

The EU Raw Materials Initiative

State-of-play

Sustainable Mining in the Arctic Region

Anne Auffret

*European Commission, DG Enterprise and Industry
Policy Officer F3 - « Raw Materials, Metals, Minerals,
and Forest-based industries »*





1. Raw Materials Initiative

- ✓ ***Critical raw materials***
- ✓ Fair and sustainable supply of raw materials from global markets (1st pillar)
- ✓ ***Fostering sustainable supply within the EU (2nd pillar)***
- ✓ Boosting resource efficiency and promoting recycling (3rd pillar)

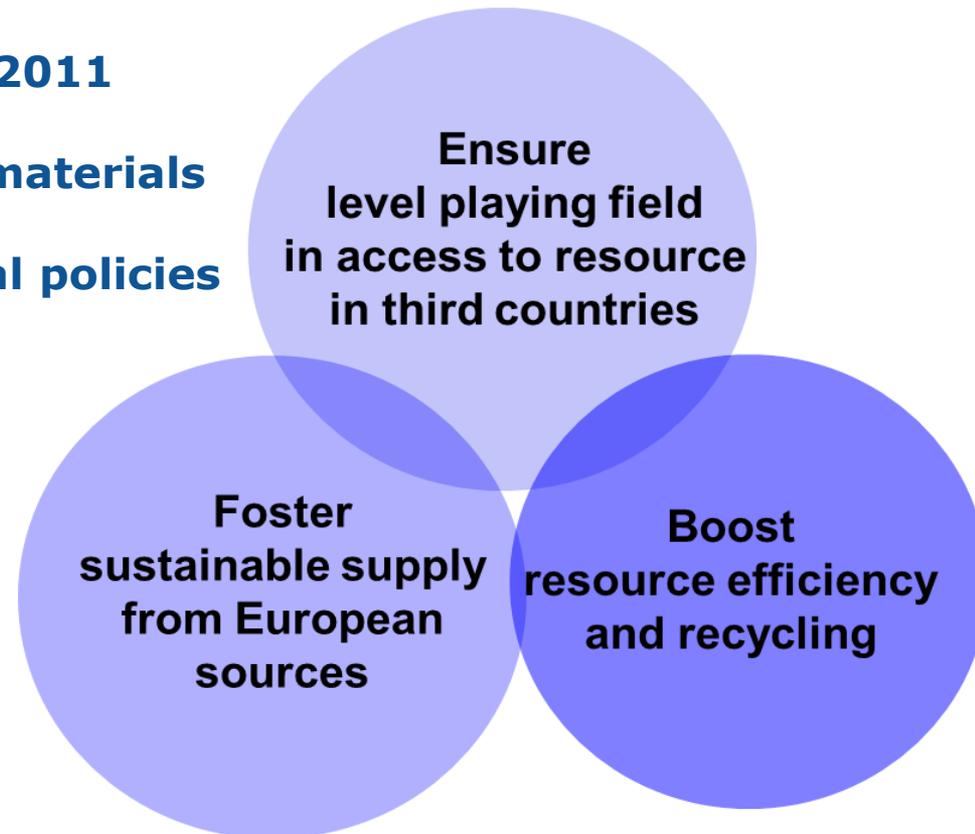
2. European Innovation Partnership on Raw Materials

3. Raw Materials in Horizon 2020

1. Raw Materials Initiative

EU “Raw Materials Initiative”

- **Aim:** securing sustainable supplies of raw materials
- **Launched in 2008, consolidated in 2011**
- **Non-energy, non-agricultural raw materials**
- **Connecting EU external and internal policies**
- **Integrated strategy (3 pillars)**
- **Introduced list of Critical Raw Materials (CRM) in 2011 and 2014**



Annual report on the implementation of the Raw Materials Initiative – 26.5.2014

Fair and sustainable supply of raw materials from global markets (1st Pillar)

