

THE COMPREHENSIVE PIPELINE WASTE TRANSFER SOLUTION (PWCS) CITY ENVIROMENT, SKYCRAPERS AND HEALTH CARE



COMPANY OVERVIEW

Ecosir Group Ltd is specialized in logistic solution for buildings including logistic design, automatic vacuum waste pipeline transfer solutions.

- Ecosir Group has it's headquarter and operations in Espoo Finland (EU), project operations in Espoo, Tampere, Kuopio and Singapore Cities. International market is covered by local certified and key Partners through Ecosir training program
- Company's comprehensive product range includes several solutions for mixed, recycled and organic waste, energy and paper materials and waste management consultation.
- Experience history over 30 years and over 100 major projects and close to 1000 smaller scale vacuum projects
- Member of key environmental and hygienic associations. Certified quality ISO 9001 and environment ISO 14001 standards

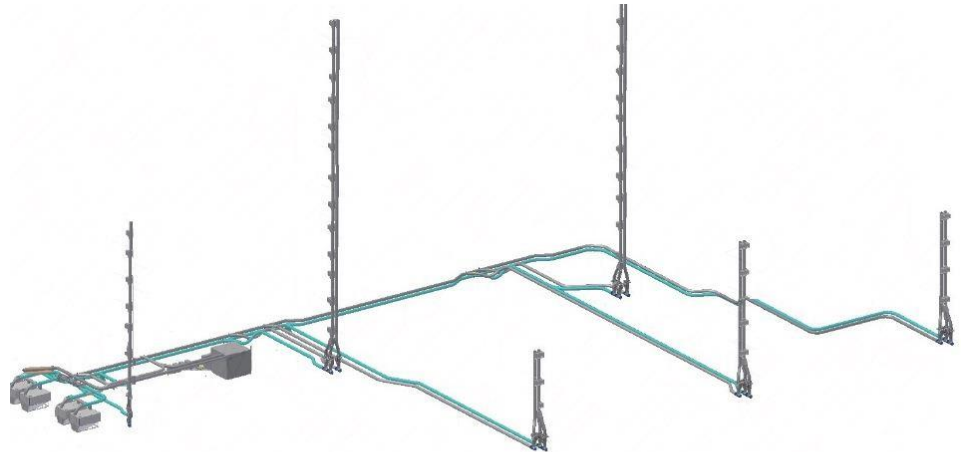


Finnish Environmental Industries (YTP)



