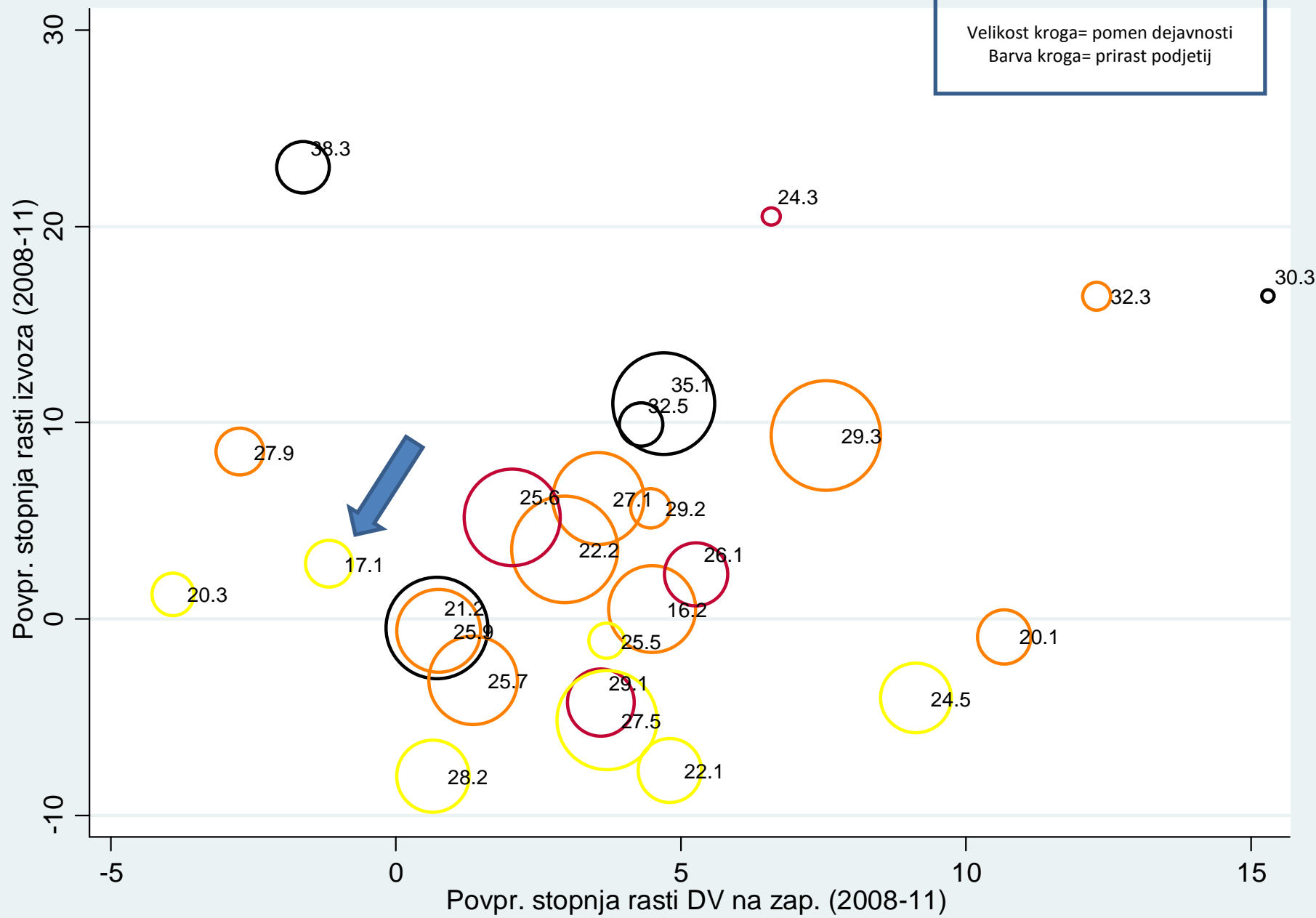
- Ex-ante conditionality for structural funds
- Complementarily with EU strategy
- Identification of priority development fields based on Slovenian competences and comparative advantages.



