

BATREC's Mercury Waste Management

Safe, traceable & cost effective by central treatment

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BATREC and VEOLIA – A powerful network



171'495
Nb of
Employees



50
Countries



25'911
Million €
revenue



46
Million tons of
waste treated



BATREC

Swiss quality recycling solutions

2018 Turnover
17.80 Mio. CHF = 15.87 Mio €



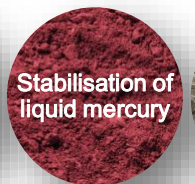
Activated carbon
reactivation



Treatment of
mercury
materials



Recycling of
mercury
adsorbents



Stabilisation of
liquid mercury



Battery
recycling

Veolia Field Services (VFS)

a sister company of Batrec - has global expertise in hazardous wastes management and is able to provide the following tailor made services:



Packaging



Conditioning



Transport



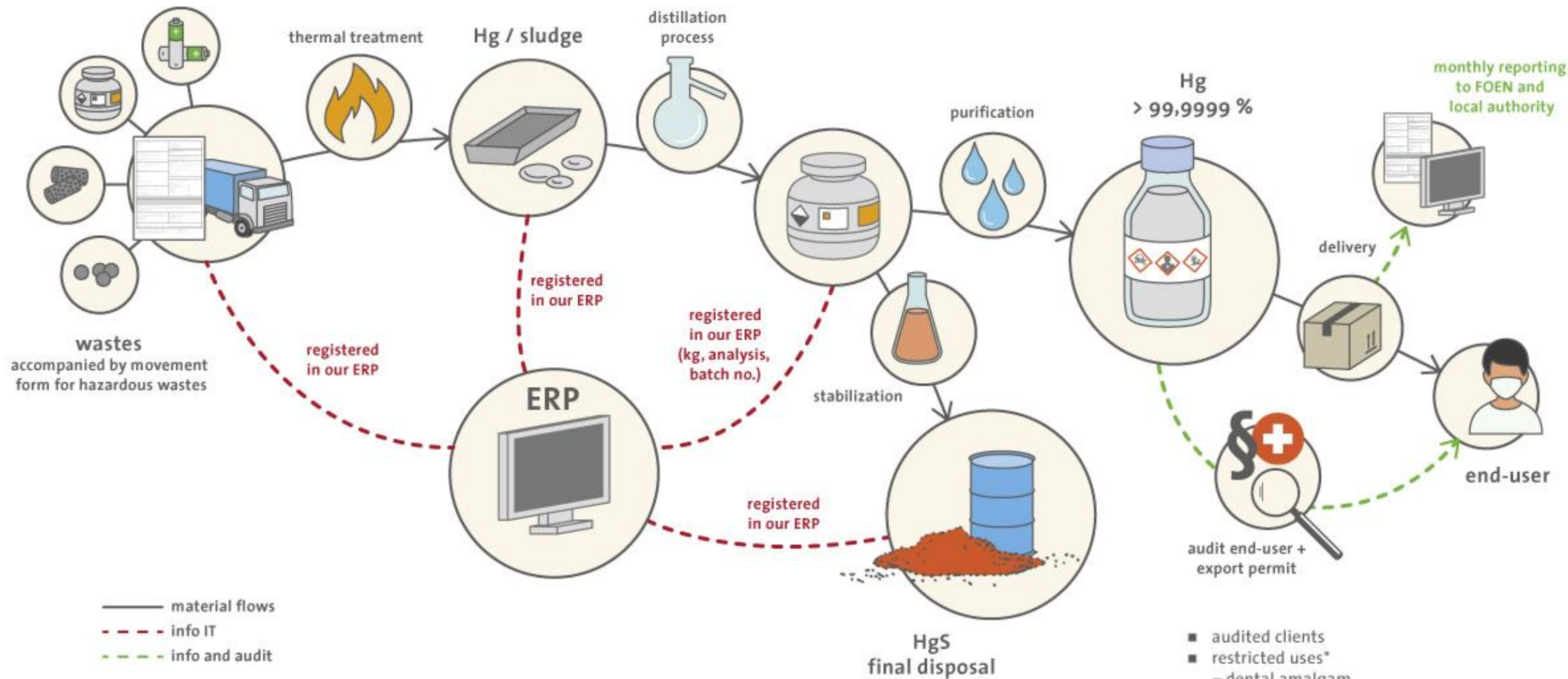
Regulatory
administration

▶ *Be able to treat any type of wastes containing Mercury in our installation in Switzerland* ◀

