

REMONDIS & BLACKFOREST SOLUTIONS



meet



Part of the RETHMANN Group

A family-run company, based on 3 divisions

REMONDIS®

WORKING FOR THE FUTURE

Environmental & Technical Services

- Recycling
- Services
- Water
- Metals

Turnover 2021: appr. 7,900m Euros

Employees: appr. 36,000

RHENUS LOGISTICS

Logistics

- Contract Logistics
- Freight Logistics
- Port Logistics
- Public Transport

Turnover 2021: appr. 5,100m Euros

Employees: appr. 35,000

SARIA®

Bio-Industries

- High-quality goods from animal by-products
- Producer of renewable energy
- Service provider for the agricultural and food sector

Turnover 2021: appr. 2,500m Euros

Employees: appr. 11,000

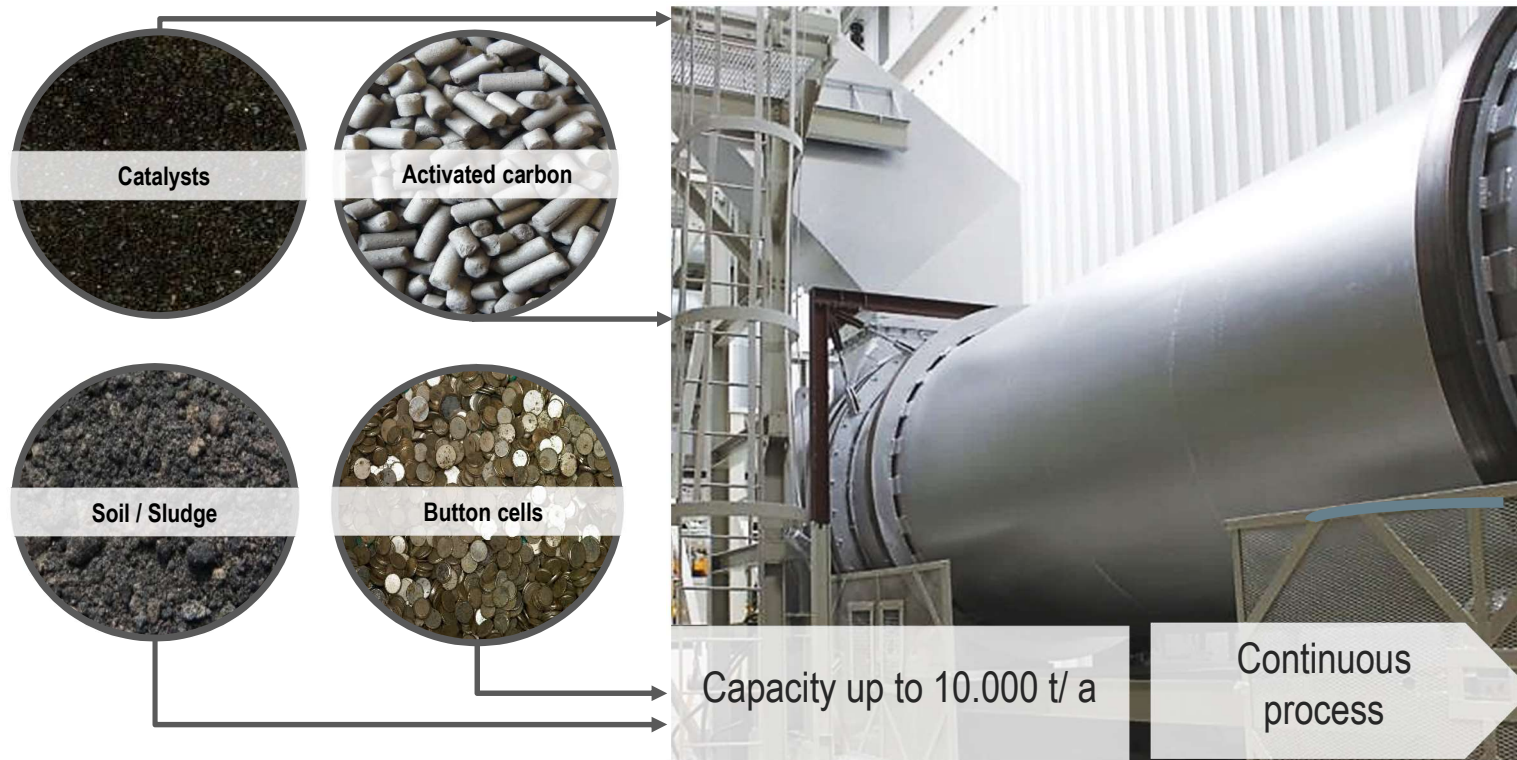
REMONDIS QR, Germany

The Group's mercury specialist

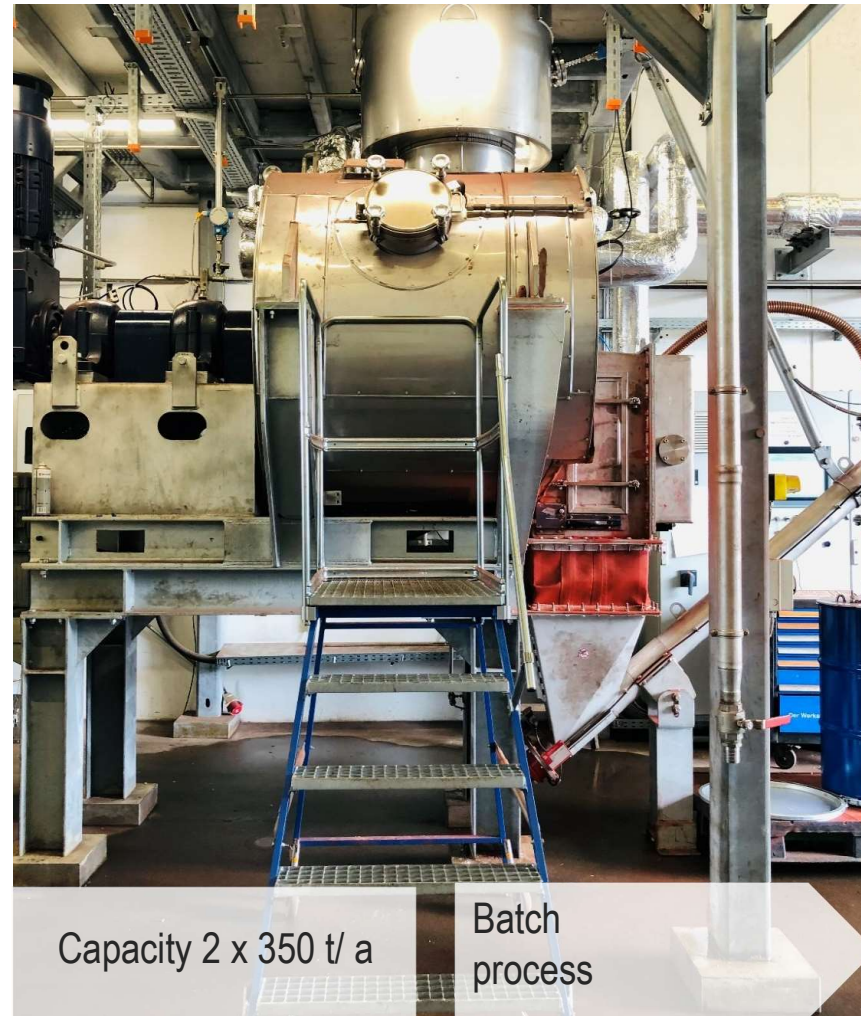
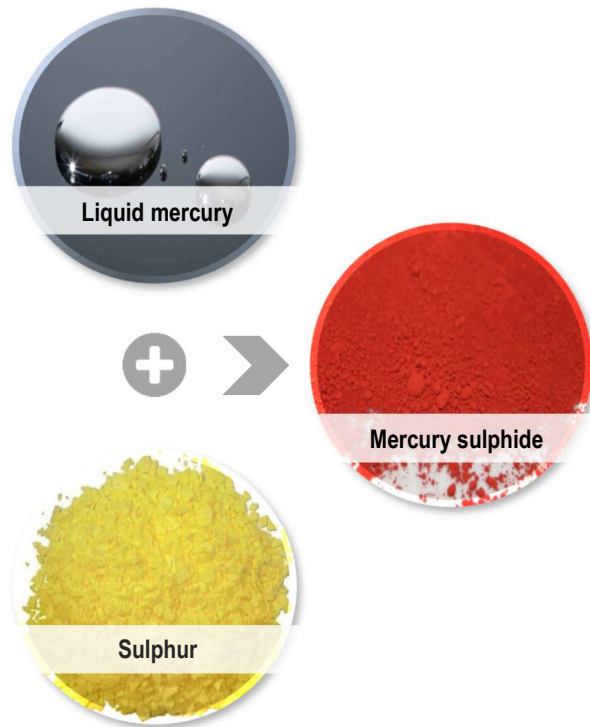
- Certified „Specialized Waste Management Company“
- Established in 1989
... with over 30 years of experience in mercury
- Dorsten (our main site)
 - Two plants for mercury treatment:
 - 1) Rotary kiln
 - 2) Vacuum mixer (Hg → HgS)



