6th
ASIA PACIFIC
PRECIOUS METALS
CONFERENCE
4-6 June 2023
PARKROYAL HOTEL
ON BEACH ROAD, SINGAPORE

ESG INITIATIVES – METALOR ECOSYSTEM

Jonathan J. Jodry, Business Development Director
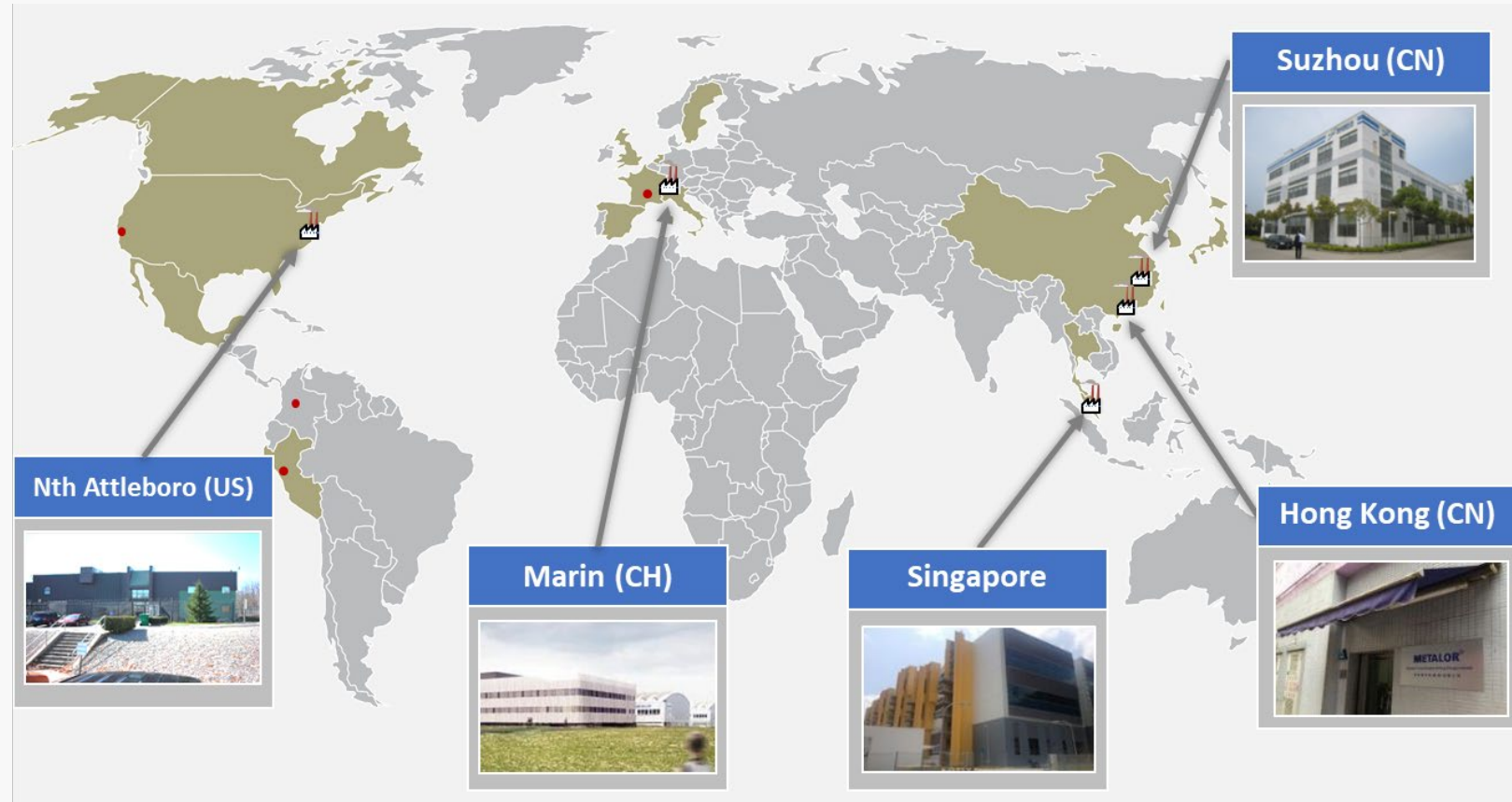
Metalor Technologies

