

## **EXECUTIVE SUMMARY**

### **Overview**

Techfilt will open a Spanish subsidiary operation, initially focusing on the sales of submerged membranes and membrane bioreactors for wastewater treatment plants. This strategy is based upon strong demand within operating water companies, many of whom are noncompliant with new European Union (EU) directives relating to wastewater treatment.

### **Market Opportunity**

As one of the most arid countries in the EU, Spain has long viewed fresh, clean water as a critical resource for the general population and industry. However, Spain lags behind its northern European neighbors in the quality and availability of wastewater treatment plants. On May 21, 1991, the EU Council issued directive 91/271/EEC concerning wastewater treatment, amended in 1998 by directive 98/15/EC. These directives set EU policies for the treatment of wastewater, forcing municipalities across Spain to make significant investments in wastewater treatment facilities.

The delay in compliance will provide a significant market opportunity in the municipal wastewater treatment sector. The EU Commission has reported that in Spain:

- In “sensitive” areas, only 34 of 113 urban areas (over 10,000 inhabitants) were in compliance. Only 62 of 113 were in compliance with collection regulations.
- 38.2% of the wastewater load discharged into “normal” areas was not properly treated (213 of 458 urban areas not in compliance).
- Continued practice of dumping untreated sewage sludge into surface waters.

Almost 75% of gathered water currently comes from surface water. Recycling this water is becoming increasingly important due to long periods of drought. Currently, just 18% of wastewater in Spain is treated for reuse<sup>1</sup>. Spain has three main problems regarding its water: (1) scarcity, (2) the poor condition of the transmission network and (3) the poor treatment of wastewater<sup>2</sup>. Of the water that should be treated for pollution only 59% currently conforms to regulatory requirements. In Spain there are approximately 1300 wastewater treatment facilities currently in operation<sup>3</sup>.

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<sup>1</sup> [www.asoaga.com](http://www.asoaga.com)

<sup>2</sup> The Spanish Ministry for the Environment ([www.mma.com](http://www.mma.com))

<sup>3</sup> The Spanish Ministry for the Environment ([www.mma.com](http://www.mma.com))

## **Target Customer**

The industry for wastewater treatment in Spain is made up of a number of different players. Operating water companies are responsible for the end-to-end management of the water cycle and are the final users of Techfilt's membrane filtration technologies. However, Techfilt's actual customers are the turn-key contractors upon whom the operating water companies rely for the design, implementation and operations of water treatment plants. Independent environmental consultants also play the role of providing advice on best practices and industry trends to both the turn-key contractors and operating water companies.

To effectively target turn-key contractors, Techfilt must have a clear understanding of how they operate. There are a number of turn-key contractors operating within the Spanish market handling water projects as diverse as desalination projects to industrial feed water applications. Techfilt, for the initial stages of the business, will target exclusively those turn-key contractors with on-going projects in the wastewater treatment industry. Based on our research, turn-key contractors such as Cadagua, Inima, Infilco, and Pridesa<sup>4</sup> are primary targets. Furthermore, these companies have the expertise in emerging filtration technologies to be strong advocates for membrane filtration products. To understand the needs of the turn-key contractor, Techfilt must understand the contractor's customer – the operating water company. These companies are located within each municipality throughout Spain, e.g. Agua de Sevilla and Canaragua<sup>5</sup>.

## **Competition and Risks**

Techfilt faces competition from two major sources: other membrane filtration technology manufacturers, and legacy wastewater treatment technologies such as stabilization ponds and trickle filters. Major competitors include GE Osmonics, Kubota, and Zenon<sup>6</sup>. To combat this competition, Techfilt will undertake direct marketing initiatives to build strong relationships with turn-key contractors. Techfilt will launch an education campaign to build awareness of the benefits of membrane filtration technology as compared to legacy water treatment systems. This campaign will be targeted at water companies and independent environmental consultants.