The Finnish Society for Hospital Infection Control

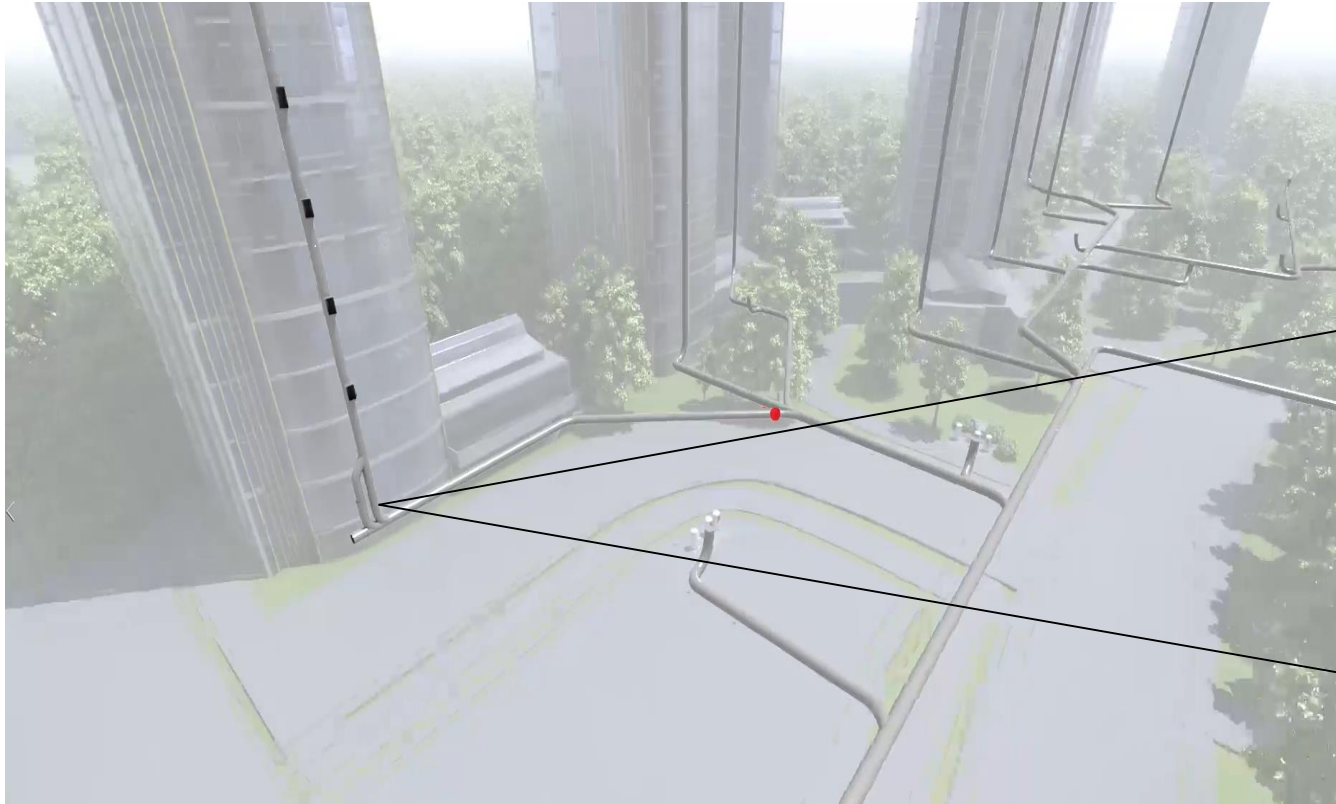
Hygienic Hospital



Waste vacuum system operation and illustration- Indoor Inlet (IDI) at each floor levels



Waste vacuum system operation and illustration – Transfer valve room (Indoor)



DV room:

DV valve for residual and recycled waste equipped with choke sensors



DV valve room – sub control cabin:

Controls by SIEMENS Touch screen or compatible

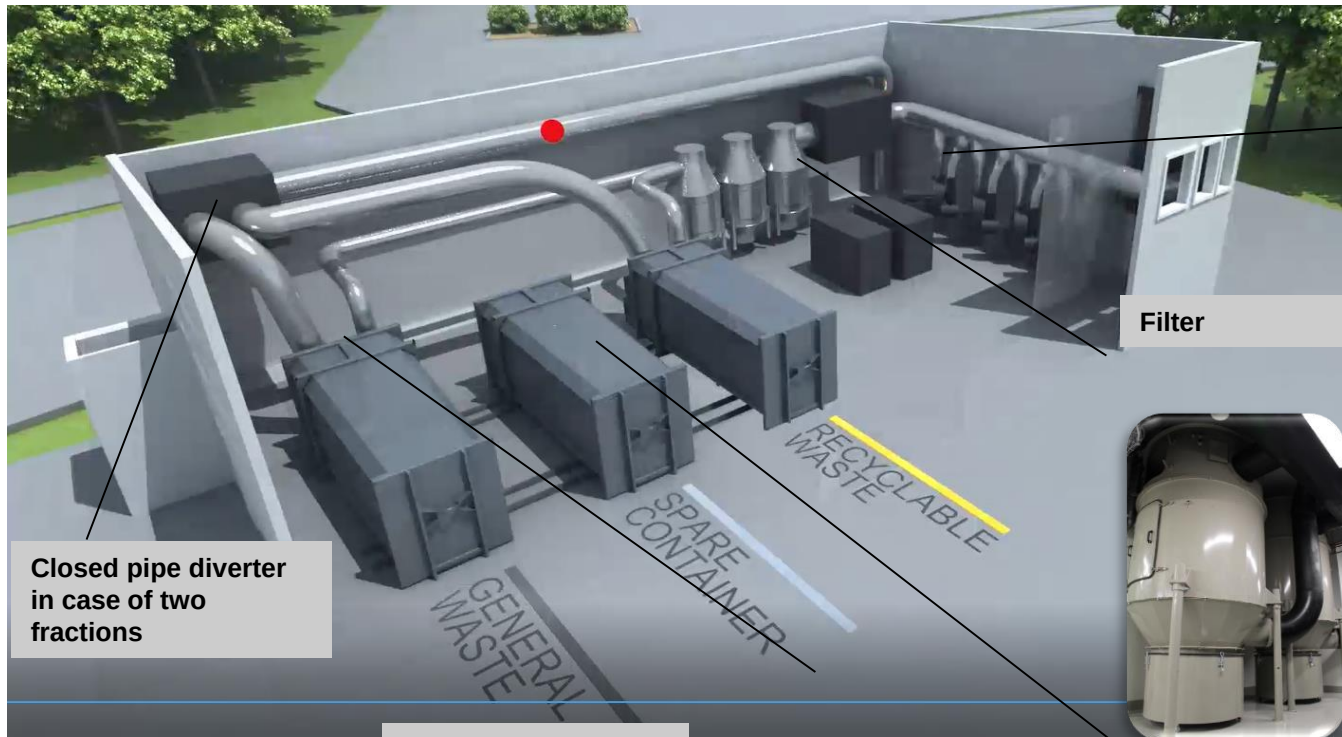
Waste vacuum system operation and illustration – Outdoor Inlets (ODI)

ODI's for General waste and recycled:
-Hand opening (spring load closing)



Waste vacuum system operation and illustration

Waste terminal



Exhausters with energy saving option and frequency converters



Touch Screen 12inch monitoring



Closed pipe diverter in case of two fractions

Low space motorized and powered (cyclone) separation and hydraulically operated refuse compactor 1 or 2 pcs



Waste containers (16-25m³)



Solutions examples

ESPOO CITY CAMPUS - EU



PHASE 1:

XMIT™ – Automatic waste and Laundry transfer solution

- Building with 7 towers size is 69 000 square meters
- Waste fractions pipeline system
- Pipeline D500 about 2 km

PHASE 2:

XMIT BIO - Automatic kitchen food bio waste transfer solution

- Pipeline transfers system for campus kitchen food (BIO) waste serving the whole area

Solutions examples

KUOPIO CITY CAMPUS AREA - EU



PHASE 1: Modules of seven (7) buildings (3 existing+ 4 new):

XMIT™ – Automatic waste transfer solution

- Areas services about 1 million people area every year
- Area has internationally recognized University research and education center
- Pipeline about 2.5 km

PHASE 1:

XMIT BIO™ – Automatic food biowaste transfer solution

- New City central catering service unit with 10 000 meals /day
- Biowaste post processed in biogas plant for electricity

New patented machine-room-less solution by Ecosir Group

Solutions examples

TURKU CITY CAMPUS - EU



PHASE 1:

XMIT™ – Automatic waste transfer solution

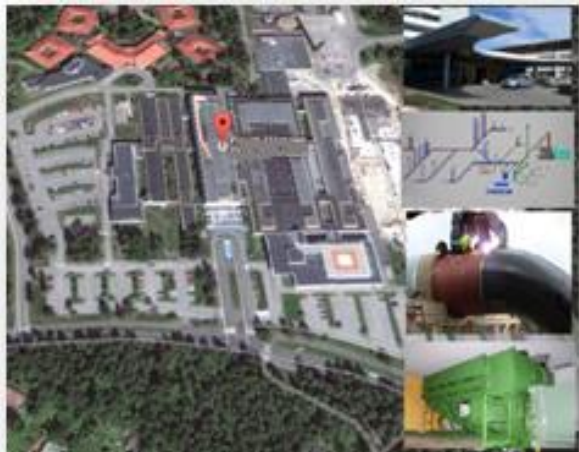
- Pipeline system serving campus areas for waste transfer
- Pipeline about 1.1 km