Rotary Kiln (Dorsten site) Distillation of mercury contaminated waste



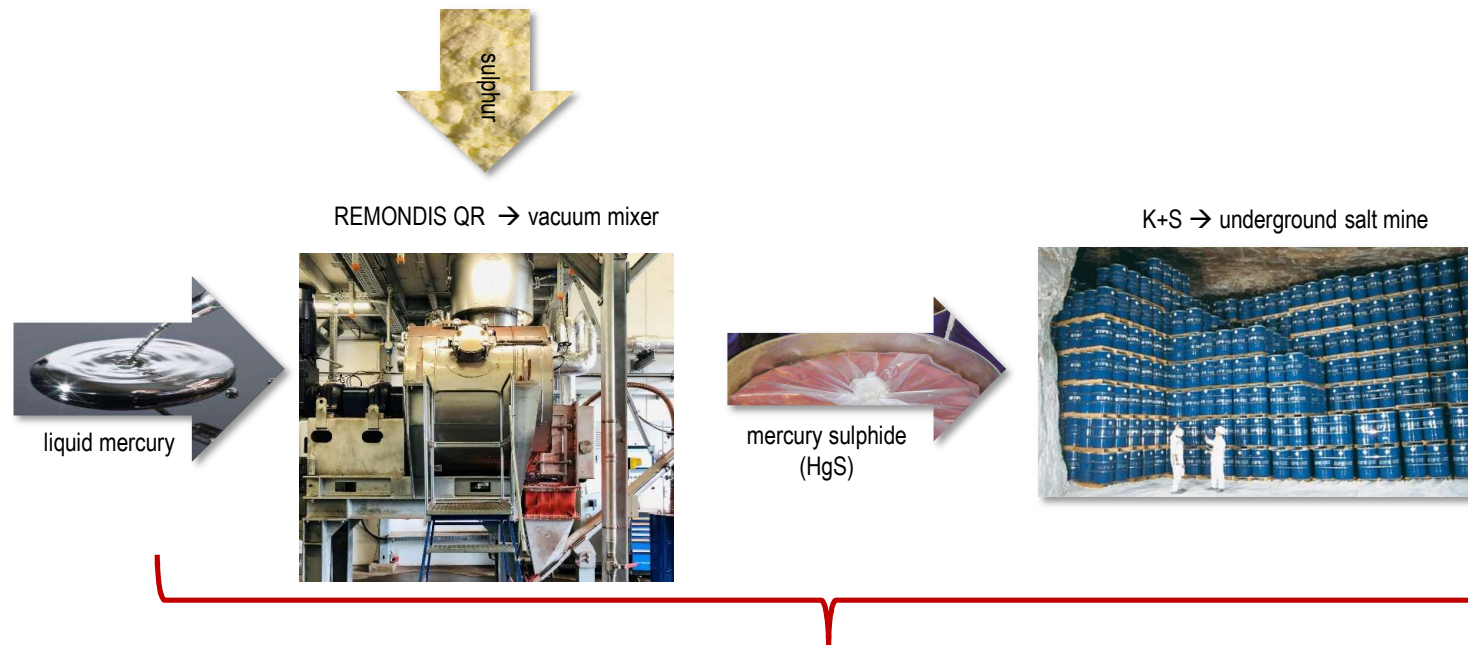
Vacuum Mixer (Dorsten site) Stabilization of liquid mercury



Capacity 2 x 350 t/ a

Batch
process

Stabilization of Hg into HgS – Final disposal of HgS included



- **After arrival of metallic mercury at REMONDIS plant**
 - REMONDIS takes over responsibility for metallic Hg...
 - ... up to final disposal of HgS in German underground mine

Box kiln (Lübeck site)

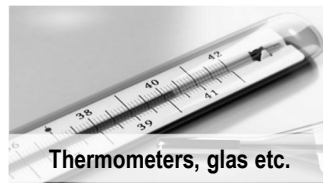
Distillation of mercury contaminated waste (recovery)