Techfilt has identified a number of risks to the success of the business venture in Spain. Techfilt has evaluated each of the following risks and has taken steps to mitigate the potential impact to the business:

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<sup>4</sup> Cadagua ([www.cadagua.com](http://www.cadagua.com)), Inima ([www.inima.com](http://www.inima.com)), Infilco ([www.infilco.es](http://www.infilco.es)), Pridesa ([www.pridesa.com](http://www.pridesa.com))

<sup>5</sup> Agua de Sevilla ([www.aguasdesevilla.com](http://www.aguasdesevilla.com)), Canar Agua ([www.canaragua.es](http://www.canaragua.es))

<sup>6</sup> GE Osmonics ([www.osmonics.com](http://www.osmonics.com)), Kubota ([www.kubota-mbr.com](http://www.kubota-mbr.com)), Zenon ([www.zenonenv.com](http://www.zenonenv.com))

- Cultural differences in conducting business
- Lack of established contacts within the Spanish market
- Risk of market saturation and need for diversification longer-term
- The physical differences and distance between Spain and Singapore

### **Marketing Plan**

Techfilt's marketing initiatives will be focused on three major phases: relationship building with turn-key contractors, building market awareness for membrane filtration technologies, and supporting local environmental organizations. Techfilt believes that the key to establishing long-term relationships with its customers is to create value above that which its competitors are currently capable. Techfilt will base its first phase approach on improving the quality of the contractor's Request for Proposal (RFP) responsiveness, thereby helping them to secure the final contract. Secondly, Techfilt will offer a "wastewater treatment-in-a-box" solution comprised of standard design templates for treatment facilities as a way of decreasing the contractor's time to build. Finally, Techfilt will offer a 15 year future compliance guarantee by which it will certify that its filtration membrane modules will be well above the requirements established by the EU for wastewater treatment.

As a secondary marketing approach, Techfilt will deliver a series of educational seminars and electronic newsletters targeted at water operating companies and independent environmental consultants as a way of building awareness of compliance requirements and emerging technologies and solutions designed to meet such requirements. In all aspects of its promotional and public relations campaign, Techfilt will adjust to local Spanish business customs so as to establish the most enduring relationships possible with its future customers.

### **Operational and Organizational Strategy**

Techfilt will establish itself in Barcelona, Spain as a sales subsidiary of Techfilt Singapore. To satisfy initial demand, complete products will be imported from Singapore, including modularized equipment packages – made up of the housings, piping and valves. As order volumes dictate, Techfilt will shift the fabrication of membrane filtration modules from Singapore to Spain. This localization will significantly reduce delivery times and improve relationships with turn-key contractors. Techfilt Spain will use subcontract fabricators, such as Idesa, a high quality fabricator located in Asturias, Spain<sup>7</sup>. Idesa will assemble the filtration

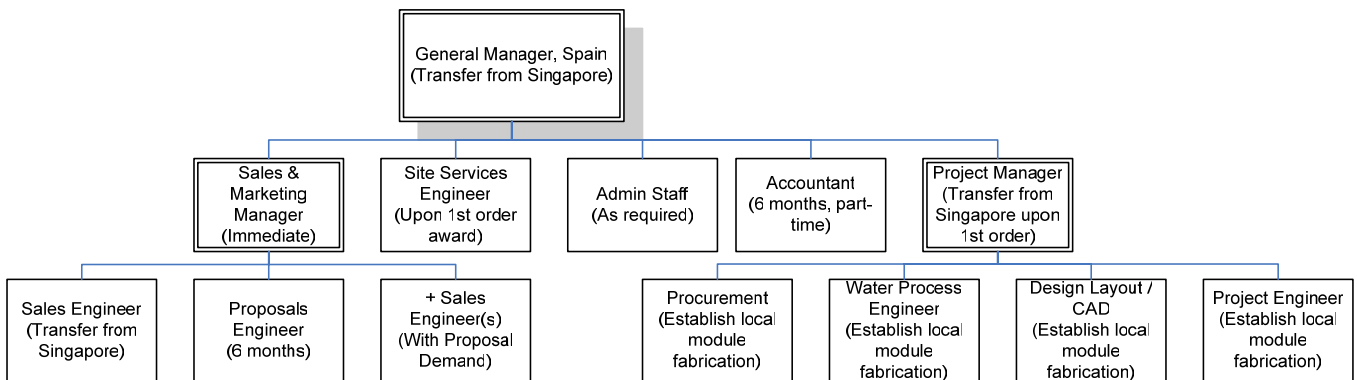
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<sup>7</sup> [www.idesa.net](http://www.idesa.net)