Distil Hg-containing waste → Stabilise Hg into HgS → Transform highly toxic Hg into a non-toxic HgS



Mercury Management at BATREC

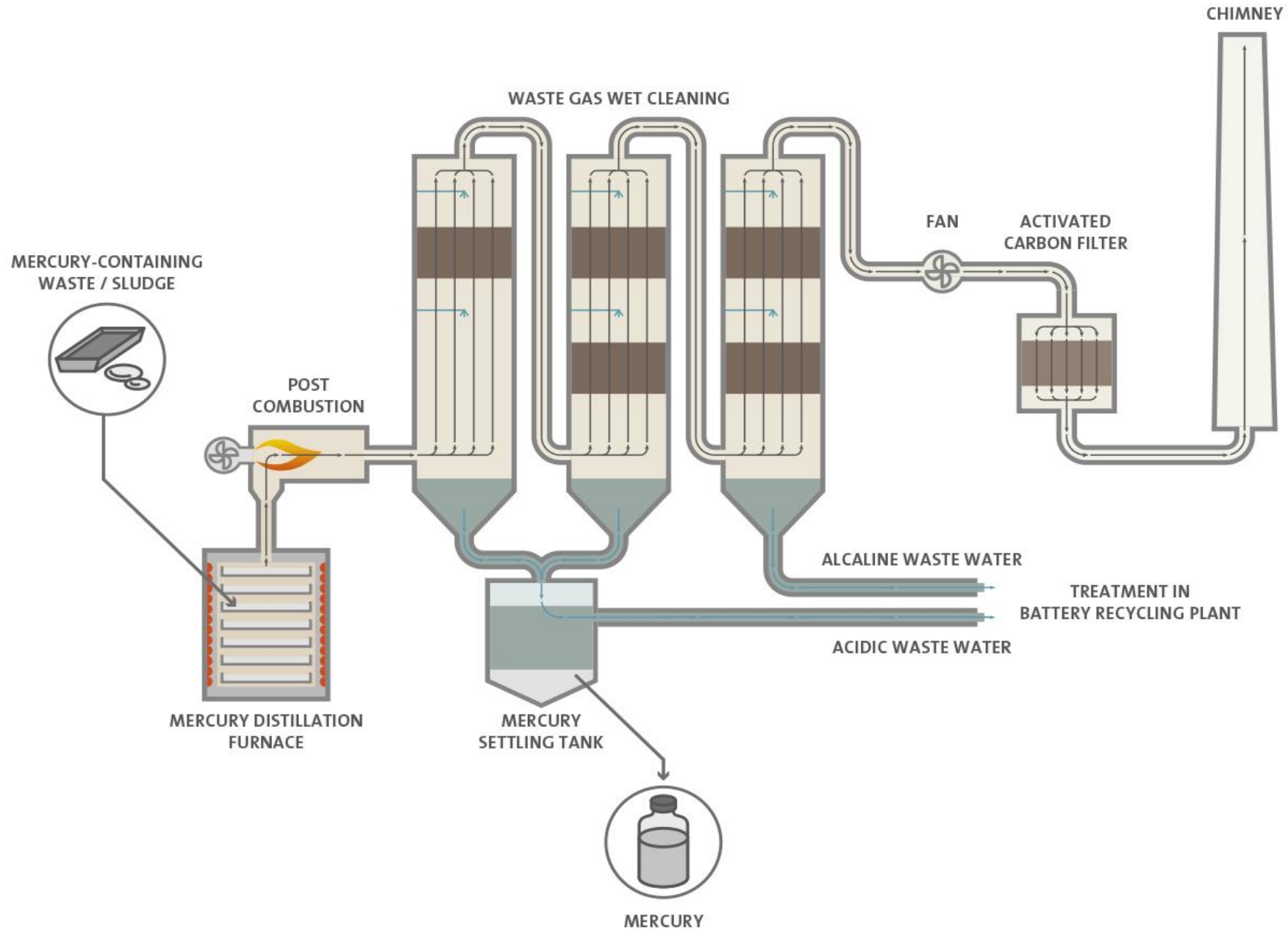


- audited clients
- restricted uses*
 - dental amalgam
 - R&D and analytics
- export permit for Hg in compliance with Article 3 of the Minamata Convention

