

# LOGGFORCAT – Development of an efficient logging system using the LOGGFORCAT boom harvester

## Summary

LOGGFORCAT is a project to generate an innovative efficient logging system based on the construction of a 15 to 20 m telescopic boom prototype with a grapple mounted on a swivel system to enable the haulage of logs at the foot of the slope in an agile manner without endangering the operators who carry out the hooking work, with an active diameter of 30 m, carrying out stacking adapted to the load needs of the logging trucks.

The LOGGFORCAT project responds to the need to modernise and optimise the logging system for forestry biomass and is based on three key pillars:

- The creation of a prototype that enables the mechanisation of the logging process.
- The design of a new logging system in accordance with the needs and potentials of the new prototype.
- The dissemination and transfer of results and knowledge.

## Objectives

The specific objectives of this pilot project are as follows:

1. Develop an innovative and efficient logging system that enables a reduction in operating costs: a logging system using the LOGGFORCAT harvesting boom.
2. Develop the prototype mounted on a swivel system with a 15 m telescopic boom with a grapple for hauling forestry biomass (logs, small-diameter wood and biomass): RS LOGGFOREST 1.0.
3. Reduce the impact of forest logging on the soil and trees in special protection zones.
4. Reduce the carbon footprint of the biomass hauling process.
5. Generate a demonstrative effect and transferability.

## Description of the actions planned in the project

LINE 1: PREPARATION OF THE PROTOTYPE: RS LOGGFOREST 1.0

1. Preparation of the mixed machine prototype with telescopic boom and grapple for the hauling of biomass RS LOGGFOREST 1.0.
2. Prototype testing.
3. Assessment of the costs and performance of the prototype.
4. Verification and CE marking of the prototype.
5. Registration of the design of LOGGFOREST 1.0.

LINE 2: LOGGFORCAT LOGGING SYSTEM

1. Establish the logging methodology in accordance with all the agents of the task force.
2. Improvement of the logging trucks to adapt to the LOGGFORCAT system.
3. Performance of pilot tests on the new logging system.
4. Assessment of costs and performance.

## Expected results and practical recommendations

LINE 1 RESULTS:

RS LOGGFOREST 1.0 prototype, which will generate:

- CE marking
- Costs and performance
- Possible marketing
- Publication of a scientific article in an international journal with the results of the LOGGFOREST test pilot.

LINE 2 RESULTS:

Validation of the LOGGFORCAT logging system, which will generate:

- A practical guide for the hauling of forest biomass using the LOGGFORCAT system.
- Costs and performance.

### Task force leader

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Entity: **ESTRATS DE BOSC SL**

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Typology of entity:  
**Forestry company**

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### Coordinator of the Task Force

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Entity: **ROBERT ROSELL PAGES**

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### Other members of the Task Force (grant recipients)

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Entity: **FORESTAL RIUECOS, SL**

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### Other members of the Task Force

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Entity: **Forest Science and Technology Centre of Catalonia (CTFC)**

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Typology of entity:  
**Technology centre**

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### Subject area(s) of application

Energy management  
Farming equipment and machinery  
Forestry  
Landscape/land management  
Supply chain, marketing and consump  
Waste, by-products and residues man

### Geographical area(s) of application

<b>Province(s)</b>	<b>Region(s)</b>
Tarragona	
Lleida	
Girona	
Barcelona	

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### Dissemination of the project *(publications, conferences, multimedia...)*

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LINE 3: TRANSFER

- Incorporation of the content of the LOGGFORCAT project on the websites and social media of the members of the task force.
- Preparation of audiovisual material (dissemination video).
- Dissemination in national media. Press releases and dissemination articles will also be sent to local and forestry publications.

- Practical guide for the hauling of forest biomass using the LOGGFORCAT system.
- Two demonstration events:
  - National seminar aimed at agents in the forestry sector and biomass cluster.
  - International seminar aimed at biomass producers in France and Italy.
- Drafting of a technology transfer article for a magazine in the Catalan forestry sector.

## Project website

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## More information on the project

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### Project dates

Starting date (month-year): June 2018

Completion date (month-year):

Current status: *Underway*

### Budget approved

**Total budget:** **€127,768.43**

*DARP funding:* €52,216.31

*EU funding:* €39,391.25

*Own funding:* €36,160.88

### With funding from:

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Generalitat de Catalunya  
**Departament d'Agricultura,  
 Ramaderia, Pesca i Alimentació**



**Fons Europeu Agrícola  
 de Desenvolupament Rural:**  
 Europa inverteix en les zones rurals

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*Order ARP/133/2017, of 21 June, approving the regulatory bases of grants for cooperation for innovation through the promotion of the creation of European Association for Innovation task forces in terms of agricultural productivity and sustainability and the execution of innovative pilot projects by these groups.*

*Resolution ARP/1868/2017, of 20 July, organising the subsidies corresponding to 2017.*

Project ID: 047\_2017