- EU trade strategy for raw materials
- Raw materials diplomacy
- Assistance to developing countries

Fostering sustainable supply within the EU (2nd Pillar)

- Exchange of good practice between EU Member States
- Enhancing EU knowledge base
- Promoting research and skills

Boosting resource efficiency and promoting recycling (3rd Pillar)

- Better implementation and smarter EU waste legislation promoting resource-efficiency & recycling
- Strengthen the enforcement of the EU Waste Shipment Regulation

Cross-cutting issues

- Sector-specific criticality analyses
- European Rare Earth Competency Network (ERECON)
- Markets and stockpiling
- European Innovation Partnership on Raw Materials
- Research

Assessment components



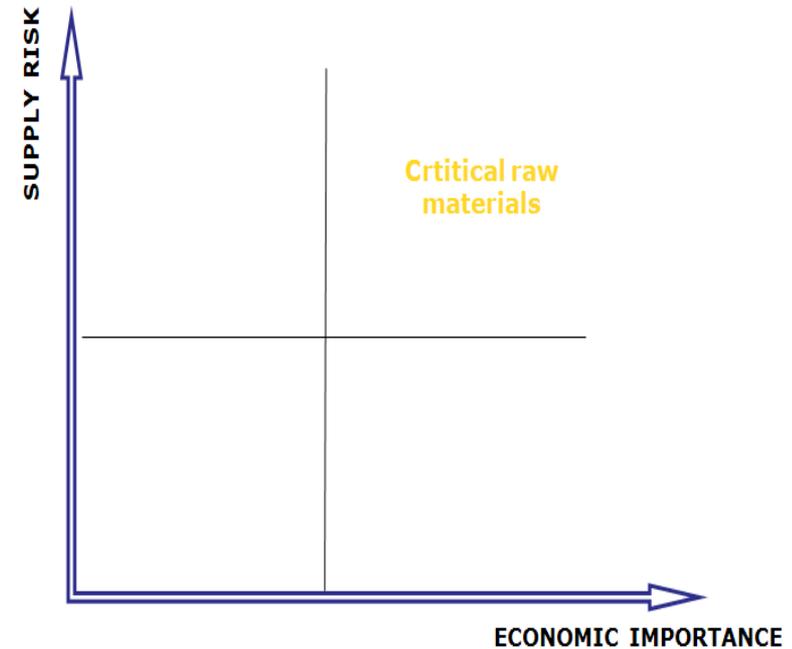
1. Raw Materials Initiative a) Critical raw materials

Economic importance

- Importance of a raw material per economic sector & importance of the sector in the EU economy

Supply risk

- Political and economic stability
- Level of production concentration
- Potential for substitution
- Recycling rate





- **20 of the candidate raw materials are identified as critical**

Antimony	Beryllium	Borates	Chromium	Cobalt	Coking coal	Fluorspar
Gallium	Germanium	Indium	Magnesite	Magnesium	Natural Graphite	Niobium
PGMs	Phosphate Rock	REEs (Heavy)	REEs (Light)	Silicon Metal	Tungsten	

- 6 new materials in the CRM list

- 3 in the previous study (borates, chromium and magnesite)
- 3 new materials (coking coal, phosphate rock and silicon metal)

- Tantalum not considered critical in this study

- No biotic materials in critical material list



- **20 of the candidate raw materials are identified as critical**

Antimony	Beryllium	Borates	Chromium	Cobalt	Coking coal	Fluorspar
Gallium	Germanium	Indium	Magnesite	Magnesium	Natural Graphite	Niobium
PGMs	Phosphate Rock	REEs (Heavy)	REEs (Light)	Silicon Metal	Tungsten	

- 6 new materials in the CRM list

- 3 in the previous study (borates, chromium and magnesite)
- 3 new materials (coking coal, phosphate rock and silicon metal)