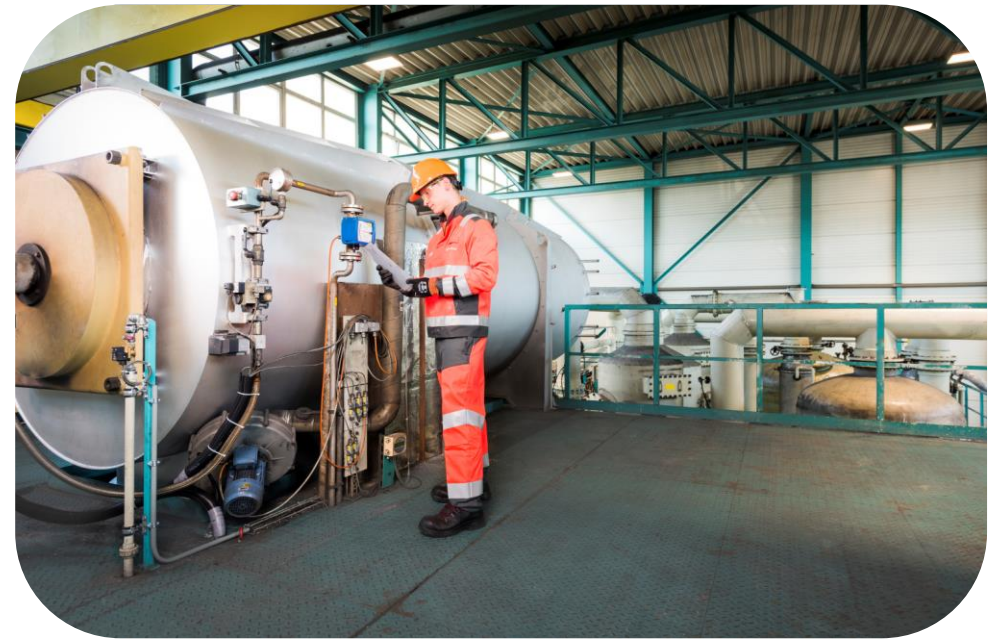
Treatment of Mercury Wastes



Hg Distillation: Process Flow Diagram



Mercury Waste Recycling Plant



Mercury Waste Recycling Plant: Process Flow Diagram

1

THERMAL TREATMENT

- desorption of the pollutants at 750 – 850°C
- destruction of the organic pollutants in the post-combustion chamber