Smart Specialization Strategy

- Identification of Priority Fields of Competence

	Najpomembnejše panoge	Rastoče panoge
Avtomobilska industrija in proizvodnja drugih vozil	(29) Proizvodnja motornih vozil, prikolic in polprikolic; Proizvodnja delov in opreme, Proizvodnja vozil, Proizvodnja karoserij	(30) Gradnja ladij in čolnov, Proizvodnja železniških vozil, zračnih in vesoljskih plovil (29) Proizvodnja delov in opreme, električne in elektronske opreme
Predelava materialov	(22) Proizvodnja izdelkov iz gume in plastičnih mas (25) Proizvodnja kovinskih izdelkov, predelava kovin	(23) Proizvodnja izolatorjev in izolacijskih elementov iz keramike (24) Primarna predelava železa in jekla (25) Proizvodnja gradbenih kovinskih izdelkov, površinska obdelava kovin (16) Proizvodnja izdelkov iz lesa, plute
Proizvodnja električnih naprav in opreme	(27) Proizvodnja gospodinjskih aparatov Proizvodnja elektromotorjev, generatorjev, transformatorjev (28) Proizvodnja drugih strojev in naprav	(32) Proizvodnja medicinskih instrumentov, naprav (26) Proizvodnja optičnih instrumentov (28) Proizvodnja drugih strojev in naprav, Proizvodnja električne opreme (27) Proizvodnja elektromot., generatorjev in transformatorjev, električnih kablov in žic
Proizvodnja materialov	(21) Proizvodnja farmacevtskih surovin (24) Proizvodnja kovin, surovega železa, jekla (20) Proizvodnja kemikalij, kemičnih izdelkov, barv, lakov (17) Proizvodnja vlaknin, papirja in kartona	(17) Proizvodnja vlaknin, papirja in kartona (20) Proizvodnja barv, lakov in prenosnih sredstev
Povezane storitvene dejavnosti	(71) Arhitekturno in tehnično projektiranje, tehnično preizkušanje in analiziranje (62) Računalniško programiranje, svetovanje (72) Znanstvena raziskovalna in razvojna dej.	(72) Raziskovalna in razvojna dejavnost na področju naravoslovja in tehnologije





New orientations for investment

Open tenders, continuous identification of potential strategic initiatives and support for cooperation of different actors in (new) value chains.

“Policy mix” approach, tailor-made investment for different sectors, combination of different policies and measures.

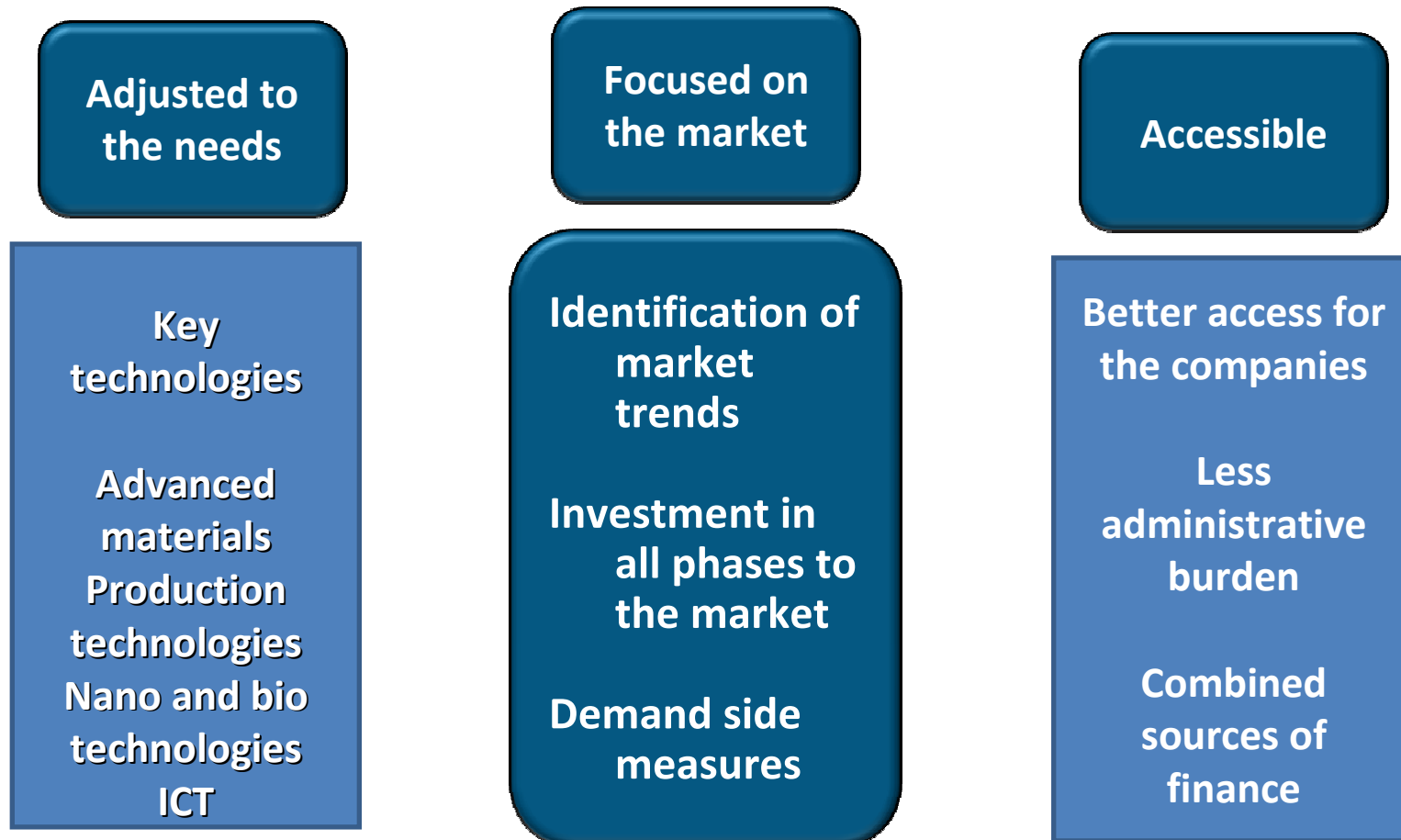
Public sector as investor, not state-aid distributor, promotion of public-private partnership, use of public procurement to stimulate market development.