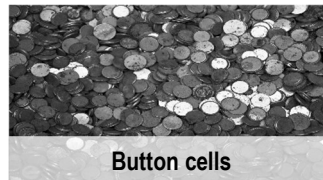
Scrap metal



Amalgam



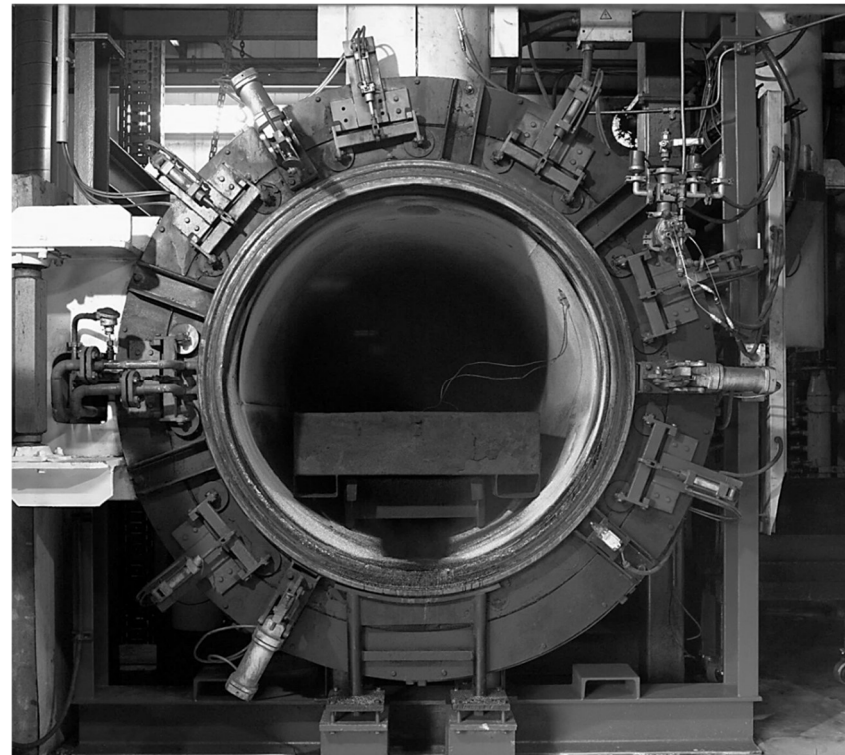
Thermometers, glas etc.



Button cells

Batch process

Capacity
< 300 t/a



REMONDIS QR, Germany

Sites & process technologies

		<u>Site/ location</u>	
		<u>Dorsten</u>	<u>Lübeck</u>
<u>Process technology</u>	Heat / distillation	1) Rotary kiln high temperature treatment	1) Box kiln high temperature treatment
	Chemical	3) Stabilisation of metallic mercury (Hg)	n.e.

REMONDIS QR, Germany

Types of mercury waste & sites

	<u>Site/ location</u>	
	<u>Dorsten</u>	<u>Lübeck</u>
<u>Types of waste contaminated with mercury</u>	1) Spent absorbents, carbon acitvated, soil, sludges,	1) Batteries, switches, relays, thermometers, dental amalgam, lamps, rectifiers, scrap metal, electronic waste
	3) Metallic mercury (Hg)	n.e.

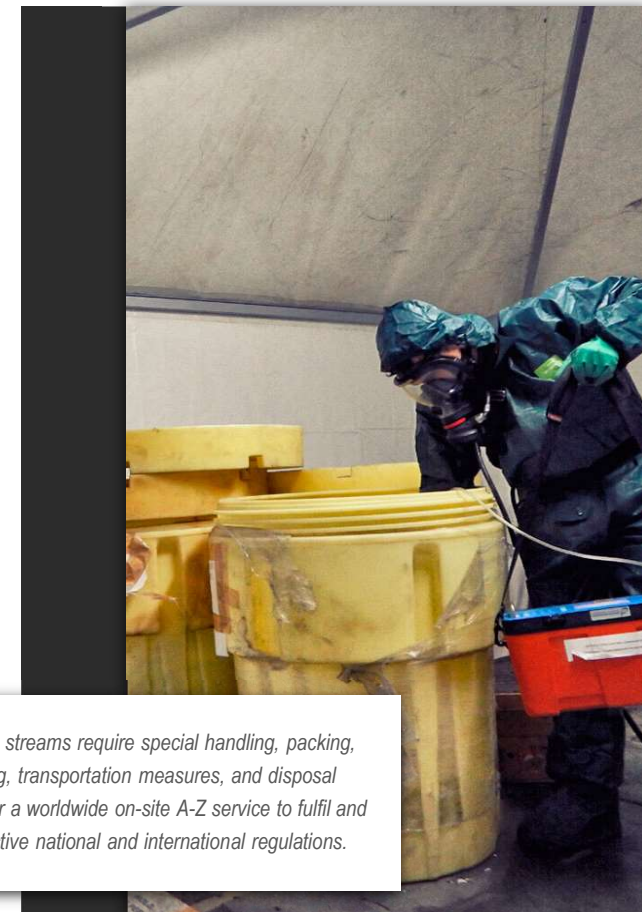
BlackForest Solutions, Germany

What we do

Trading & Operations

On-site operations and technical supervision

- Basel Convention notification service
- On-site packing and labelling of hazardous waste (IMDG & ADR)
- Worldwide logistics management, specialized in solutions for crisis areas
- Cooperation with certified EU hazardous waste disposal facilities (e.g. REMONDIS)



Hazardous waste streams require special handling, packing, licensing, labelling, transportation measures, and disposal systems. We offer a worldwide on-site A-Z service to fulfil and exceed all respective national and international regulations.