2

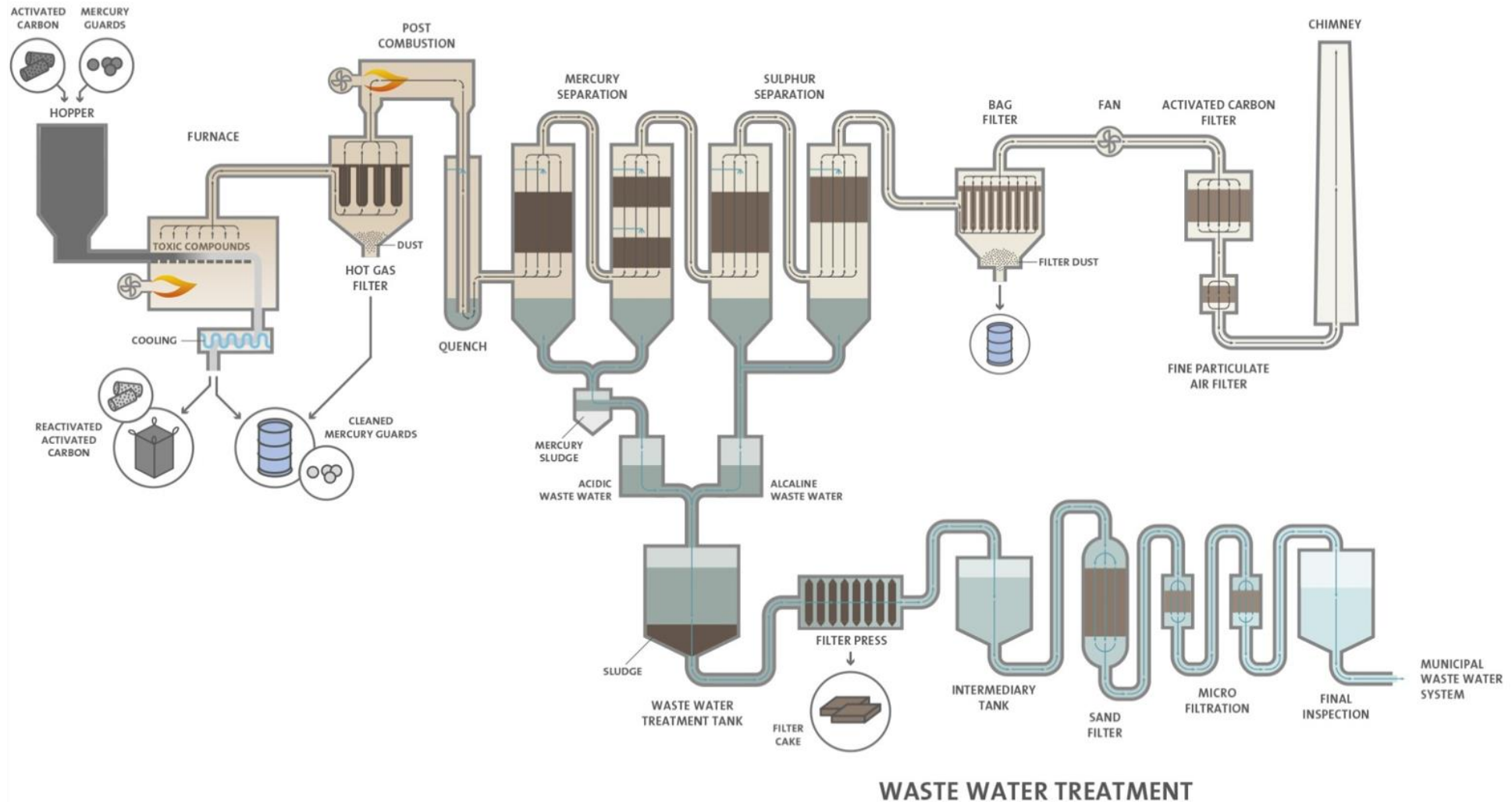
WASTE GAS WET CLEANING

- condensation of Mercury
- removal of Sulfur

3

WASTE GAS DRY CLEANING

- removal of trace level Mercury
- removal of other pollutants and fine dust
- removal HEPA Filter