membrane (proprietary technology imported from Singapore) into a functional module to be shipped to the final client site. The fabricator will build to designs generated initially by the engineering and design department in Singapore. As local expertise grows, module design for local customers will shift to the Spanish office. To facilitate this process, Techfilt Spain will develop standard package designs for different types of process conditions commonly found in the local market. Potential delays that could arise due to shipment times between Singapore and Spain will be eliminated through meticulous attention to detail at the time of order and by aligning Idesa with the local design team to integrate the proprietary Techfilt technology.

Over time, the Spanish office will become the headquarters for Techfilt’s European operations with satellite sales offices opened throughout the EU based on demand. In the current climate, with the low modularization fabrication costs of Spain, coupled with the open trade policies of the EU, we would expect to fabricate and export plant modules from Spain across Europe.

**Table A – Proposed Organization Structure**



The Sales and Marketing Manager will play a critical role in recruiting and relocating staff for the Spanish subsidiary. The role of Sales and Marketing Manager must be filled by a Spaniard with excellent connections and solid previous experience in the water industry. In addition, the office will be bi-lingual English and Spanish to facilitate communication between the local market and the Singapore headquarters.

**Financial Plan**

The projected financial statements were prepared using an exchange rate of 2.15 SGD to 1 EUR.

*Revenues:* Techfilt Spain will generate revenues by selling filtration membrane modules to turn-key contractors. As Techfilt Spain launches in the Spanish market, the initial 12 months

will be spent establishing partnerships, making contacts and fulfilling initial customer orders. In 2005, Techfilt expects to earn minimal revenues of 100,000€ (215,000 SGD). With the growth of Techfilt Spain's customer base, revenue flows will increase. Revenues are projected to reach 2M€ (4.3M SGD) in 2006, 4M€ (8.6M SGD) in 2007 and 5M€ (10.8M SGD) in 2008, consistent with Techfilt's position as a new entrant in the market. Positive net income will be achieved in 2006.

*Costs and Expenses:* The primary cost drivers for Techfilt Spain are, on average: COGS (45.5%), salaries and marketing (37%) and depreciation (21.5%).

**Table B – Income Statement Techfilt Spain**

<b>Income Statement: Spanish office (in SGD '000)</b>				
	<b>31-Dec-05</b>	<b>31-Dec-06</b>	<b>31-Dec-07</b>	<b>31-Dec-08</b>
Operating Revenues	215	4,300	8,600	10,750
COGS	(98)	(1,957)	(3,915)	(4,893)
Gross Margin	117	2,343	4,685	5,857
Expenses	(875)	(1,453)	(2,213)	(2,652)
Depreciation	(9)	(171)	(343)	(428)
EBIT	(766)	719	2,130	2,777
Interest Expense	(89)	(161)	(161)	(161)
PBT & Minority Int	(856)	557	1,968	2,615
PAT	(856)	671	1,289	1,710

*All projections based on a current exchange rate of 2.15 SGD to 1 Euro.*

*Overall financial highlights:*

- Total capital required will be SGD 2,044,000. Operations will become cash flow positive in 2007 and are estimated to reach break-even point at the end of 2009.
- Sensitivity analysis shows profitability under all scenarios in 2006 and beyond.
- The capital required to launch Spanish operations will be financed through a long-term bank loan at the rate of 7.9%. Reliance on debt financing will offer Techfilt Spain a tax shielding effect worth approx. SGD 554,000 from 2006 - 2008.
- Net present value is positive (value-creating for Techfilt) for all costs of capital between 5% and 13% and growth rates between 0% and 5%.