- Tantalum not considered critical in this study

- No biotic materials in critical material list



- **MINERAL POLICY FRAMEWORK**
 - Reactivation of the RMI AHWG 2 – recommendations based on
 - Report on National Minerals Policy Indicators
 - Evaluation and Exchange of Good Practices for the Sustainable Supply of Raw Materials within the EU
 - Athens: EU Raw Materials Conference – 20 June 2014
 - RMSG – 26 September 2014
- **EU KNOWLEDGE BASE**
 - Competitiveness of the EU Mineral Raw Material Sector
 - Non-energy extractive industries and recycling industries: metals, industrial and construction minerals
 - Study on Data Inventory for a Raw Material System Analysis
 - 22 raw materials (CRM included)

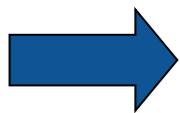


- MINERAL POLICY FRAMEWORK
 - POLICY AND LEGAL FRAMEWORK
 - INFORMATION FRAMEWORK
 - LAND-USE PLANNING
 - PERMITTING
- Structure of the draft report
 - Description
 - State of play and challenges in the European Union
 - Best practices
 - Recommendations

2. European Innovation Partnership on Raw Materials



- **Speed up breakthrough innovations**
 - by pooling resources through a challenge-driven approach
 - and acting across research and innovation cycle
 - bringing together all relevant actors to connect supply and demand side for a societal challenge, covering much more than R&D
- **Innovation required for the entire value chain of raw materials – industrial approach**
 - Exploration, exploitation, processing, using, recycling, substitution, etc.
 - **Sectors:** mining, engineering, pulp and paper, product design, robotics, etc.



Commission adopted the **proposal for an Innovation Partnership on raw materials** on **29 February 2012**
COM(2012) 82 final

•Overall objective:

Contribute to the 2020 objectives of the EU Industrial Policy (to increase the share of industry in GDP to 20%), the Innovation Union and the Resource Efficiency 'flagships'



Specific objectives:

- Reduce import dependency
- Improve supply conditions from European and other sources
- Push Europe to the forefront in raw materials sectors
- Provide alternatives in supply
- Mitigate negative environmental and social impacts



•I. Technology Pillar

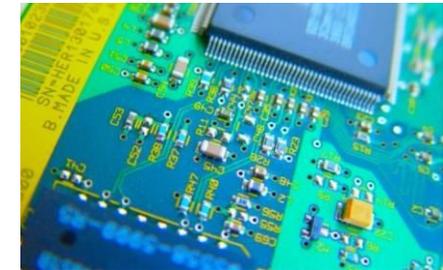
- I.A Raw materials research and innovation coordination
- I.B Technologies for primary and secondary raw materials' production
- I.C Substitution of raw materials

