

Localisation of Mercury waste treatment It's not rocket science!



Zero industrial waste ...!

Reinhard Schmidt, CEO/Owner

We consider ourselves as
technology innovators, suppliers & coaches.

- machinery supply incl. supervision up to 1 year
- since 16 years in 'Made in Germany'
- 10 Mio € annual turnaround
- present clients in EUR, RUS, AUS, AZE, IND, CHN
- 50 % business with mercury waste units

Localisation of Mercury waste treatment

Why?

Basel Convention:

Controlling transboundary movements of hazardous waste and their disposal

econ's Convention – we call it 'Basel 2.0':

Avoidance of transboundary movements of hazardous waste and their disposal

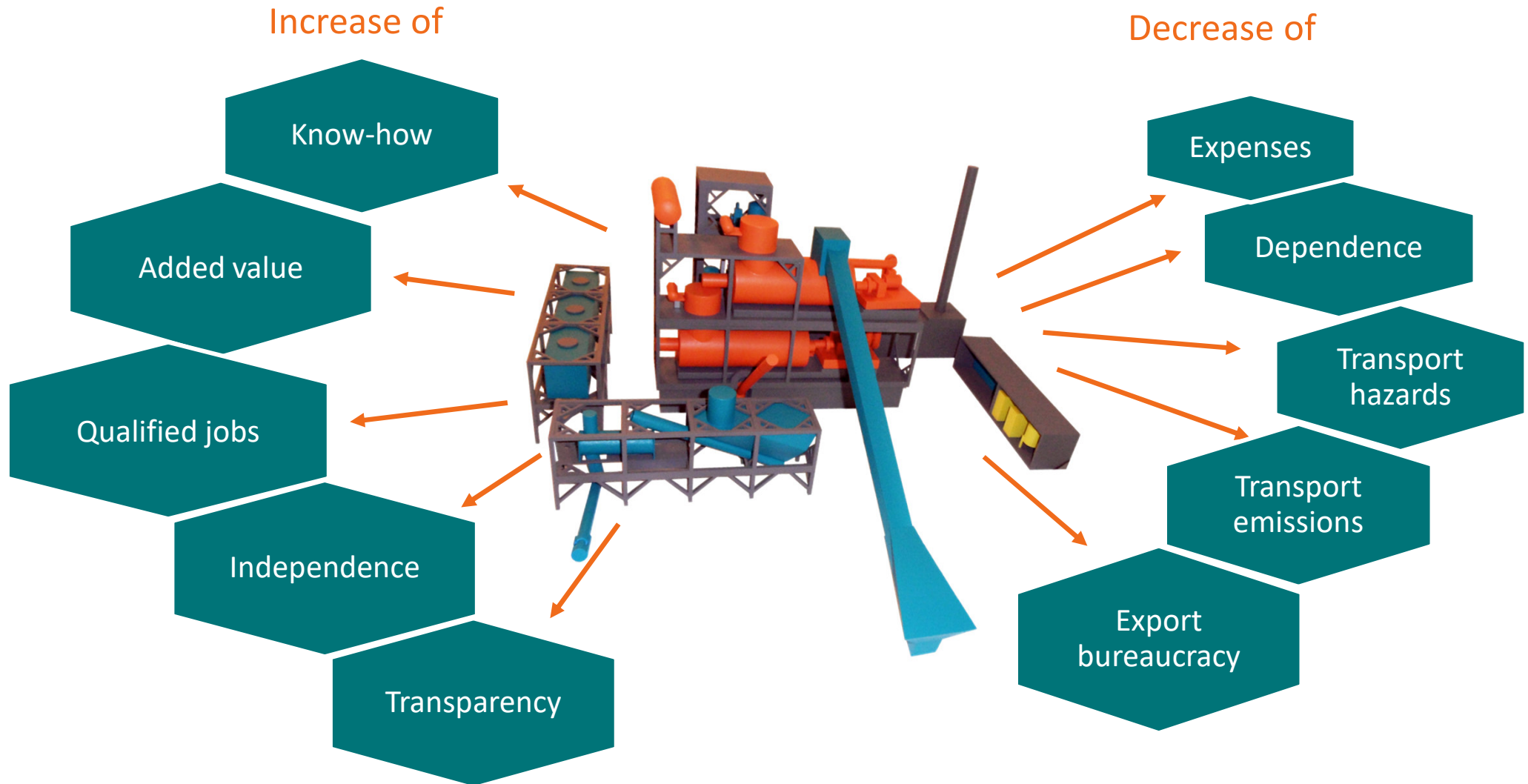
It's all about

taking over responsibility

and saving money!