METALOR®

Metalor Technologies – Profile

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C O N F E R E N C E
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Metalor Technologies :

- 5 refineries on 3 continents
- All on the LBMA GDL
- Sourcing from all around the world
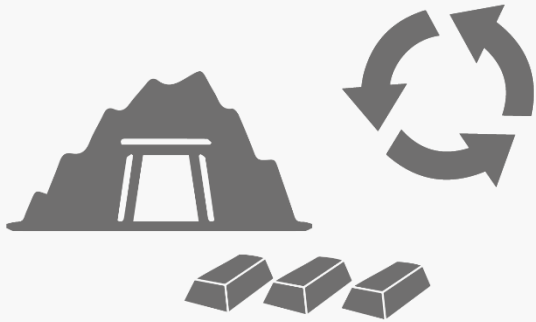- Part of Tanaka Precious Metals group

ESG Initiatives in Sourcing, Refining & Products

Sourcing
Responsible sourcing

Refining
Decarbonisation

Products
Transparency & Traceability

- Very robust DD process
- Not sourcing from mine collectors, nor from specific geographic areas
- Systematic controls

- Continuous consumption improvement
- Solar-generated electricity
- Heavy investment in future technologies

- Offering clear choice of products to customers
- Security features
- Metal traceability
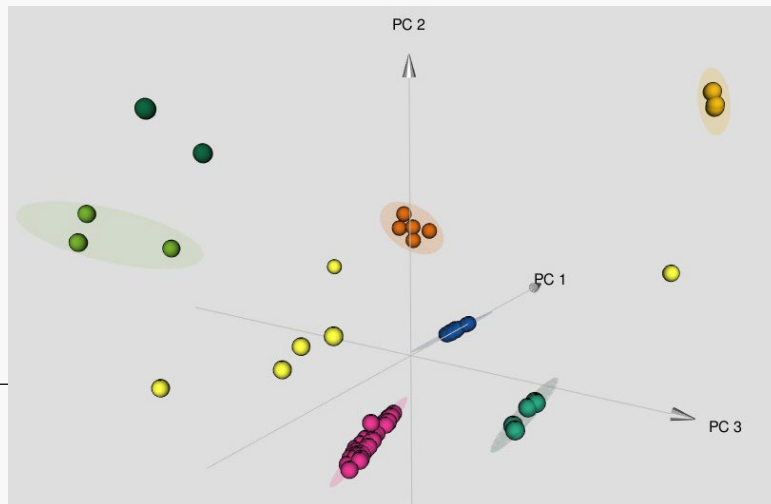
Responsible Sourcing – Mines

Metalor clear & transparent rules – no sourcing from

- Mine collectors
- ASM (expect for specific government backed programmes, like Swiss Better Gold)
- Non-compliant areas

Systematic controls on mined gold (doré)

- Geoforensic Passport - complex signature characterizing each mined gold supplier
- University of Lausanne (Dr Beck) & Metalor Technologies development over 6 years
- Verification of the signature or each doré with the supplier's Geoforensic Passport to confirm the origin : > 15'000 doré analysed so far

Analysis

Analyzed by ED-XRF (Energy dispersive X-ray fluorescence)

Au	Ag	Pt	Pd	As	Bi	Cd	Co	Cr	Hg	Mo	Ni	Pb	Sb	Se	Sn	Te	Zn	Cu	Fe
893.0	71.9	nd	nd	2.5	nd	nd	nd	nd	nd	nd	0.9	nd	nd	nd	nd	nd	nd	28.6	1.0