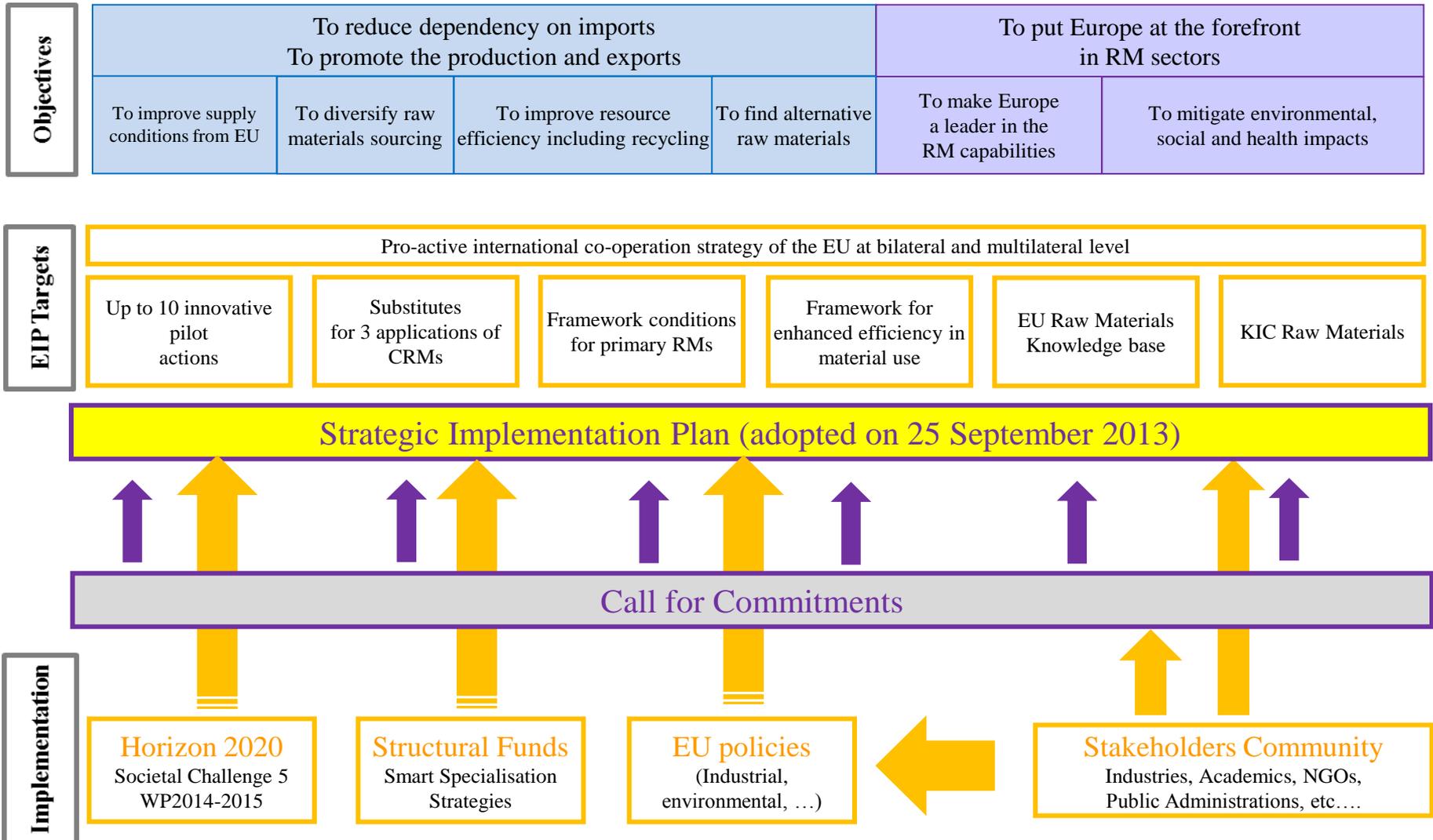
•II. Non-Technology Policy Pillar

- II.A Improving Europe's raw materials framework conditions
- II.B Improving Europe's waste management framework conditions and excellence
- II.C Knowledge, skills and raw materials flows

