



# SecureChain

sustainable biomass energy



EU H2020 Nr. 646457

04/2015 – 03/2018

[securechain.eu](http://securechain.eu)



**Mentoring innovation in  
SMEs to foster market  
uptake in sustainable  
bioenergy chains**



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## Horizon 2020 Call LCE-14-2014: *Market uptake of sustainable bioenergy*

- Coordination and Support Action 01/04/2015 – 31/07/2018 (3.5 years)
- Total EC grant: 1,809,586.25 €
- 11 participants in 8 EU member states, 6 model regions in Europe



# Objectives

Europe's solid biomass to energy sector is dominated by SMEs.  
What is and can be their role in fostering innovation and growth in rural areas in view of the emerging bio-based circular economy?

- Promote a *Sustainable Supply Chain Management* practice of SMEs in regional bioenergy chains





# Objectives

## Targeted impacts and EU model regions



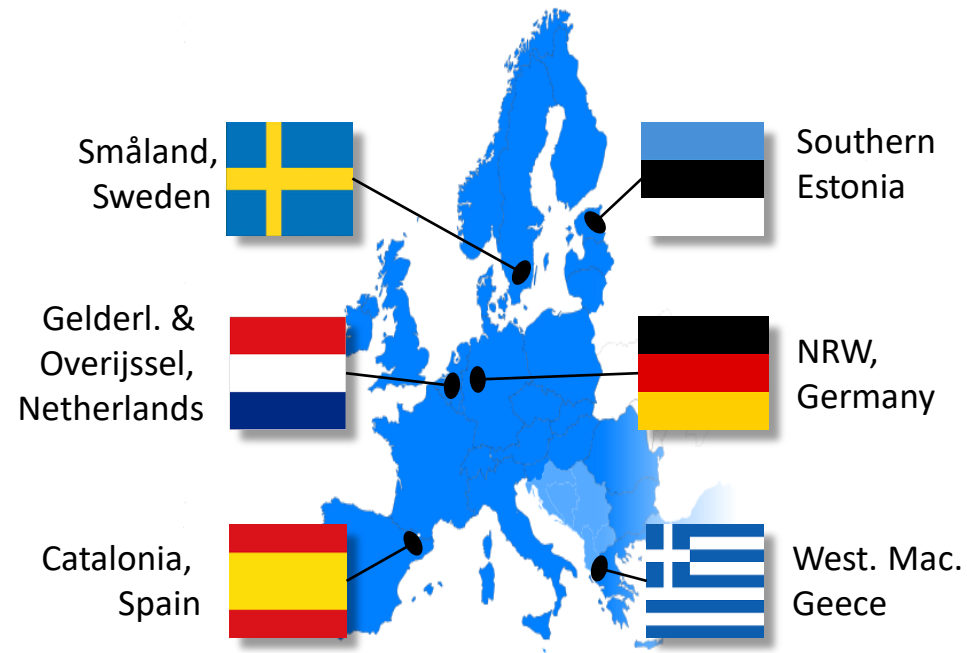
→ **Mobilise more solid biomass**



→ **Maximise the share of sustainable bioenergy**



→ **Foster market uptake of most efficient systems**



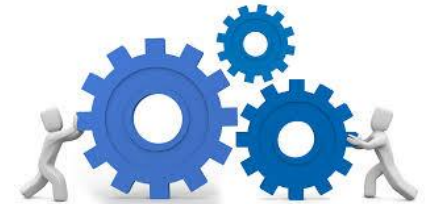
# A mentoring approach for SMEs



**Innovation  
Vouchers**



**Regional Lead Partners  
& SMEs**



**Pilot project  
implementation**



**Learning Labs &  
Trainings**



**Sustainability**  
• LCAs  
• Certification



**Finances**  
• Risk assessment  
• Advisory services

# A mentoring approach for SMEs

- **Innovation Voucher contest**

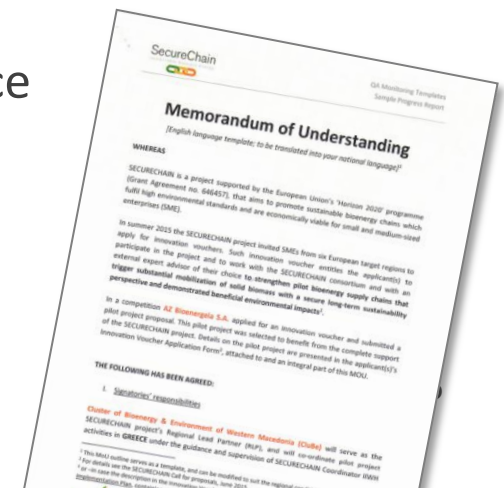
- Open call launched in all regions (June 2016)
- Broad scope, open to all SMEs in bioenergy
- Aim for project ideas with good potential for market uptake
- Evaluation acc. to 6 criteria: selection of 20 proposals out of 40



- **SMEs' benefits from collaboration with consortium**

- Vouchers worth 3,000 – 5,000 € to obtain specific advice from local consultant of their choice
- Expertise from consortium (LCA, certification, ...)
- Tailored advice to each pilot project





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## A mentoring approach for SMEs

