

## DELEGATION REQUEST

**Names of persons speaking:** Michael Leopold, Sean Kawakami

**Organization you are representing:** Convertus Group, Circular Waste BC

**Primary purpose of the organization:** Establishing municipal partnerships to divert organic waste through purpose-built facilities and material management expertise.

**Number of members:** 60

**Mailing address:**

981 Maughan Road  
Nanaimo, BC V9X 1J2

**Contact name:** Sean Kawakami

**Subject matter:** Organic waste processing and diversion, facility optimization and risk mitigation – specifically Convertus Group, Circular Waste BC organizational background and core competencies related to the region’s organic waste diversion goals.

**Specific request of the regional district, if any (i.e. letter of support, funding):** Consideration of alternative options to support Comox Valley and Strathcona Regional Districts and their respective constituents in the progressive management of organic waste from residential, industrial, commercial and institutional sources.

**Requested meeting date:** December 3, 2020

**Audio-visual equipment needed:** Overhead projector with HDMI input capable of supporting PowerPoint presentations.



# Introduction

Comox Strathcona Waste Management |  
December 2020



# The Convertus Group Goals

1

To be the leading and most advanced organic waste operator in North America.

2

To act as a key component of the circular economy by maximizing the re-use of nutrients in the food chain and utilize their renewable energy potential.

3

To play a meaningful role in reducing methane emissions by supporting landfill diversion mandates.

4

Partner with local communities to design-build-service and operate sustainable organic waste management solutions leveraging our unique European engineering and advances in technology and operations.

# Together we are the only organic waste processor in North America that offers integrated services.



## Design + Build

### BIOLOGICAL TREATMENT

We specialise in three types of biological treatment

1. Anaerobic digestion (AD)
2. Composting and bio drying
3. Odour reduction systems

### MECHANICAL TREATMENT

- We specialise in designing and constructing the most efficient and sustainable integrated mechanical solutions
- By cooperating with suppliers throughout the world, The Convertus Group is able to provide solutions at any time and place



## Operate

### PLANT OPERATION

- We operate long term waste management contracts focused on a holistic end-to-end waste solution to local municipalities, as well as commercial businesses



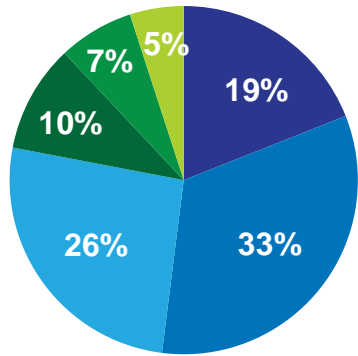
## Service

### SERVICES

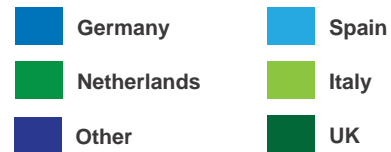
We offer three types of service models

1. One-off maintenance
2. Visit contracts
3. Full service contracts

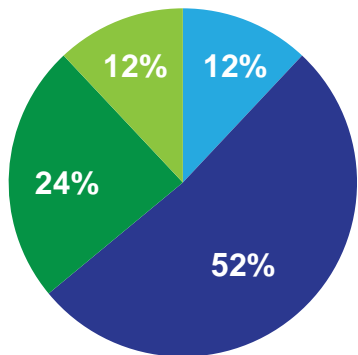
# WTT has a large installed base of 114 projects globally