Mercury Stabilisation



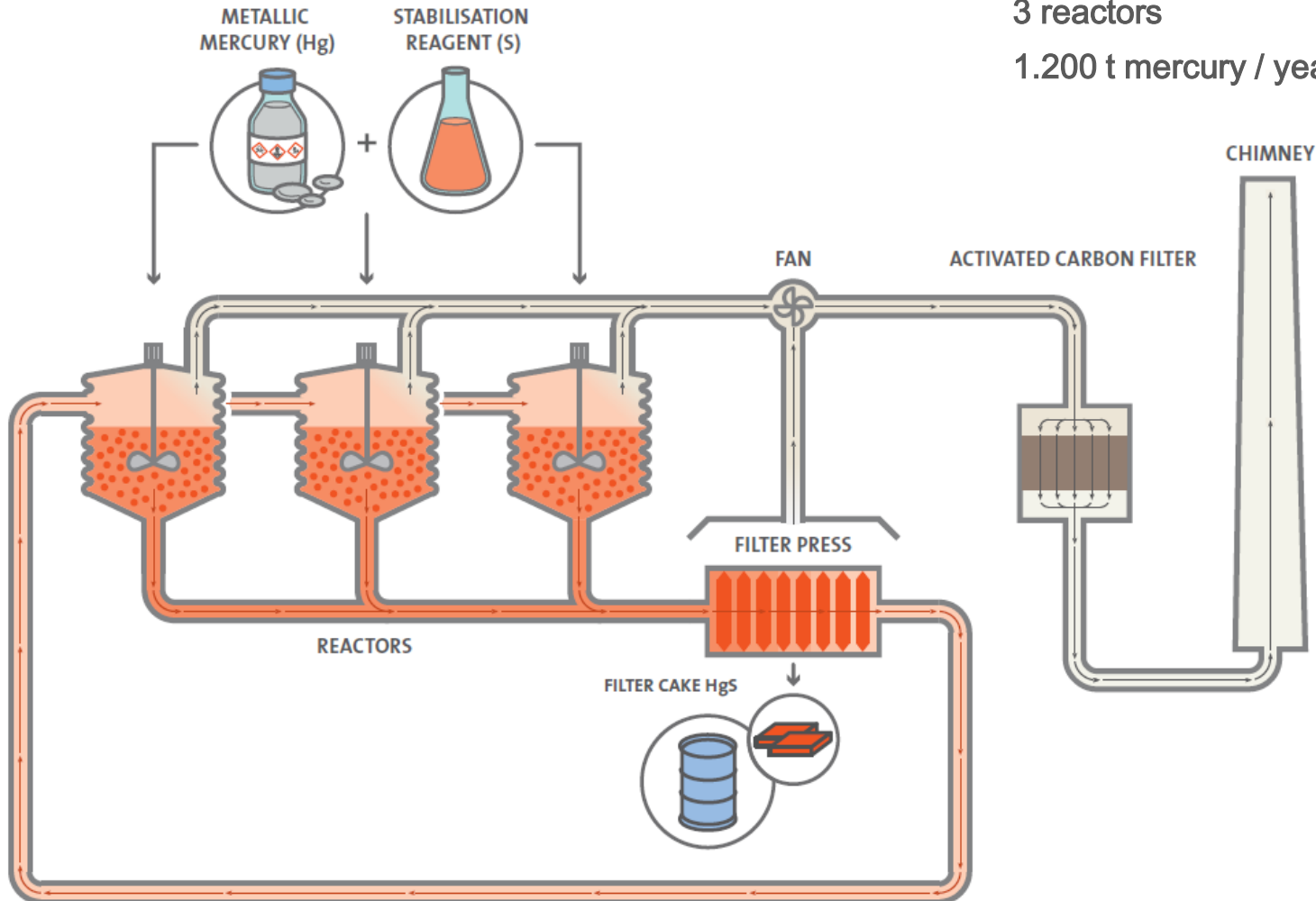
Mercury Stabilisation

Capacity:

625 kg mercury / batch

3 reactors

1.200 t mercury / year

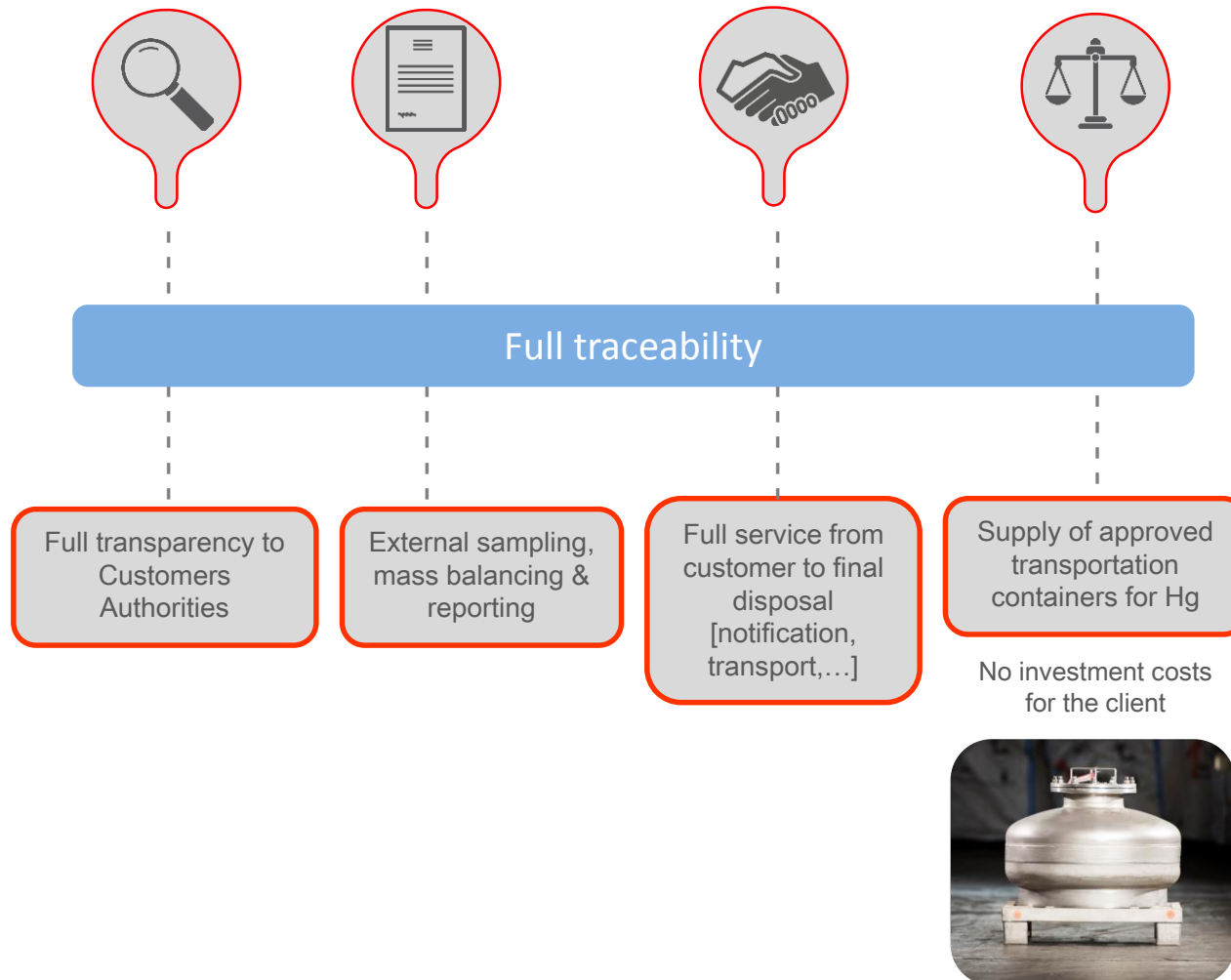


Process characteristics

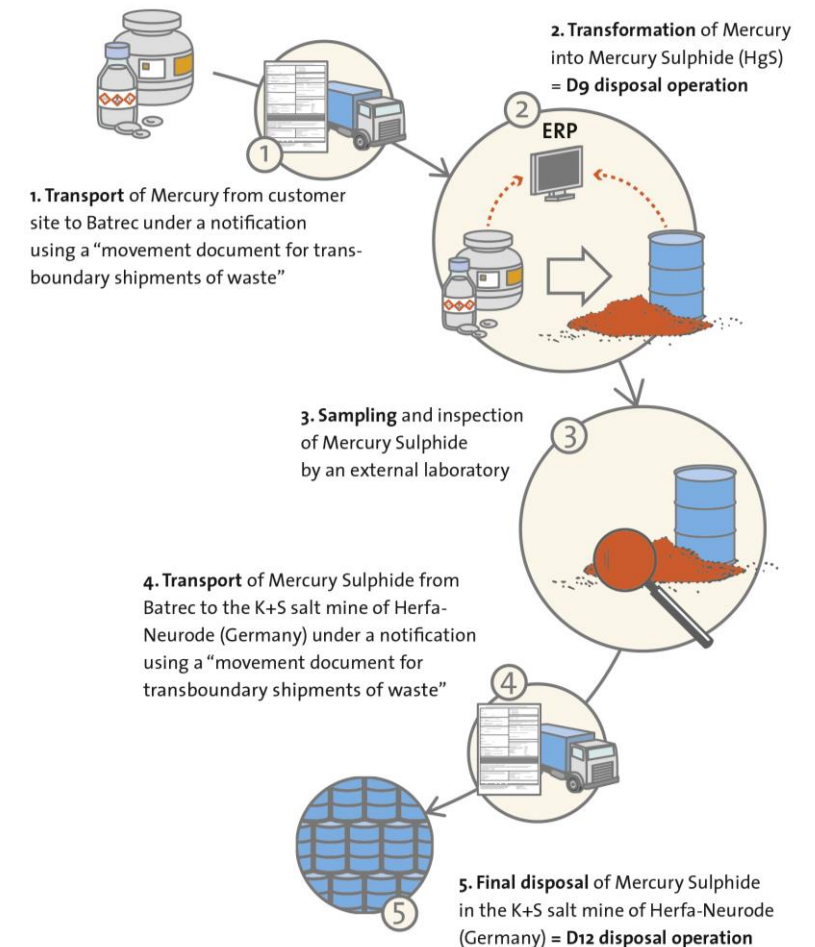
- ✓ batch process
- ✓ wet process at low temperatures in a closed circuit limits the risk of Hg emissions
- ✓ no gaseous Hg in the process
- ✓ stabilisation solution is regenerated
→ *zero effluents produced*
- ✓ simple reactants