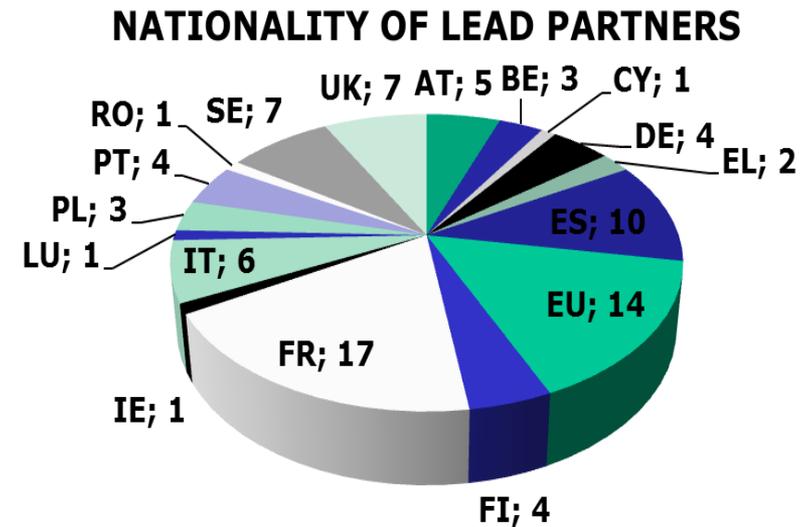
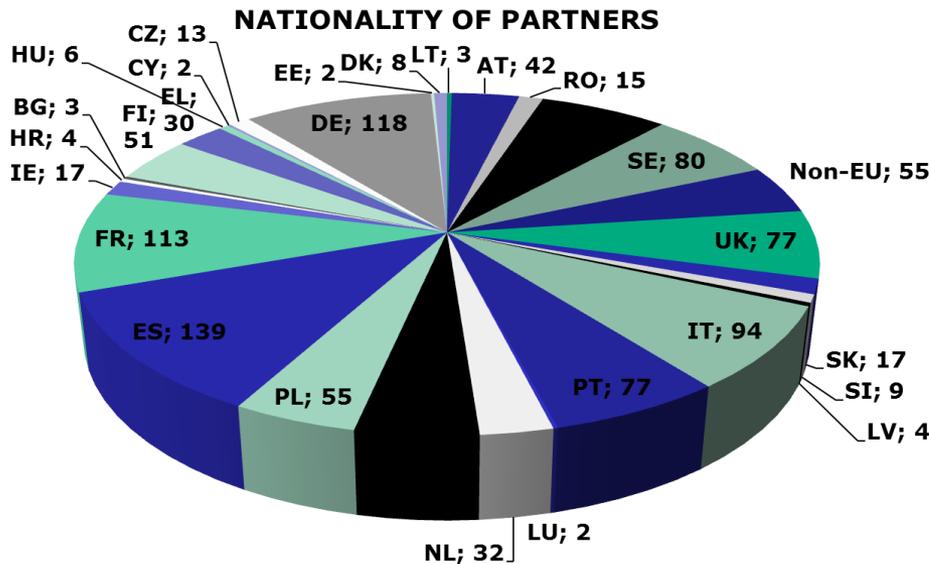
•III International Cooperation Pillar

- III.1 Technology
- III.2 Global Raw Materials Governance and Dialogues
- III.3 Health, Safety and Environment
- III.4 Skills, Education and Knowledge
- III.5 Investment activities





- Launched on 31 October (closed on 7 February 2014)
- **80** Raw Materials Commitments endorsed
- Aprox. 800 partners
- Relative deficit from EU-13 group
- **Next calls** in 2015, 2017 and 2019



2nd half of 2014

- Operational Groups and Raw Materials Commitments
- Start monitoring implementation of EIP SIP

