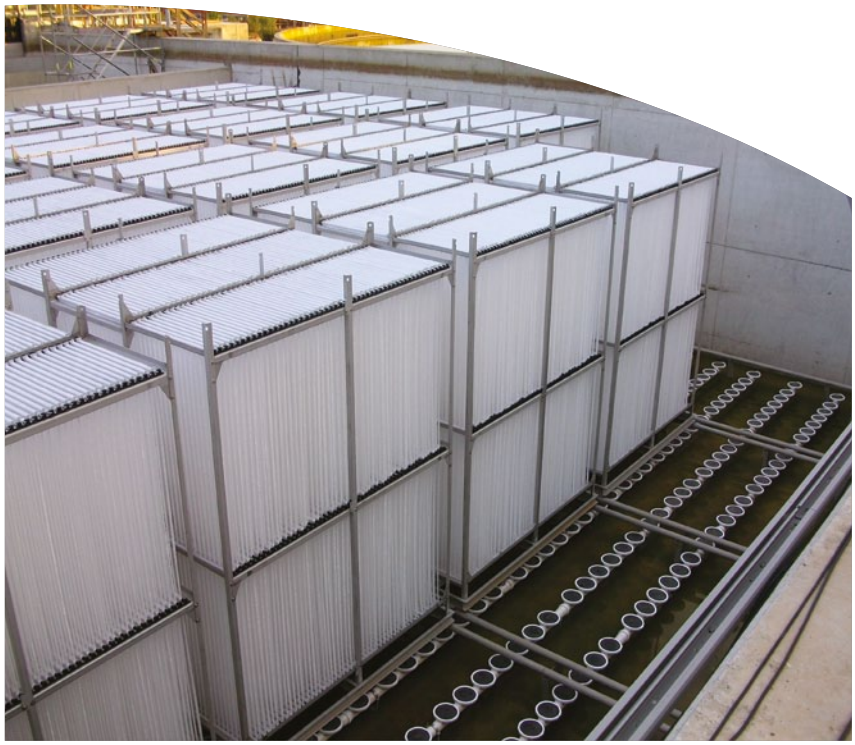
Municipal Wastewater – Treatment

Barcelona, Spain

How we created value

- Dewatering sludge reduces volume for disposal
- Trouble-free operation since start-up
- Plant upgrade increased treatment capacity using existing bioreactors with no new civil works required



Brief
ACA (Agencia Catalane del Agua - Catalan Water Authority) wished to expand the Terrassa Wastewater Treatment Plant, just north of Barcelona. The contract for the works was awarded to FCC Construcción. The Terrassa expansion used Ovivo's Integrated Fixed-film Activated Sludge (IFAS) system, becoming the world's largest AFS reference site.

Solution
Ovivo's IFAS system improves effluent quality, removes nutrients and increases the existing plant's capacity by introducing extra biomass growing surfaces into the bioreactors. Additional surface area comes from numerous polypropylene biotextile curtains submerged in fine bubble-aerated zones in four bioreactors. Each bioreactor has forty-two IFAS cages installed on rails over a gliding system, so cages can be moved for maintenance without removing them. This reduces costs and disruption at the site, whilst increasing the plant capacity plant by 25% from 60,000 to 75,000 m^3/day. Three 43 meter-diameter secondary clarifiers have been totally refurbished to improve secondary settlement and achieve better effluent parameters. A full-scale module showed how the polypropylene biotextiles worked and permitted oxygen transfer tests. A small pilot biotextile cage was used to run performance trials.

Outcome
The plant is able to treat 75,000m^3 of wastewater per day. Pilot trials during the installation, showed the new plant exceeding required results before becoming fully operational in summer 2010.

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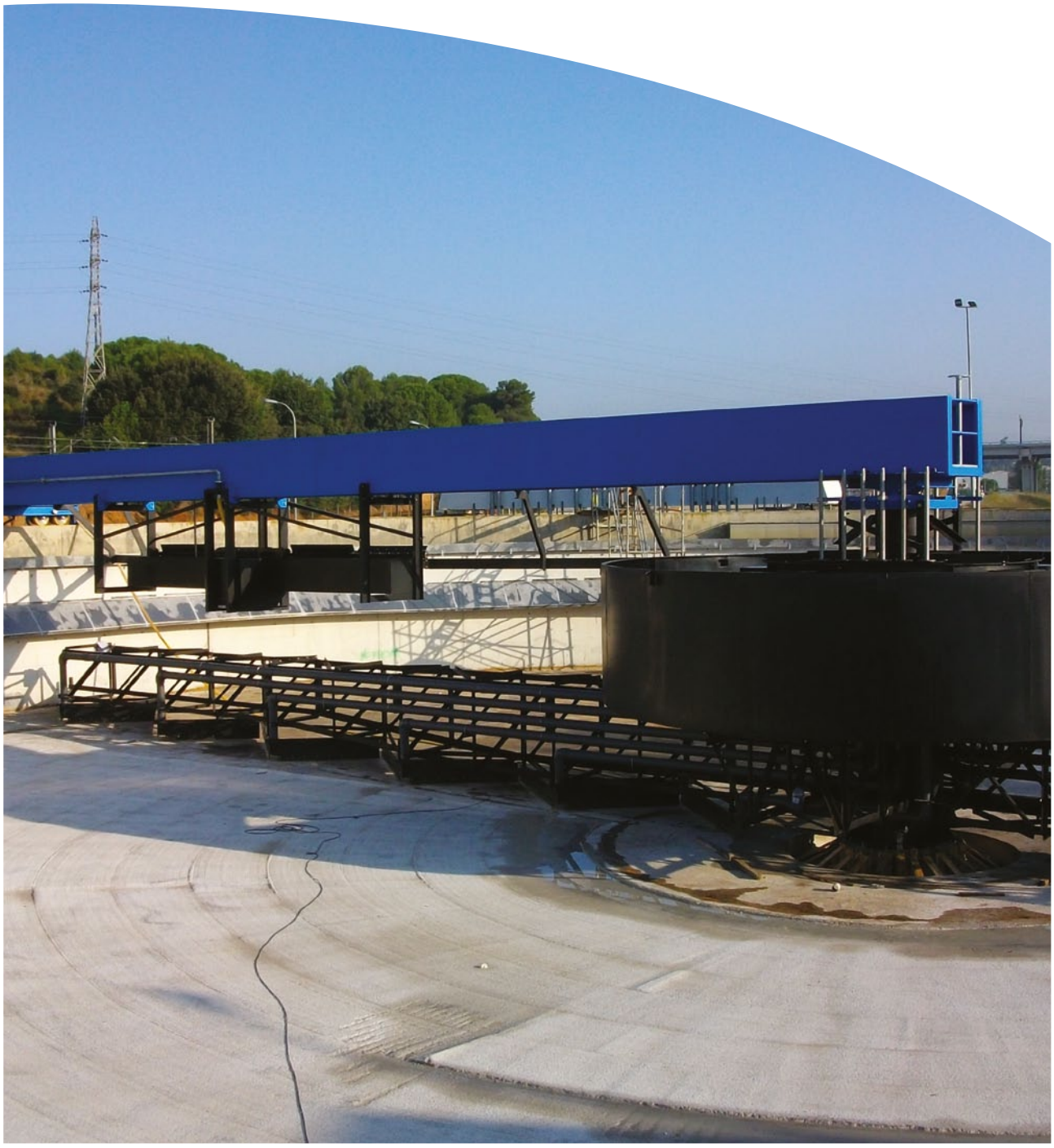

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