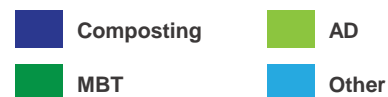
Installed Base by Geography



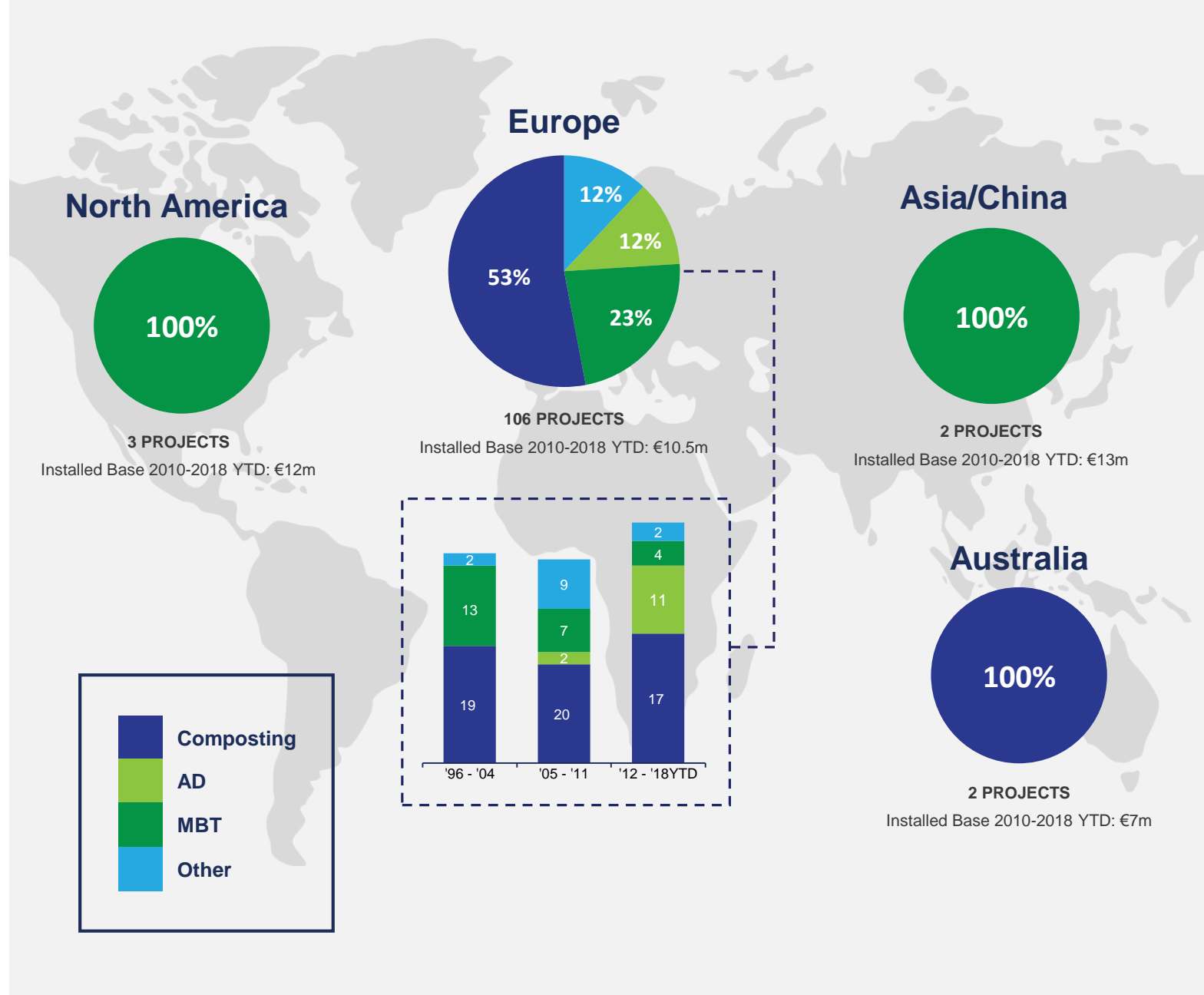
Total = 111 projects



Installed Base by Type

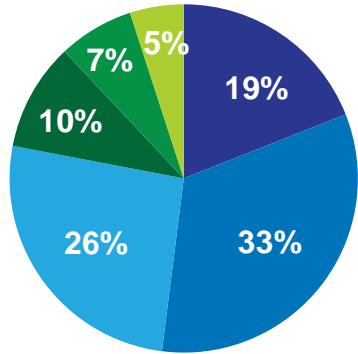


Total = 111 projects

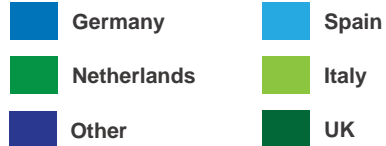


Growth in North America and Australia initiated on the back of existing European customers active in the respective geography. The expansion into Asia can be attributed to the unique track-record of the Company in ALBA's home market Germany