Decentral treatment of Mercury wastes

Local benefits



3 types of Mercury waste

3 technology options available

Soils & sludge

contaminated with elemental mercury

- **Vacuum distillation - VacuDry[®]**
eventually after soil washing → only the fine fraction goes into thermal treatment
- max. 400 °C; low vacuum < 50 mbar abs

Spent activated carbon & catalyst

contaminated with mercury compounds

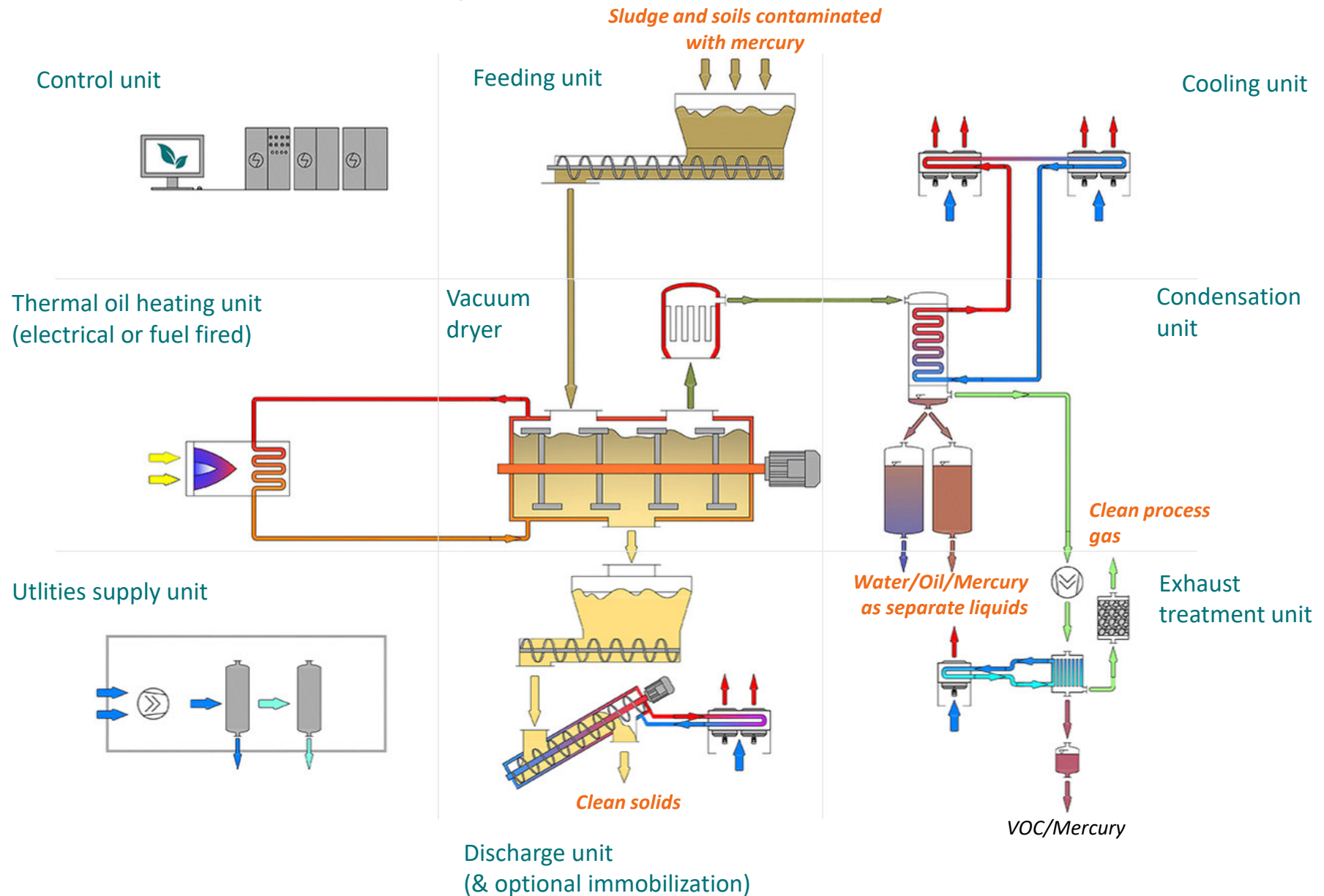
- **High temperature treatment - HTTU**
- max. 1,000 °C; atmospheric pressure

