













## **R&D** Capabilities

Departments, centres and research institutes of the UAB^{CIE} Sphere have demonstrated excellence in their field of R&D, promoting multidisciplinary research and knowledge transfer.

Therefore, we promote collaboration, information sharing and the creation of agreements between research centres and companies with the aim of increasing innovation and business competitiveness.

In this section we present the scientific and technological capacities of the research groups of the Esfera (Sphere)  $\mathsf{UAB}^{\mathsf{CIE}}$  organized by subject.



APLICATIONS	SOLUTIONS
Environmental prevention	Minimising environmental impact
	Tools for sustainability and environmental prevention
	Tools for the prevention of forest fires
	Tools for studying changes in the territory and territorial planning and management
	Predicting levels of pollens and spore allergens
	Prevention of invasions of exotic vegetable species
	Detection of sick buildings
	Forest regeneration
	Maintaining and improving soil health
Environmental Monitoring	The consequences of human activity on terrestrial ecosystems
	Microsystems and sensors for environmental monitoring
	Microsensors for the diagnosis of allergies
	Analysis of the environmental impact of tourism
	Remote Sensing and Geographic Information Systems
	Forest inventories
	Environmental impact of economic activity
Elimination of pollutants	Nutrient removal wastewater
	Degradation of environmental pollutants by biological processes
	Reuse of waste
Energy generation	Renewable energy sourcess
	Materials for the generation, storage and use of energy

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	Local development strategies that enable rural areas to reach a more sustainable peak
	Management of natural areas
	Environmental analysis and land use using satellite images and GIS, with special attention to the water system
	Improved mobility and territorial transport system management
Environmental,	Managing mountain areas
governance	Coastal zone management and marine activities
	Sustainable tourism and local development
	Application of economics and evolutionary models to resources, environmental policy and institutional problems
	Support the definition of climate policies
	Eco-innovation for environmental improvements of products and services

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