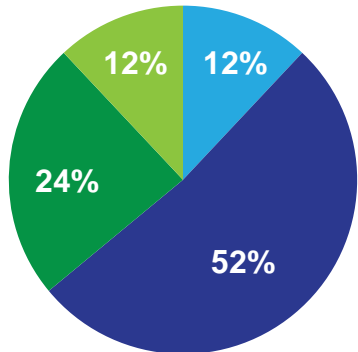
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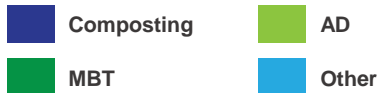
## Installed Base by Geography



Total = 111 projects

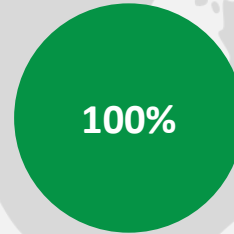


## Installed Base by Type



Total = 111 projects

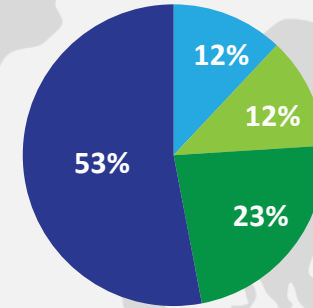
## North America



3 PROJECTS

Installed Base 2010-2018 YTD: €12m

## Europe



106 PROJECTS

Installed Base 2010-2018 YTD: €10.5m

## Asia/China



2 PROJECTS

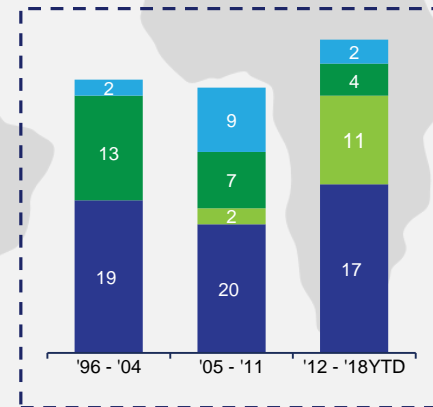
Installed Base 2010-2018 YTD: €13m

## Australia

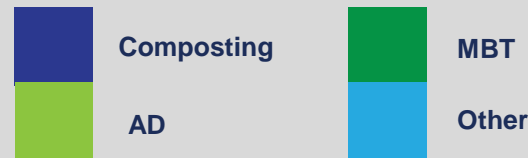


2 PROJECTS

Installed Base 2010-2018 YTD: €7m



## Blue Chip Clients



Growth in North America and Australia initiated on the back of existing European customers active in the respective geography. The expansion into Asia can be attributed to the unique track-record of the Company in ALBA's home market Germany





DESIGN + BUILD

# Global Hallmark Projects

SURREY CA



## Surrey Biofuels Processing Facility

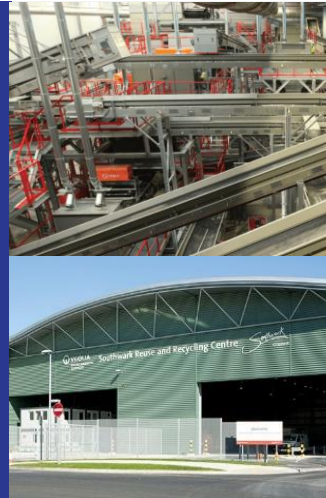
**Customer:** Orgaworld + Renewi + WTT

**Capacity:** 115,000 tons of organic waste per annum

**Scope WTT:** Design and build of the process technique for dry AD-tunnels, hybrid tunnels, composting tunnels, odour abatement system, biofilter, flare and fermentation tank with gas storage