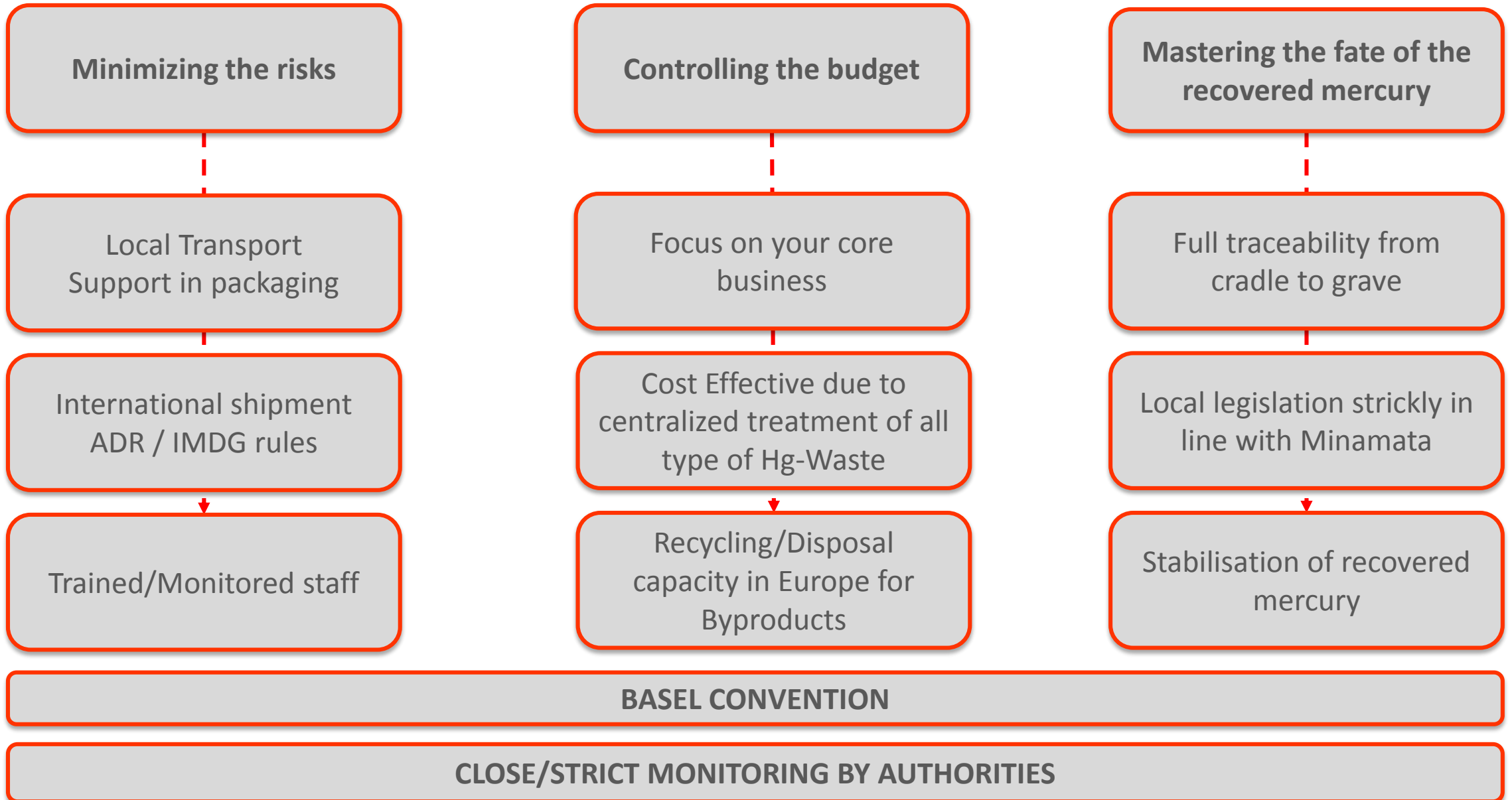
Offer complete safe management of the Mercury