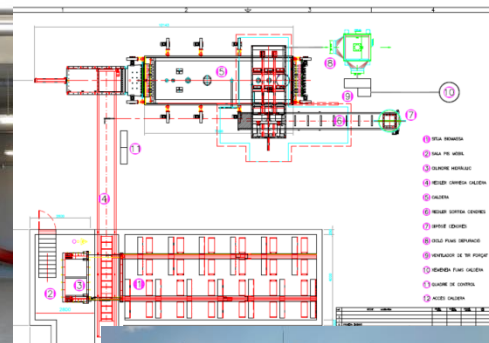
- **Advisory services provided to pilot projects**
    - **Assessment/mapping** of locally available biomass supplies
    - **Technical appraisal** and testing of new or improved equipment
    - **Feasibility** of specific supply chain configurations and logistics
    - **Life Cycle Assessments** of greenhouse gas emissions
    - **Cost-benefit** analyses and exploitation calculations
    - **Financial** risk analyses, investment scenarios, business plans
    - **Certification** trainings and company pre-checks
    - **Trainings** e.g. on harvesting, quality and business plan development
- ➡ SecureChain has tested the approach in a variety of companies and regional market settings.

# SME pilot projects: Supply chain canvas

<i>Biomass → Energy Supply Chains</i>	<i><b>Biomass harvesting</b></i>	<i><b>Fuel production</b></i>	<i><b>Energy conversion</b></i>	<i><b>Recycling</b></i>
<i>Region</i>				
<b>Småland</b> , Sweden (4 pilots)	Efficient harvesting of forest residues		Optimal biomass boilers for small municipalities	Wood ash pellets fertilizer
<b>NRW</b> , Germany * (3 pilots)	Improve biomass collection/sorting in trade centres	Valorise wood industry residues into pellets		
<b>Gelderland &amp; Overijssel</b> , Netherlands (3 pilots)	Low-impact harvesting in landscape maintenance	Strategic storage facilities for quality wood chips		
<b>Catalonia</b> , Spain (4 pilots)	Optimise biomass logistics and trade centres	Up-scaling wood chips and pellet production	Renovated heating systems, cogeneration	
<b>Western Macedonia</b> , Greece (3 p.)	Fast growing tree plantations; mixed feedstocks	Wood wastes for energy use in wood industries	Improved biogas plant	
<b>Southern Estonia</b> (3 pilots)			Small CHP plants for village communities	Wood ash fertilizer production
Total: 20 pilots	8	4	6	2



# SME pilot projects: Impressions



## Results and Impacts

- **Highlights of main outcomes**

- 20 Pilot projects accomplished (successful & unsuccessful), completion or further implementation is under way
- LCAs for 8 pilots; Certification of 5 companies
- Numerous events: training sessions, company visits, B2B seminars, roundtables with authorities, study trips to other countries (DE, SE, AT)
- Exchange with other consortia; outreach (UA)

### **SMART Performance Indicators**

- |   |                                      |
|---|--------------------------------------|
| • Volume of additionally mobilised biomass: | 142,000 tons/year                    |
| • Final renewable energy production:        | 2,300,000 GJ/year                    |
| • Reduced GHG emissions:                    | 40,100 tons CO <sub>2</sub> eq./year |
| • Direct and indirect jobs created:         | 90 FTE/year                          |
| • Total investments triggered:              | 10.2 million EUR                     |

## Lessons Learnt

- **Sustainable bioenergy projects are challenging for SMEs**
    - Challenge to balance business and environmental aspects
    - Long-term sustainability vs. daily operation goals
    - Not every pilot is a success story > gain in knowledge
  - **Hands-on approach can provide effective support**
    - Role of local consultants, agencies and trainers (mentors)
    - Good facilitation & tangible results are key
    - Roundtables to sensitize SMEs and stakeholders
- ➡ Recommendable transferable practice for the support of bioenergy market uptake by SMEs



# A big Thank You to the team !



BTG – Biomass Technology Group BV  
Enschede, The Netherlands | [www.btgworld.com](http://www.btgworld.com)



UPC – Universitat Politècnica de Catalunya  
Institute of Sustainability and Department of Business Management | Barcelona, Spain | <http://is.upc.edu>



ESS – Energikontor Sydost AB  
Växjö, Sweden | [www.energikontorsydost.se](http://www.energikontorsydost.se)



BOKU – University of Natural Resources and Life Sciences  
Institute of Waste Management  
Vienna, Austria | [www.wau.boku.ac.at/abf.html](http://www.wau.boku.ac.at/abf.html)



CLUBE – Cluster of Bioenergy & Environment of Western Macedonia | Kozani, Greece | [www.clube.gr](http://www.clube.gr)



TREA – Tartu Regional Energy Agency MTÜ  
Tartu, Estonia | [www.trea.ee](http://www.trea.ee)



DINCERTCO Gesellschaft für Konformitätsbewertung mbH  
Berlin, Germany | [www.dincertco.de](http://www.dincertco.de)



CBI – Climate Bonds Initiative  
London, United Kingdom | [www.climatebonds.net](http://www.climatebonds.net)



CERTH / CPERI – Centre for Research and Technology Hellas, Chemical Process and Energy Resources Institute  
Thessaloniki, Greece | [www.isfta.gr](http://www.isfta.gr)




CTFC – Centre Tecnològic Forestal de Catalunya  
Solsona, Spain | [www.ctfc.cat](http://www.ctfc.cat)





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