BlackForest Solutions, Germany

Who are we?

the RFS GRouP

The **RainbowForest Group** changes the world with a new generation of purpose-driven, impact-oriented ventures, tackling the most pressing environmental challenges of our times.

BLACKFOREST SOLUTIONS

BlackForest Solutions (BFS) is a Berlin-based company active in more than 60 countries. We transfer technical waste management knowledge worldwide to support our partners and jointly make environmental justice in low-and mid-income countries a reality.



BlackForest Solutions, Germany

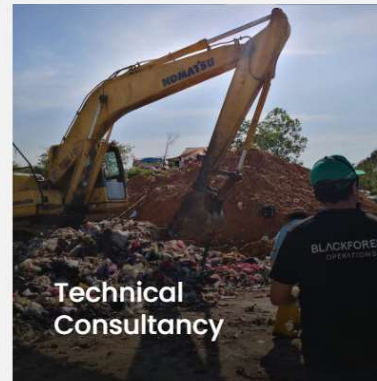
What we do

OUR SERVICES

“To change the world” is easier said than done. We therefore **carefully developed our service departments** based on our team’s specializations, the environmental impact achievable and our clients’ demands. The following core services summarize our portfolio:



- Hazardous waste export and disposal
- Onsite sampling & repackaging [of hazardous waste]
- Basel Convention notification services
- Dangerous Goods logistics management



- Baseline assessments
- Technical concept creation
- Capacity building programs
- Recyclable material sourcing



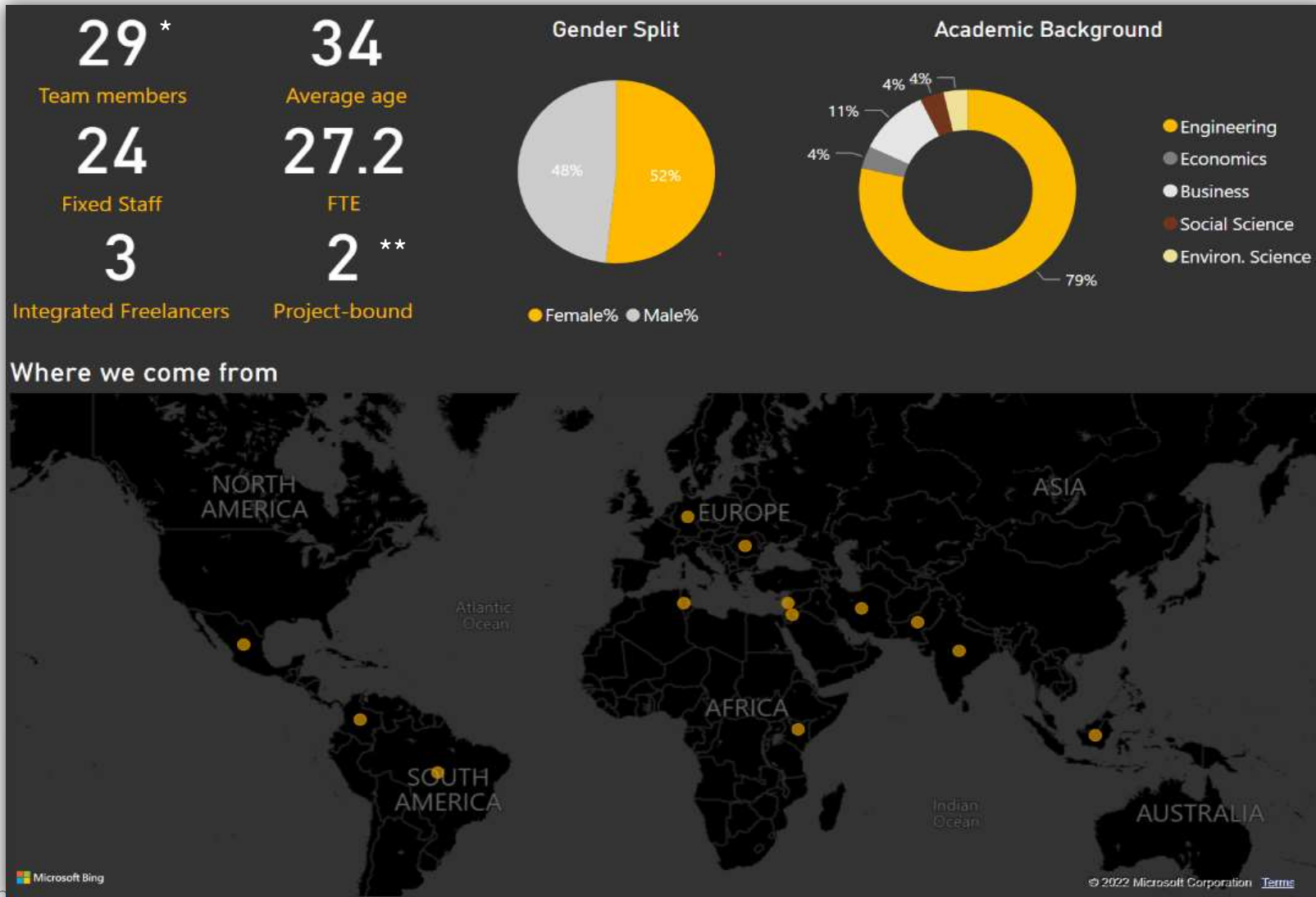
- On-site operational support
- Technical process optimisation
- Forensic investigations and technical due diligence
- Technical upgrade and commissioning support