The Surrey project is the first fully integrated biofuel plant in North America and serves not only as an example to engineer new plants in NA but also allows WTT to start revamping the large installed base of sub-par brownfield plants across the continent

SOUTHWARK UK



## Southwark Biofuel Processing Installation

**Customer:** Veolia

**Capacity:** 80,000 tons of organic waste per annum

**Scope WTT:** Design of complete MBT with integrated biofuel production. Detailed engineering of machinery and process-technique

The Southwark project illustrates WTT's engineering flexibility and ability to act as a strategic partner to its clients even in the most complex engineering challenges

MELBOURNE AU

## Dandenong Organics

**Customer:** Sacyr

**Capacity:** 120,000 tons of green waste per annum (future proof for introduction of FOGO)

**Scope WTT:** Design and build of the process technique for 12 composting tunnels, odour abatement system, biofilter







# What Our Customers Think

“When completed, the facility will be the largest of its kind in North America with a capacity to process 100% of the City’s organic waste, helping Metro Vancouver achieve its regional 70% waste diversion target.”

**LINDA HEPNER | MAYOR OF SURREY**


“In conjunction with [The Convertus Group], Veolia has partnered to build this unique facility in the centre of London. [The Convertus Group] has utilised various equipment to enable us to tackle the challenge of waste management in an urban setting.”

**MATTHEW PIOTROWSKI | OPERATIONS MANAGER VEOLIA SOUTHWARK**



CONVERTUS GROUP

# Operated Facilities




### Surrey BC

Anaerobic Digestion  
+ Tunnel Composting

**Built:** 2016  
**Size:** 5 ha  
**Composting tunnels:** 7  
**AD/Hybrid tunnels:** 10

Category	Value
Current Output	100k
Operating Capacity	95k
Permitted Capacity	115k




### Ottawa ON

Tunnel Composting

**Built:** 2010  
**Size:** 10 ha  
**Composting tunnels:** 6 → 8

Category	Value
Current Output	81k
Operating Capacity	100k
Permitted Capacity	150k




### Nanaimo BC

Tunnel Composting

**Built:** 2003  
**Size:** 2.3 ha  
**Composting tunnels:** 4  
**Maturation Base:** 3

Category	Value
Current Output	18k
Operating Capacity	35k
Permitted Capacity	40k



### London ON

Tunnel Composting

**Built:** 2006  
**Size:** 5 ha  
**Composting tunnels:** 12

Category	Value
Current Output	81k
Operating Capacity	93k
Permitted Capacity	150k



OPERATE & SERVICE

# Processing Capabilities

UNIQUELY POSITIONED WITH ACTIVE CAPABILITIES



## Tunnel Composting



Ability to obtain 40 - 50% evaporation



Deal with complex & contaminated organic waste streams



Allows for curbside delivery of fresh waste daily with no pre-treatment required



## Dry AD + Wet AD



Dry AD suited for complex organic waste streams



Suitable for SSO streams of high calorific value



Generates renewable biomethane gas used for electricity generation and injection into natural gas grid