13-14 Jan. 2015

- EIP Conference
- Horizon 2020 Brokerage event

2015

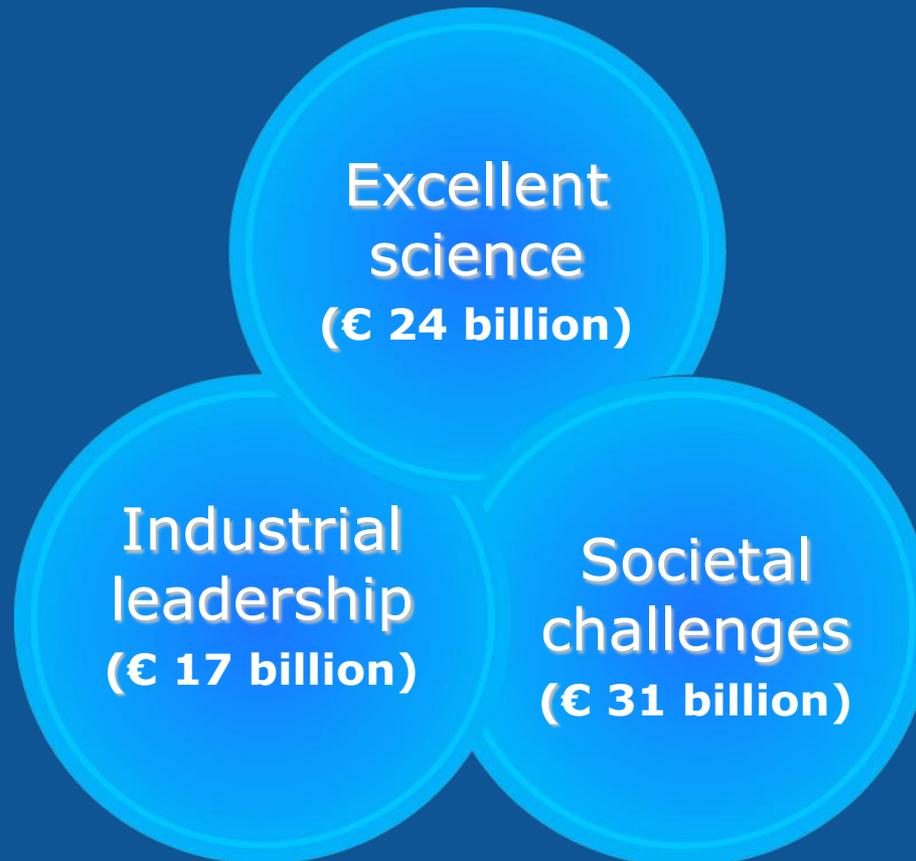
- EC Communication on the Strategic Implementation Plan
- Adoption of the Raw Materials Scoreboard
- 2nd Call for Commitments

3. Raw Materials in Horizon 2020

Horizon 2020

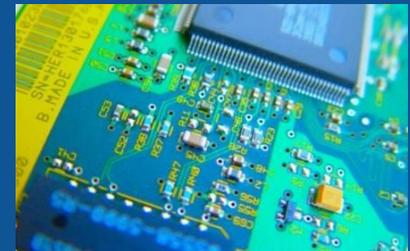
Context and overview

3. Raw Materials in Horizon 2020



"Ensuring the sustainable supply of **non-energy and non-agricultural Raw Materials**"

- New solutions for sustainable **production of raw materials**
- Innovative and sustainable solutions leading to **substitution of raw materials**
- **Coordinating and supporting** raw materials research and innovation
- **Cross-challenge topics**



"**Waste:** A resource to recycle, reuse and recover raw materials"

- **Towards near-zero waste** at European and global level



SC5 11 - New solutions for sustainable production of raw materials

- New exploration technologies and geomodels (2015)
- Deep mining on continent and in sea-bed (2015)
- New metallurgical systems (2015)

SC5 12 - Innovative and sustainable solutions leading to substitution of raw materials

- Materials under extreme conditions (2015)

Waste 4 - Towards near-zero waste at European and global level

- Raw materials partnerships (2015)

* Work programme 2015 updated on 22 July 2014.



SC5 13 - Coordinating and supporting raw materials research and innovation

- Raw materials intelligence capacity (2015)
- Innovation friendly minerals policy framework (2015)
- Raw materials research and innovation coordination (2015)
- Strategic international dialogues and cooperation with raw materials producing countries and industry (2015)

Cross-challenge topics

- Boosting the potential of small businesses for eco-innovation and a sustainable supply of raw materials (SME Instrument)
- Fast track to innovation



- EU raw materials webpage:

http://ec.europa.eu/enterprise/non_energy_extractive_industries/raw_materials.htm

- European Innovation Partnership on Raw Materials:

<https://ec.europa.eu/eip/raw-materials/en>

- Horizon 2020:

<http://ec.europa.eu/research/horizon2020/>



European
Commission

THANK YOU