Combination of different sources of finance to support development from research to the market, non-repayable and repayable sources.

Important changes in the public funds management system, focus on results and impact not on administrative control of spendings.



New programmes are more consistent with the industry needs and challenges





Opportunities and Challenges for Paper Industry

Participation in the programmes

is not just an opportunity to raise funds for investment in R&D.

It is important to:

- Access up-to-date knowledge
- Identify market trends and opportunities
- Gain new partners and access to international value chains.

Successful participation demands first of all

- **Networking and cooperation** to complement knowledge and competences on different technology and development fields for more competitive application
 - between companies and R&D institutions
 - Between companies in traditional and new value chains.
- **Timely preparations** and creation of strategic partnership based on the company's strategy .



Opportunities and Challenges for Paper Industry

Preparation of the programmes is in final stage. Programmes in Horizon 2020 will be announced in December 2013 and first public calls opened by the end of this year.

Operational programs for the use of EU structural funds in Slovenia are in preparation, the start of implementation is estimated for the middle of 2014.

Short overview of the programs to come:

- EU Joint Technology Initiatives (JTI)
- EU programmes for investment in key enabling technologies
- Preparation for the structural funds investment in Slovenia.



Horizon 2020 Joint Technology Initiatives (JTI)

Seven years programmes in support for joint industries initiatives on specific fields; public-private partnership between EU and industry.

Important initiatives organized:

- Innovative Medicines Initiative
- Clean Sky (Aeronautics)
- Fuel Cell and Hydrogen
- **Bio-based Industries**
- Electronic components and systems



JTI Bio-based Industries



- Joint R&D projects for development of material and production technologies.
- Demonstration projects of application of new technologies and solutions in real environment.
- New business models.

Joint European undertaking for all sectors based on the use of biomass.

- Focusing on development of new, competitive value chains based on bio materials.
- Estimated market potential by 2020 is 200 billion EUR.
- The funds for the programme amount to 3,8 billion EUR with the EU budget contribution of 1,0 billion.

Five thematic fields (value chains):

From lignocellulosic feedstock to advanced bio-fuels, bio-based chemicals and biomaterials.

The next generation forest based value chains.

The next generation agro-based value chains.

Emergence of new value chains from (organic) waste.

The integrated energy, pulp and chemicals bio-refineries.



Horizon 2020

Key enabling technologies

Intensive investment in development of key technologies important for paper and paper processing industry. Some relevant themes announced:

- **Advanced materials and nanotechnology**
 - Nano composites
 - Integration of nano materials into existing production and assembly lines
 - Industrial uptake of advanced materials
 - LCA and eco-design of advanced materials and related products
 - 2D& 3D printing of multifunctional materials

- **Advanced manufacturing technologies**
 - Manufacturing processes for efficient use of materials
 - Energy efficient production processes
 - Industrial technologies for multimaterial assembly processes
 - Recovery technologies, characterization, separation, pre-processing
 - Energy and resource management systems.



EU Structural Funds in Slovenia

Invitation to identify and propose joint strategic projects (value chains) on the defined fields of specialization for Slovenia is expected to be opened soon.

Opportunities for the paper industrie is to integrate in:

- “Traditional” forest-based value chain to address challenges on development of biomaterials
- Cross-sectoral cooperation and development of new value chains on smart packaging, combining competencies on the field of materials and electronics
- Cross-sectoral cooperation on the field of manufacturing technologies for development of resource and energy efficient production and assembly processes
-



Conclusion

New development programs are opening several opportunities.

They are focused on the fields of strong interest for the industry:

- development of knowledge and key enabling technologies (advanced materials and production technologies)
- support for innovation and market application.

They support companies participation in international value chains and can thus contribute to their position on existing and development of potential new markets.

Key to successfully participation in the programmes is networking and creation of strategic partnerships for advancement of knowledge and competences.

THANK YOU FOR YOUR
ATTENTION!

LOOKING FORWARD TO
COOPERATE WITH YOU IN
THE FORTHCOMING
PROGRAMMES

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