- Market entry strategies
- Technology mediation services
- Global project development support
- M&A process support

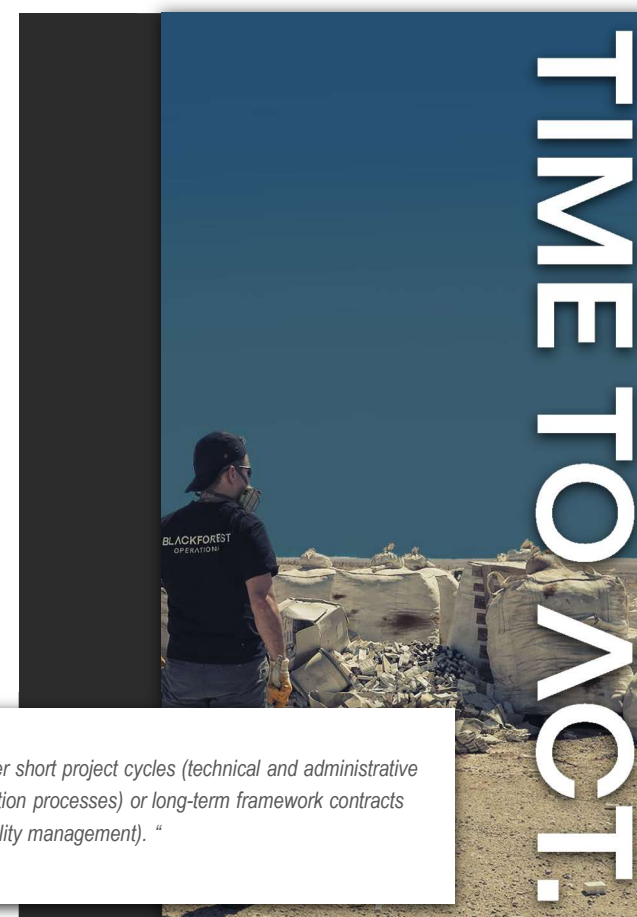
BlackForest Solutions, Germany





BlackForest Solutions, Germany Principles

- **On site appearance within 72h**
worldwide
- **Avoiding remote consultancies**
be with our clients everywhere
- **German working and safety standards**
adjusted to local conditions
- **Project development in extreme
environments**
military and crisis area



“ We offer short project cycles (technical and administrative optimization processes) or long-term framework contracts (e.g. facility management). “