Pure elemental mercury

- **Conversion to HgS**
- max. 200 °C; atmospheric pressure

Soils & sludge contaminated with elemental Mercury

Vacuum distillation - VacuDry®



Soils & sludge
contaminated with elemental Mercury

Vacuum distillation - VacuDry



Soils & sludge

contaminated with elemental Mercury

Vacuum distillation – VacuDry

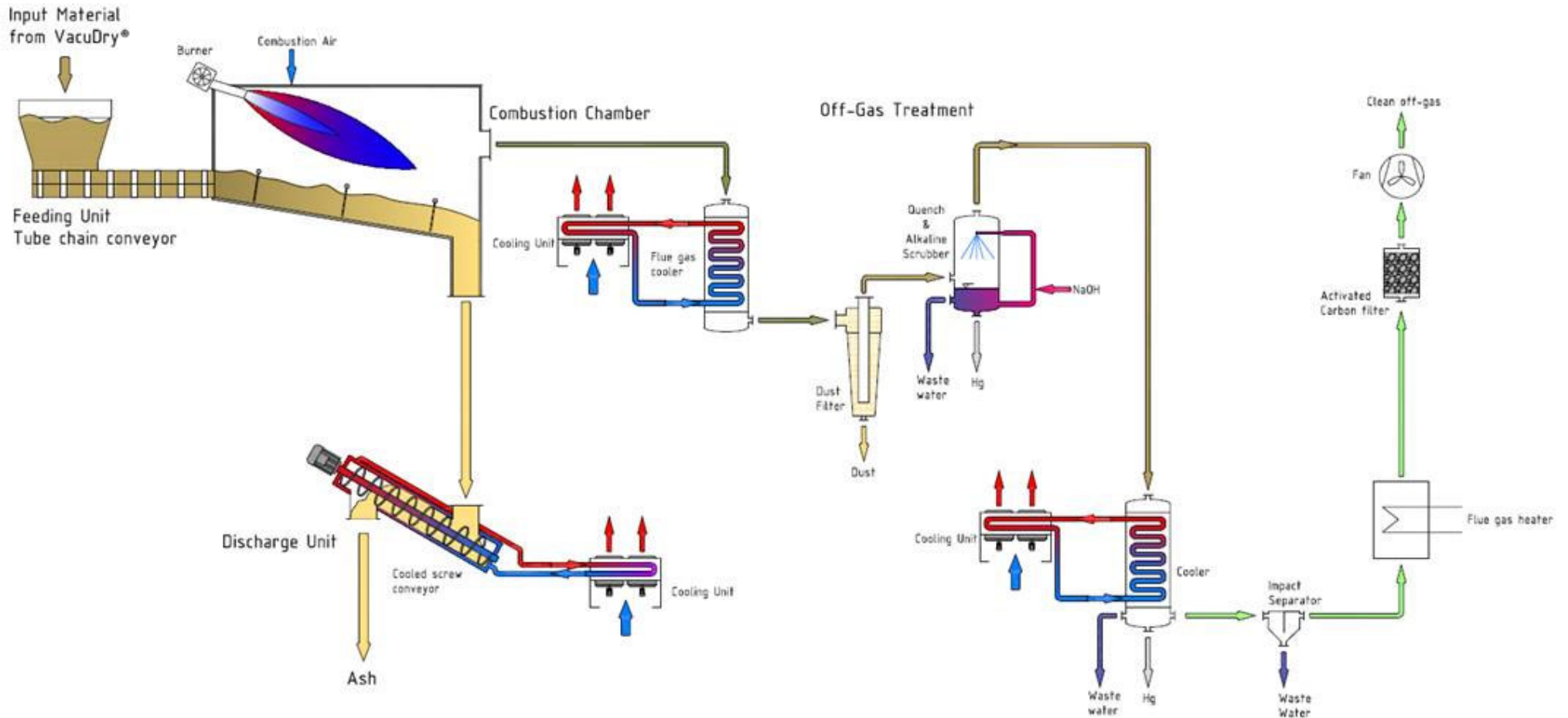
Units available up to 500 tons per day throughput

Exemplary projects:

- Germany (in operation since 1998 !) – hydrocarbon and mercury containing wastes from LNG production (with and without NORM)
- Australia – LNG wastes and tank cleaning sludge containing oil and mercury
- France/India – contaminated soils from former chemical plant/thermometer factory (combined with soil washing)
- Eastern Europe – contaminated soils from earlier mining facility

Spent activated carbon & catalyst contaminated with Mercury compounds

High temperature treatment - HTTU



Spent activated carbon & catalyst
contaminated with Mercury compounds
High temperature treatment unit - HTTU



Spent activated carbon
contaminated with elemental Mercury
High temperature treatment unit – HTTU

Modular equipment available
starting from 100 kg per day throughput

Exemplary projects

- Australia – spent catalyst from LNG facilities containing hydrocarbons and mercury
- Europe – spent catalyst from LNG facilities containing hydrocarbons and mercury

Pure elemental Mercury conversion to HgS

Mobile Mercury Conversion Units

Elemental
Mercury



Elemental
Sulphur



Mercury
sulphide
(HgS)



Pure elemental Mercury

conversion to HgS

Mobile Mercury Conversion Units – MMCU

Units available starting from 100 kg
up to 5 tons per day throughput

Exemplary projects

- Poland – chlor-alkali plant: 130 tons Hg conversion, HgS to salt mine (K+S)
- England – chlor-alkali plant: 400 tons Hg conversion, HgS to salt mine (K+S)

Localisation of mercury waste treatment It's not rocket science!

Reinhard Schmidt, CEO/Owner

info@econindustries.com

econ 
INDUSTRIES

Zero industrial waste ...!



econ industries services GmbH
Schiffbauerweg 1
82319 Starnberg
Germany
+49 8151 446377-0
info@econindustries.com
www.econindustries.com