PHASE 2:

XMIT BIO™ – Automatic kitchen food biowaste transfer solution

- New central catering service unit with over 10 000 meals /day
- Fully automatic waste solution

LAHTI CITY CENTRAL AREA CAMPUS – EU



***XMIT*™ – Automatic waste transfer solution**

- Complete system control – up to 120 ltr bags with D500 pipe
- Mixed waste pipeline transfer
- Area serving 800 000 people/year

Solutions examples

BIG APPLE- RESIDENTIAL TOWERS LINKED WITH SHOPPING MALL ESPOO FINLAND



XMIT™ – Automatic waste transfer solution

- Residential towers linked with the shopping mall complex
- Pipeline about 1 km
- Area 101 000m², 27 000 visitors / day

Solutions examples

STATE OF FINLAND (EU) – PARLIAMENT HOUSE (data confidential)



Solutions examples

STATE OF FINLAND – DEFENCE FORCES (data confidential)



Puolustusvoimat



Solutions examples

RESIDENTIAL ST. PETERSBURG, RUSSIA



RESIDENTIAL ST. PETERSBURG XMIT™

Residential Campus

- Automatic waste transfer solution
- Pipeline about 1 km
- Large residential area

Solutions examples

EPSHP CITY CAMPUS (EU)

- Five buildings connected together
- PWCS waste vacuum system
- Vacuum pipeline DN500 about 2 km
- Serving daily 200 000 people



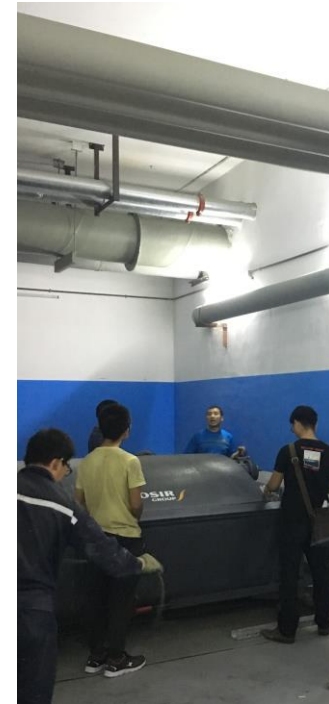
- daily



Solutions examples

Commercial/residential building project Langfang – the second biggest single construction site in P.R. China

- The delivery includes two systems:
 1. Automatic vacuum waste transfer system for eight high rise 5-star hotel towers and
 2. Automatic vacuum Bio food waste system for the commercial center and its 18 restaurants



<https://fi-fi.facebook.com/ecosir/posts/chinas-biggest-construction-site-gets-vacuum-waste-pwcs-deliveries-from-ecosir55/1116654948439190/>

Solutions examples

Major prison building project (EU)

- Central prison in Estonia
- The automatic vacuum waste transfer system
- Other info confidential



Solutions examples

Commercial/residential building project – Smart city project in P.R China

- Automatic waste transfer system for Yinchuan A , SMART CITY area
- CITYMASTER 400 – ODI 21
- System 21 waste ODI's serving 12000 people in 42 building towers



Solutions examples

City of Kuwait Adan Campus PWCS project - Kuwait

- Automatic PWCS waste transfer system
- D500 mm vacuum system for general and recycled waste
- Transfer piping about 2 km



Solutions examples

Intelligent City of Shenzhen P.R China

- Automatic PWCS waste transfer system
- Vacuum transfer system for four (4) waste general and recycled waste
- Transfer piping DN500