BlackForest Solutions, Germany On Site Activities



Safety Level



Jordan
SWAQA
Landfill



Dubai
Mercury
spillage
contamination
site



Dubai
Mercury
spillage
during
packaging



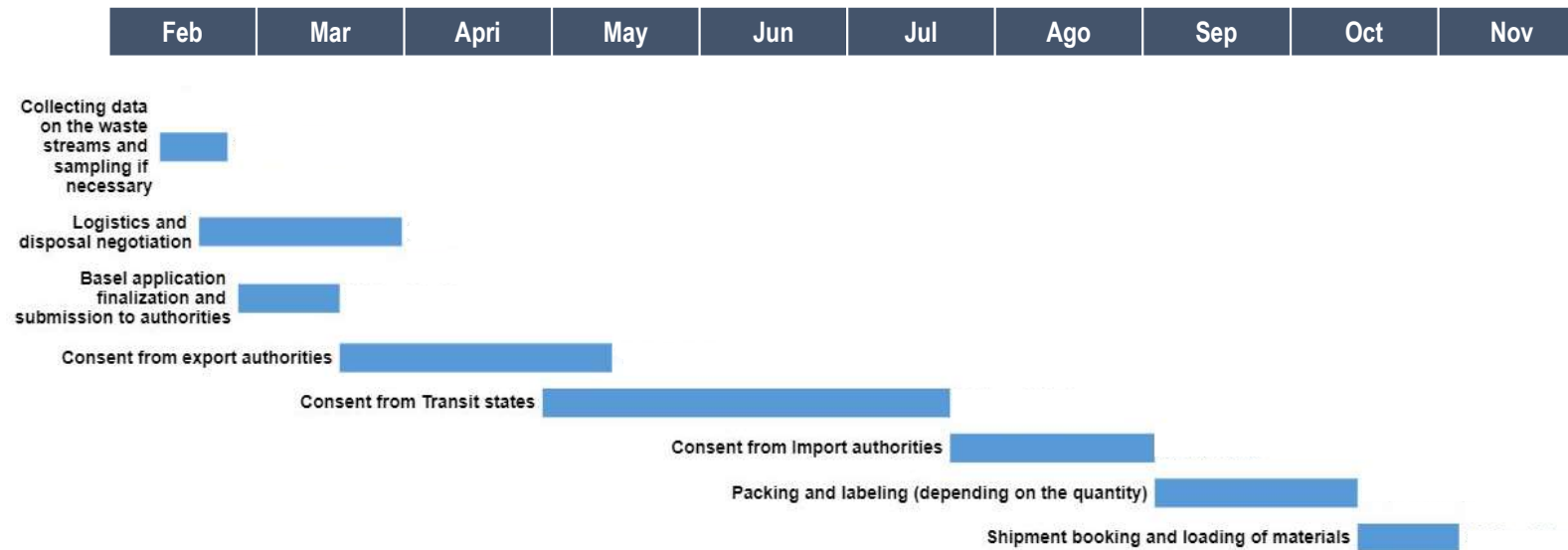
Kuwait sampling procedure for industrial waste

BlackForest Solutions, Germany

Basel Notification

2023

2023



*Estimated – varies depending on country, transit states and season

BlackForest Solutions, Germany Metallic Mercury Container



REMONDIS will provide the containers on demand

BlackForest Solutions, Germany Security Measures for Road and Sea Transportation



Example of secure UN packaging in a 40ft sea container

BlackForest Solutions, Germany

Example Mercury Residues from Mining Industry

Date: 02/2018 - 10/2018
Guatemala City / GUATEMALA

Waste Type

- Mercury contaminated soil
- Fluorescent lamp powder
- Mercury contaminated activated carbon (from retort furnaces)



Status quo

- Stored material in inadequate conditions
- No suitable local solution
- Environmental risk in storage area



BFS

- Technical consultant
- On site coordination
- Logistics management

REMONDIS

- Treatment and disposal of mercury waste



Solution

- Repacking in UN licensed drums
- Basel notification
- Licensing
- Export
- Treatment and disposal



BlackForest Solutions, Germany Example Mercury Residues from Mining Industry

Date: 02/2018 - 10/2018
Guatemala City / GUATEMALA



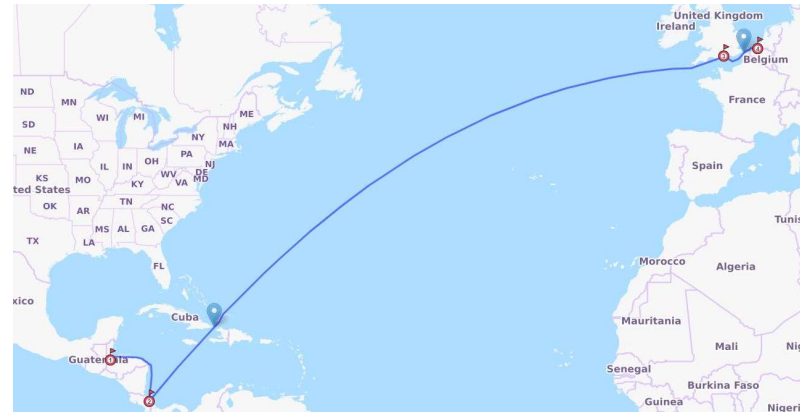
BlackForest Solutions, Germany

Example Mercury Residues from Mining Industry

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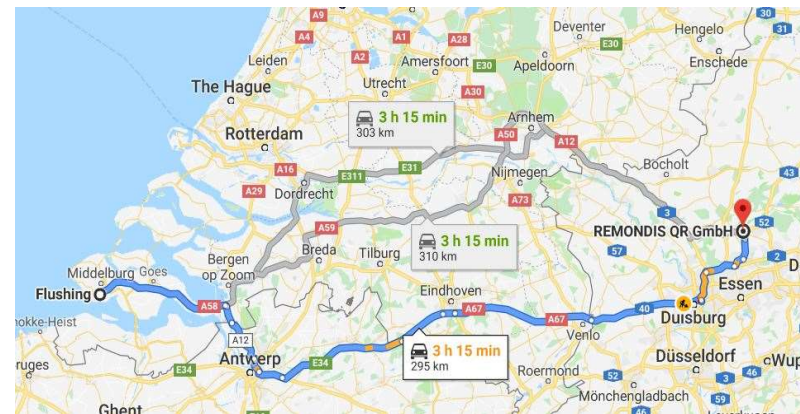
Sea route