Test

Customer Name	Result	Sub-group
▓▓▓▓▓	Origin of doré confirmed	▓▓▓▓ 6

⬆ Save & Export LIMS

Responsible Sourcing – Recycling

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Lack of standardised definition for "recycled gold"

- Metalor is essentially using RJC-CoC standard, as per customers' request
- Other standards co-exist with different definitions (LBMA…)
- Many refiners and industries have their own labels and brands – market highly fragmented

ISO proposal for a new standard family

- Creation of an internationally recognized definition of "recycled gold"…
- … together with rules "responsible sourcing" of that gold

Goal:

- Limit the risk of "green washing" by defining rules to be followed
- Prevent further fragmentation of the market

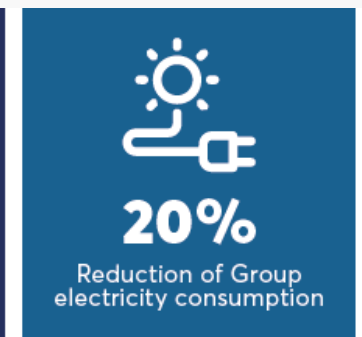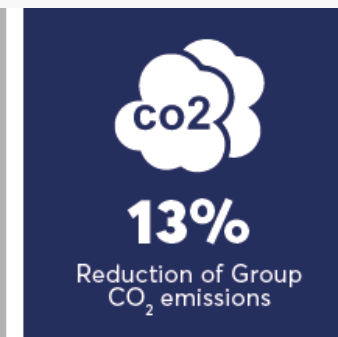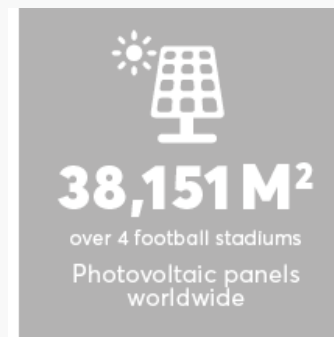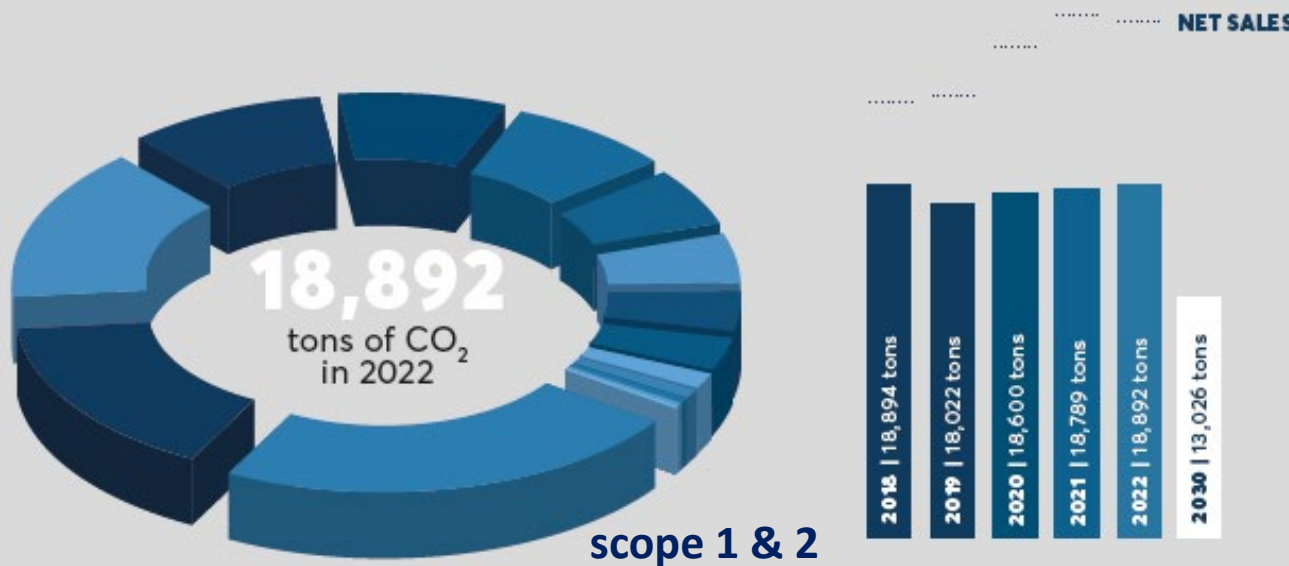*Under vote until mid-June, supported by key precious metal industries & associations*