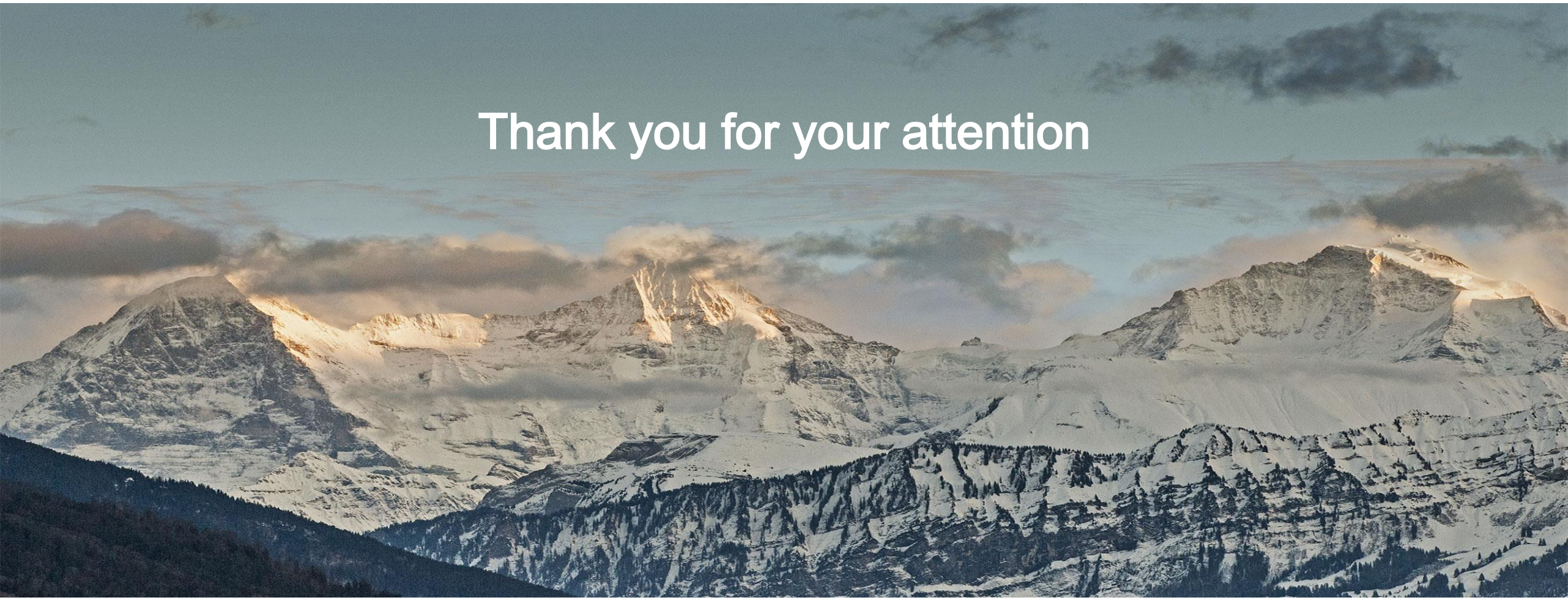


Traceability chain for the stabilisation of Mercury



Safe, traceable and cost effective approach by central treatment





Thank you for your attention