

Introduction SophSys team.

Dear Sir/Madam,

This document intends to introduce SophSys and the SophSys team to third parties. With this document we show our background and capabilities in regards to the Pyrolysis technology and our knowledge and experience on waste sorting and recovery and the conversion of gas into electricity.

SophSys and the team.

SophSys is a Dutch company, specializing in converting (household and industrial) waste into energy, using a Type-C chemical recycling technology (Pyrolysis). SophSys is the exclusive distributor for several manufacturers of this Level-C technology.

The Type-C chemical recycling technology is an EU-approved technology for full processing of waste into energy, with a zero-residue status.

The pyrolysis units presented are proven systems, capable of processing waste into energy on a 24/7 basis and it is approved to handle mixed-waste compositions. As such, the Type-C Chemical Recycling technology by SophSys is seen by the Dutch government as the best available technology to resolve the ongoing and ever-growing waste problems.

SophSys intends to develop and deploy waste recycling facilities within the Netherlands, the greater Balkan region including Croatia, United Kingdom and Ukraine in an attempt to provide sustainable and green solutions for 100% remediation of the collected household and industrial waste.

SophSys has been active since 2016 and has built a strong local and national team.

Within the team are:

- permit specialists
- EPC contractors with the necessary approvals for operating and constructing these types of waste recycling sites
- strategic advisors
- waste specialists
- chemical specialists
- pyrolysis specialists
- engine manufacturers
- engineers
- designers
- financial and banking specialists
- permit specialists
- subsidy and EU funding specialists
- a well-experienced management team

The team enables SophSys to provide turn-key solutions for waste2energy projects for its clients, covering all aspects of a project's development and implementation.



The SophSys owners have been involved in the Pyrolysis technology for many years and are considered industry experts on the subject.

SophSys and its predecessors have been responsible for the development of energy storage technology, have developed a fuel additive for emission reduction on combustion engines and various others. SophSys is the exclusive distributor for the Waste4ME, PGE and Charcotec pyrolysis technology in several European countries including Croatia and the greater Balkan region

The key players in the SophSys enterprise are:

- Mr. Martin La Croix, one of the directors/owners of SophSys, is a former director of various international enterprises, active in a.o. the FMCG sector, as well as in the offshore industry.
- Mr. Martijn Beerthuizen, the other director/owner, is a.o. lecturer at Mariupol State University Ukraine and teaches on innovative technologies such as pyrolysis and renewable energy.
- Mr. Davor Krnic is the leader of the Croatian SophSys team. With a long history in implementing innovative technology for processing plastic waste and training as a chemical weapons inspector for the UN, Mr. Krnic has extensive knowledge of chemical reactions in technical processes and extensive knowledge of local and national legislation for implementation of innovative technology in Croatia.
Mr. Krnic also has considerable experience in chemical synthesis and formulation of toxic products, as well as incineration technology. Mr. Krnic has been responsible for obtaining and operating a pyrolysis installation in Croatia for plastics.

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Project Technical Leader

Mr. Glyn Jones is part of the SophSys operational team and interact with the EPC contractor and all related suppliers and partners to ensure a swift and correct development of the project under EU and Dutch regulations and standards.

Mr. Glyn Jones has spent over 40 years in the Energy sector and was appointed MD of one of the largest UK Electricity Supply Business (Powerline) and the Gas Supply Business.

Mr. Jones was deployed with Ofgem agreement as the National Chair of the CiC Code of Practice Competition in Connections Governance Group

Glyn Jones is registered as a Chartered Engineer (CEng) and is a Member of the Institute of Engineering Technology (MIET) and a Member of the Institute of Management (MCMI).

Waste4ME process and legislation specialists, chemical specialists

Waste4ME is a technology developer/owner and manufacturer of pyrolysis installations.

The owners of Waste4ME have been involved in the writing and implementation of the Dutch and EU legislation on waste and waste processing and this company has extensive knowledge of the waste industry, chemical recycling and how to operate large waste processing facilities.

SophSys has signed an exclusive contract with Waste4ME for the deployment of their knowledge in Croatia and Waste4Me will be part of the technical, operational and legal development of the project and is the manufacturer of the proposed technology.

Waste4ME has a pyrolysis research and development site in the Netherlands, where it processes and researches waste compositions, using pyrolysis technology to obtain technical data. This data will become available to the project.

Mr. Onno Meijerink is one of the owners/directors of Waste4ME and has extensive knowledge of the waste and energy industry. As manager and project leader, he was responsible for the development and operational success of several large energy installations. Mr. Meijerink is considered to be one of the leading experts on waste management and energy from waste in Western Europe.

Mr. Vincent Toepoel is the second owner and director of Waste4ME. Mr. Toepoel was the lead developer on the military pyrolysis project, was a senior consultant for IATA and has successfully managed large projects for the international company Schneider Electric.

Waste4ME works closely together with large international corporations, including DSM, Dow Chemical and SABIC; see below overview.

R&I activities	Partner	
Pyrolysis Cluster Moerdijk (2016-2021)	SABIC, DSM, Port of Moerdijk & more	Setup the pyrolysis cluster with location, demonstration installations (Waste4ME is largest partner) and facilities for measuring compositions. Demonstrate several wastes to product flows to useful molecules, both biomass and waste plastics.
PRIMA (2020)	Dow Chemical, TNO, MRE, CBM, Energy	Research and demonstrate the recycling of mattresses from mechanical followed by chemical recycling. The knowledge of chemical recycling of latex will be used in the project for determining the direction.
DKR350 plastics to oil (2020)	TNO	Measuring emissions and oil compositions of lowest quality recycled plastics with a 5% chlorine content showed heavily reduced chlorine in the oils, but high in the gas. The Life Cycle Analysis made on this flow showed significant reduction in overall emissions for replacing products in the market with circular oils with about 50%.
MIT feasibility study on chlorinated waste (2017)	Internal	Research on how to de-chlorinate plastics thermally in the range of 200 °C to 400 °C before the pyrolysis reactions start at higher rates.
CODEMO, military	Internal	Developing the WER unit for pyrolyzing waste to replace diesel by gas on military camps. It

(2013 - 2015)	results in the operational WER unit in basic form.
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KVT (Royal Van Twist): Gas generator supplier

KVT is the supplier of the LPG-operated gas generators for the project. It holds a Royal approval as a company and was established in 1836, thus having over 175+ years of experience.

KVT is the official Perkins partner for development of gas-operated engines and is a Perkins Approved Gasifier Specialist. KVT is also an official NATO supplier for engines and technology and is responsible for the development and deployment of the gas-operated Perkins engines. KVT has developed the LPG engine for Waste4ME and certified the unit with EU approval on emission.

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Project F1rst: EU and NL subsidy specialist company

Project F1rst is operated by Mr. Frits Heukers. Mr. Heukers is a former province of Drenthe (NL) subsidy specialist with a long history in supporting medium and large companies in their development of renewable energy projects and developers with obtaining funding and support for their inventions and technology upgrades.

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