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Geochemical traceability of gold

- Thematic Areas/Technology/Topic of focus + key elements of the idea/problem:
Illegal mining and trade of **conflict minerals** (Ta, W, Sn, Au,... ores). OCDE: collaborative government-backed multi-stakeholder initiative on responsible supply chain management. Implemented on international level (EU regulation 2017, ICGLR, World Gold council) and national level (Dodd Frank Act, RDC, Rwanda, RS Africa...). **Due diligence, Certification, Traceability**. Geochemical fingerprinting: independent control tool for supply chain due diligence schemes.
- Expected synergies and complementarities:
Partnership needs to cover the complete forensic chain: Access to representative samples of all relevant deposits → following gold composition through various mineral and metallurgical processing → analyses → data bases → stringent and robust statistical analysis. Plus preparation of market introduction.
- Outcomes:
All components are at high TRL. Integration → validation → up-scaling=implementation of Au fingerprinting as audit tool. Service for gold exploitation-processing-manufacturing industry and for national and supra-national stakeholders
- Market & Business opportunities:
Illicit gold trade: >2.3 B US\$/y, financial shortfall for exporting countries, increasingly constraining regulatory framework
Market: mining, exporting and importing industry, fair-trade manufacturers (ex. Fairphone), governmental stakeholders.
Example: AFP (Analytical Fingerprinting) developed for Ta, Sn, W, market introduction in 2006. Similar service for Au missing.
- Partners already identified:
GTK, TU Wien, BGR, University of Coimbra
- Wanted additional partners :
Gold mining operators/ore processing/exporting industry, Economists (market introduction)

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