- Puerto Barrios/Guatemala
- Moin/Costa Rica
- Portsmouth/Great Britain
- Flushing Port/Netherlands



Road route

- Flushing Port, Netherlands to Remondis QR, Dorsten, Germany

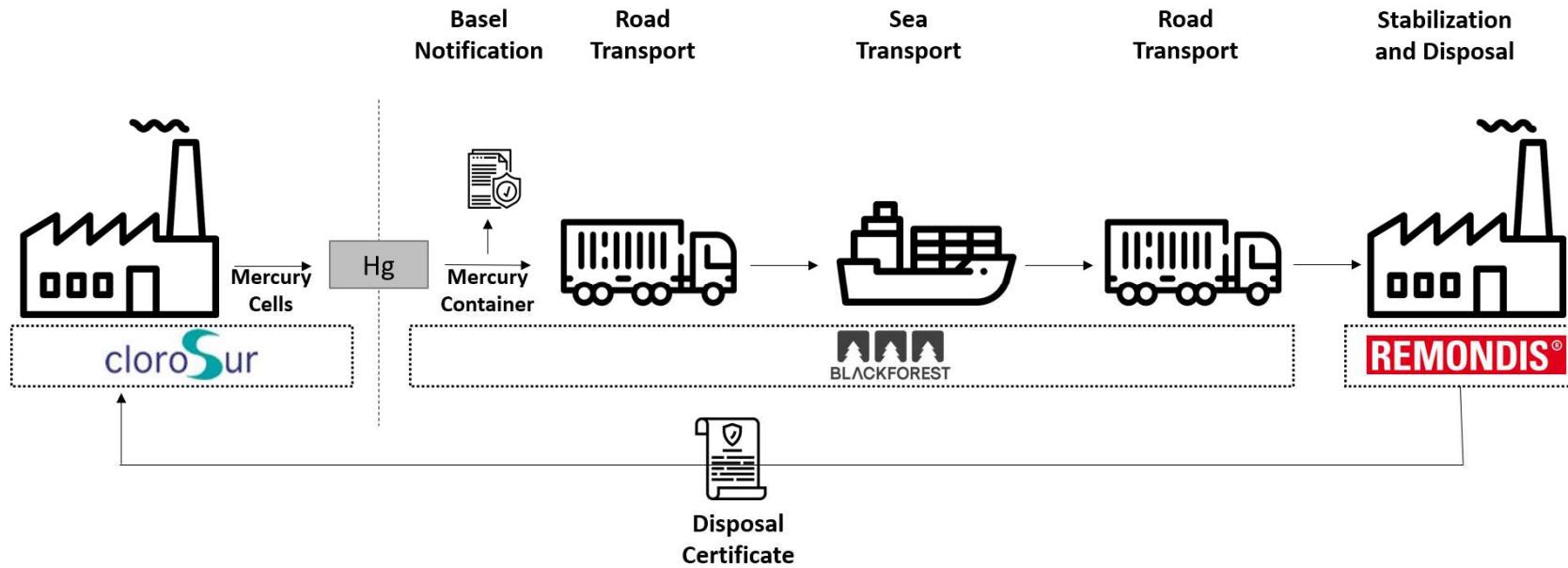


REMONDIS QR & BlackForest Solutions, Germany

Benefits for CloroSur members

- Full-service package – with One-Stop-Shop-Service
 - Containers (2 ton content of mercury) – Transport – Stabilization & Disposal
- Feasible – from 10 ton of metallic mercury to be stabilized
 - Just pay per weight (metallic mercury) and sea-container (20'ft)
- 100 % traceability – always aware of mercury waste
 - From CloroSur member's facility until REMONDIS QR and final disposal underground
- German partner – with local presence
 - On Site Assistance and multilateral cooperation
- Reliable companies – for safe and secure activities
 - With vast experience in international hazardous waste – transport & treatment

REMONDIS QR & BlackForest Solutions, Germany One-Stop-Shop Mercury Service



All services provided follow strict international regulations on transport, treatment and disposal of mercury waste.

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And now

... enjoy lunch!

Buen provecho!

Bom appetite!

Guten Appetit!