## Main benefits of offerings:



Ability to operate closer to customer



Reduces processing time / increases throughput



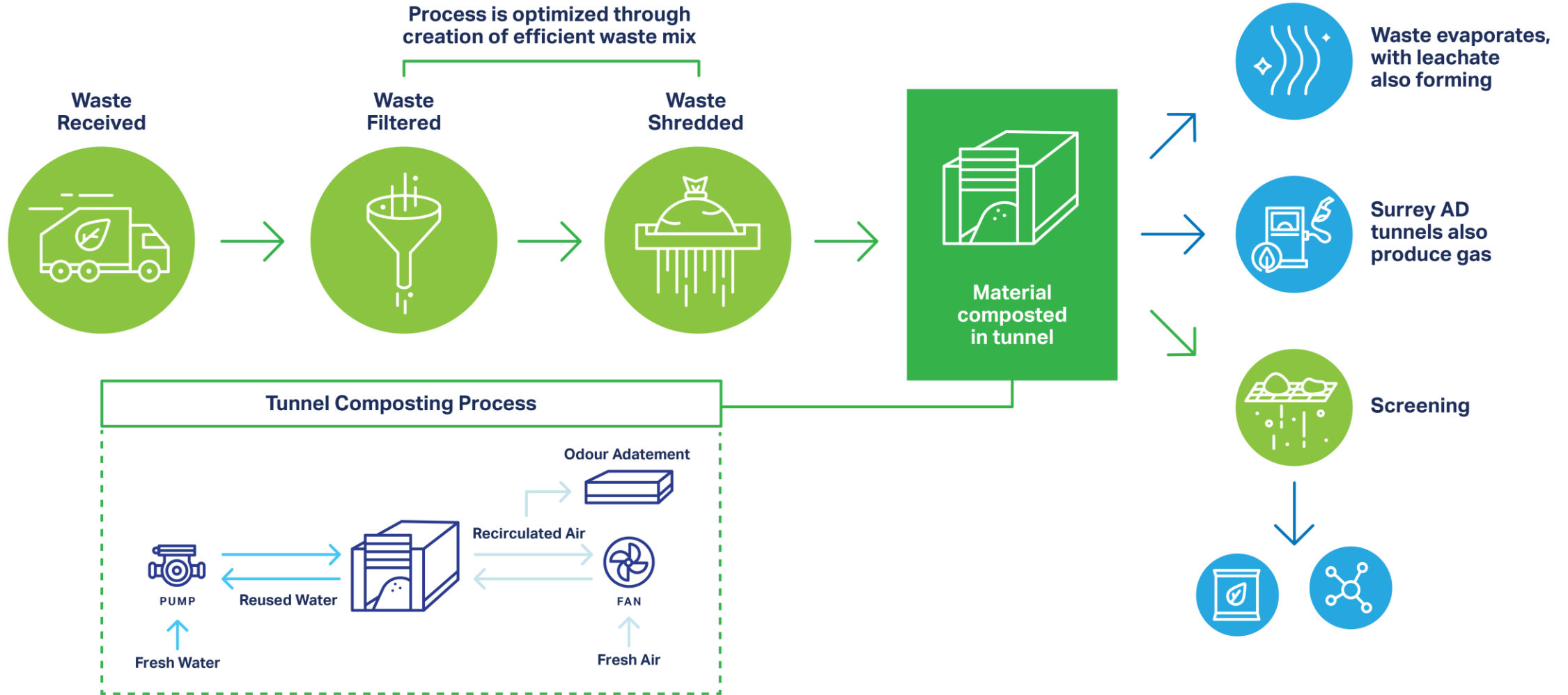
Reduces odour footprint






Ability to deal with complex and contaminated organic waste



# Process Value Chain



# Market-leading Odour Abatement and Monitoring Technology

<b>ODOUR ABATEMENT</b>	 <p>✓ <b>Ammonium Scrubber</b></p> <p>Improved ammonium absorption efficiency means less odour</p>	 <p>✓ <b>Bio-scrubber/ Humidification</b></p> <p>Improved water absorption of air pollutants results in less odour</p>	 <p>✓ <b>Biofilters</b></p> <p>Improved absorption of odorous gases results in less odour</p>
<b>MONITORING</b>	<p><b>1</b> Real-time Environmental Monitoring Platform uses meteorological data and eNose measurements to electronically model potential odour disturbances in the surrounding communities</p>	<p><b>2</b> Improved ammonium absorption efficiency means less odour</p>	<p><b>3</b> Odour monitoring allows Convertus to confirm conclusively that facility is not responsible for a particular reported issue</p>



# Strong customer relationships

have supported management in securing long-term intake volumes and optimizing contracts.

INTAKE	EXAMPLE OFFTAKE CUSTOMERS
<p>Whilst municipalities still represent a growing core customer base for Convertus...</p>	
	
<p>...the Company's technologies are increasingly attracting commercial parties</p>	
	





**Thank You**

*We look forward to hearing from you.*