Refining

A physical reality...

- Gold melts at 1'064°C – and is melted multiple times for refining & manufacturing

At Metalor, significant efforts to control operational carbon footprint (scope 1 & 2)

- 4 years : Net Sales +27% but CO_2 emissions stable
- 13.5 MUS$ invested to develop use of photovoltaic panels

NET SALES

18,892 tons of CO_2 in 2022

2018 | 18,894 tons
2019 | 18,022 tons
2020 | 18,600 tons
2021 | 18,789 tons
2022 | 18,892 tons
2030 | 13,026 tons

scope 1 & 2

38,151 M² over 4 football stadiums
Photovoltaic panels worldwide

13% Reduction of Group CO_2 emissions

20% Reduction of Group electricity consumption

Refining

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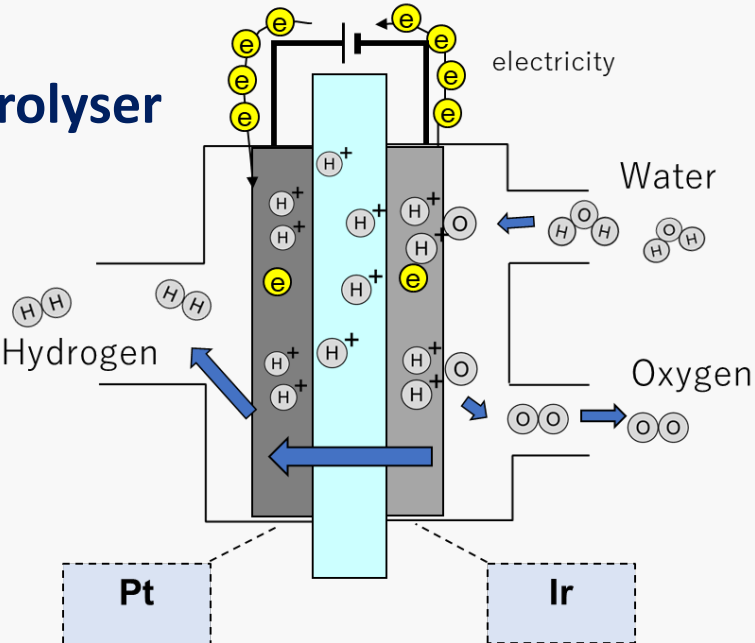ON BEACH ROAD, SINGAPORE

The most important role of refiners to prevent global warming:

• Invest, support & develop new technologies for a carbon-neutral society

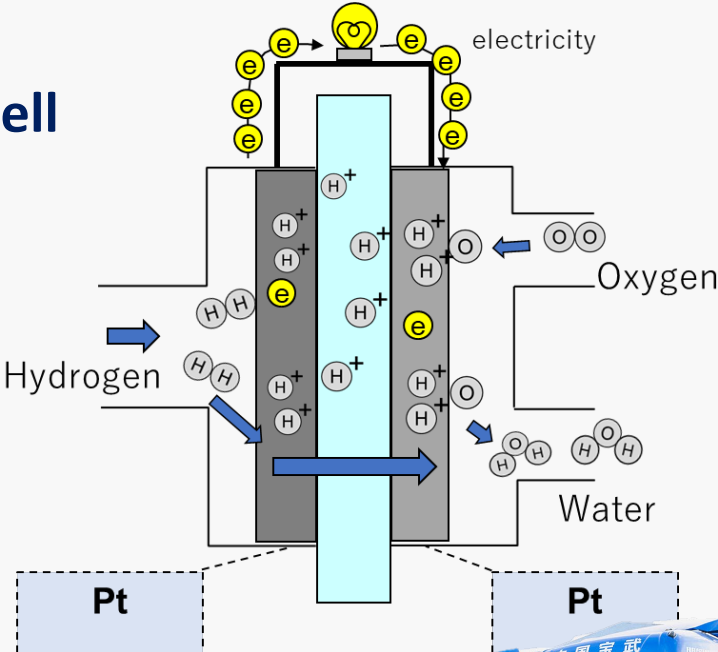Tanaka Kikinzoku (Metalor shareholder) is leading such innovation with catalysts:

electrolyser

fuel cell

Fuel Cell catalysts

source: h-tec.com

source: Hyzon

Products

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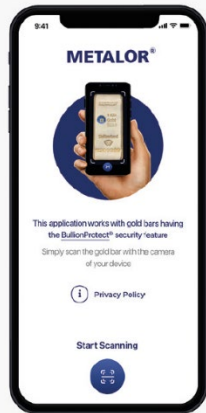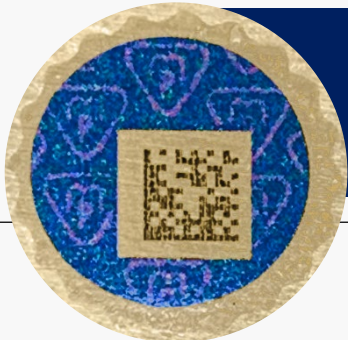
All Metalor bars are meeting ESG requirements higher than existing standards

- Metalor does not propose ESG+ (and hence ESG-) products

- But Metalor can segregate sourcing and flows to meet customer's request (Single-mine, SBG mines, specific areas mines, RJC-CoC recycled gold, specific industry recycled gold…)

Transparency : Security & Traceability offered to all customers

- Combination of security features and traceability tools available to all customers, using "Metalor Check" application, entirely free and protecting your privacy

- Release audited CSR annual report (GRI framework)

BullionProtect®

Biometric markings

Transparent origin stamp

METALOR SOURCING, TRACEABILITY AND SECURITY ECOSYSTEM

For compliance reasons, METALOR is not sourcing from mine collectors

SBGA
SWISS
BETTERGOLD
ASSOCIATION

Responsible Gold

METALOR is sourcing recycled gold with the highest standard

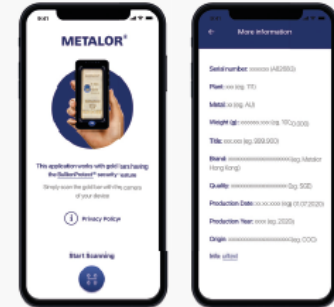**RESPONSIBLE JEWELLERY COUNCIL**

CHAIN OF CUSTODY

Signature of every doré ingot received is compared with the Geoforensic Passport of the mine to validate the origin

METALOR®

All steps automatically recorded in our SAP system

Refining following customer's request:

- Single-mine segregated refining
- Single-recycled segregated refining
- Mixed mines from specific area
- Recycled CoC gold
- Mixed batches

Metalor Check iOS application to obtain details on the origin of the gold

Kilobars bearing the **BullionProtect®** security feature

Specific grades, sources or certification **stamped directly on bars**: iso 24018, BGI, CoC

Biometric markings (overt & semi-covert embed in all bars to prevent any counterfeiting

METALOR ECOSYSTEM IS OFFERED TO ALL OUR CUSTOMERS!
(Geoforensic Passport validation, BullionProtect®, Metalor Check application)

THE REFINING CHARGES DEPEND ON THE TYPE OF SEGREGATION CHOSEN
(Mixed, single mine, segregated refining, CoC...)