Solutions examples

CITY SOLUTIONS

ASTAKA TOWERS, JOHOR BAHRU, MALAYSIA
THE HIGHEST RESIDENTIAL TOWERS IN MALAYSIA AND SINGAPORE
SHOPPING AREA/HOTEL AT THE GROUND FLOOR



XMIT SKYMASTER – Automatic waste transfer system

- Waste system with 140 inlets including towers (INDOORS) and inlets (OUTDOOR) at pool deck
- Mixed waste from residential Tower A and Tower B and pool deck outside The building complex

XMIT SKYMASTER™

- Automatic waste transfer system



Solutions examples

Other project cases

DEL MAR Towers, Cyprus

- Waste pipeline system D500mm
- Serving High Quality residential towers



Solutions examples

Other project cases

Address Towers, Cyprus

- Waste pipeline system D500mm
- Serving High Quality residential towers

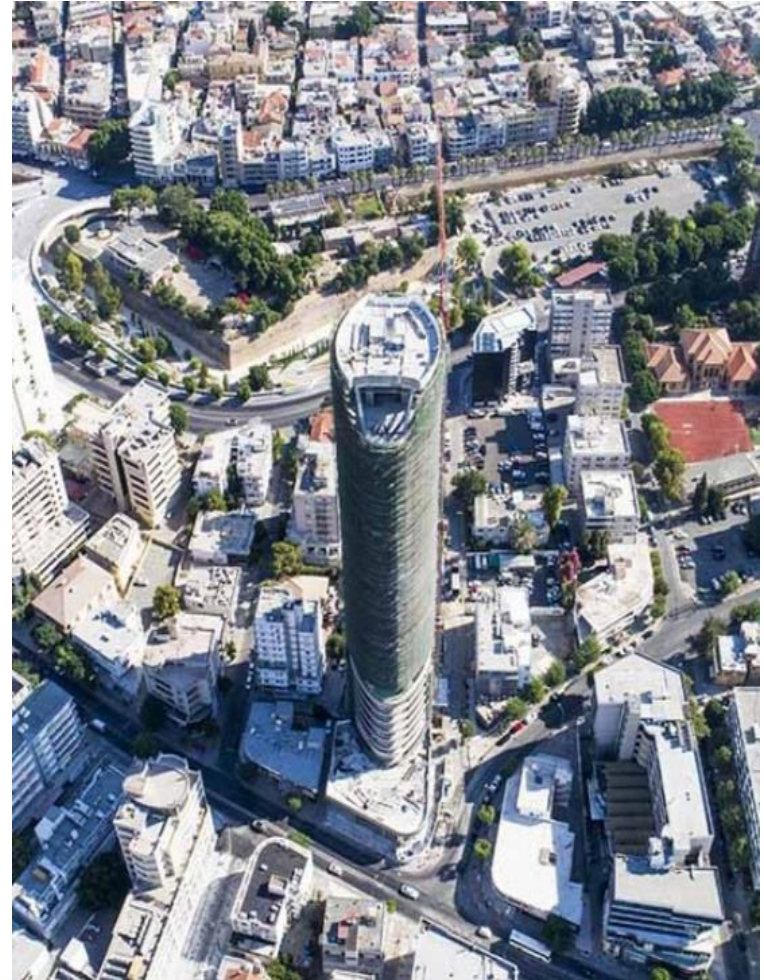


Solutions examples

Other project cases

CYFIELD Tower, Cyprus

- The tallest skyscraper building in Nicosia
- Waste pipeline system D500mm
- Serving High Quality residential customers



Summary:

Secured solution to select Wastecare Finland technology

Superior technology and one of the longest know how

- Company having one of the longest history in its field
- Superior motorized waste/air separation (cyclone) unit only 4 meters high! Save building cost in each waste terminal.
- Systems are up and running 24/7
- Users celebrating miles stones - example 1 000 000 transfers ..
- Remote On-line monitoring 24/7-option via mobile phone Aps!

