

OFREMI : French Mineral Intelligence Center

Stress test and public-private collaborations with French companies

Political framework



Operational framework

Interministerial delegation for
minerals and metals supply
(DIAMMS)



**PREMIER
MINISTRE**
*Liberté
Égalité
Fraternité*



French mineral
intelligence centre

Investment fund



APPEL À PROJETS
MÉTAUX CRITIQUES

Public investment on
strategic projects

Operated by



Knowing the risks

Knowing one's vulnerabilities

Dépendance à la Chine sur nos approvisionnement en aimants permanents

1&2 Mine	3 Oxydes	4 Métal	5 Alliages	6 Aimants
57%	85%	90%	90%	90%

Dépendance à la Chine sur nos approvisionnement en aimants permanents

1&2 Mine	3 Oxydes	4 Métal	5 Alliages	6 Aimants
57%	100%	100%	100%	100%

Being alerted

French criticality Criticality analyses factsheets for entreprises

Stress-tests

1. Mapping

2. Vulnerabilities

3. Impacts

4. Mitigation/ remediation

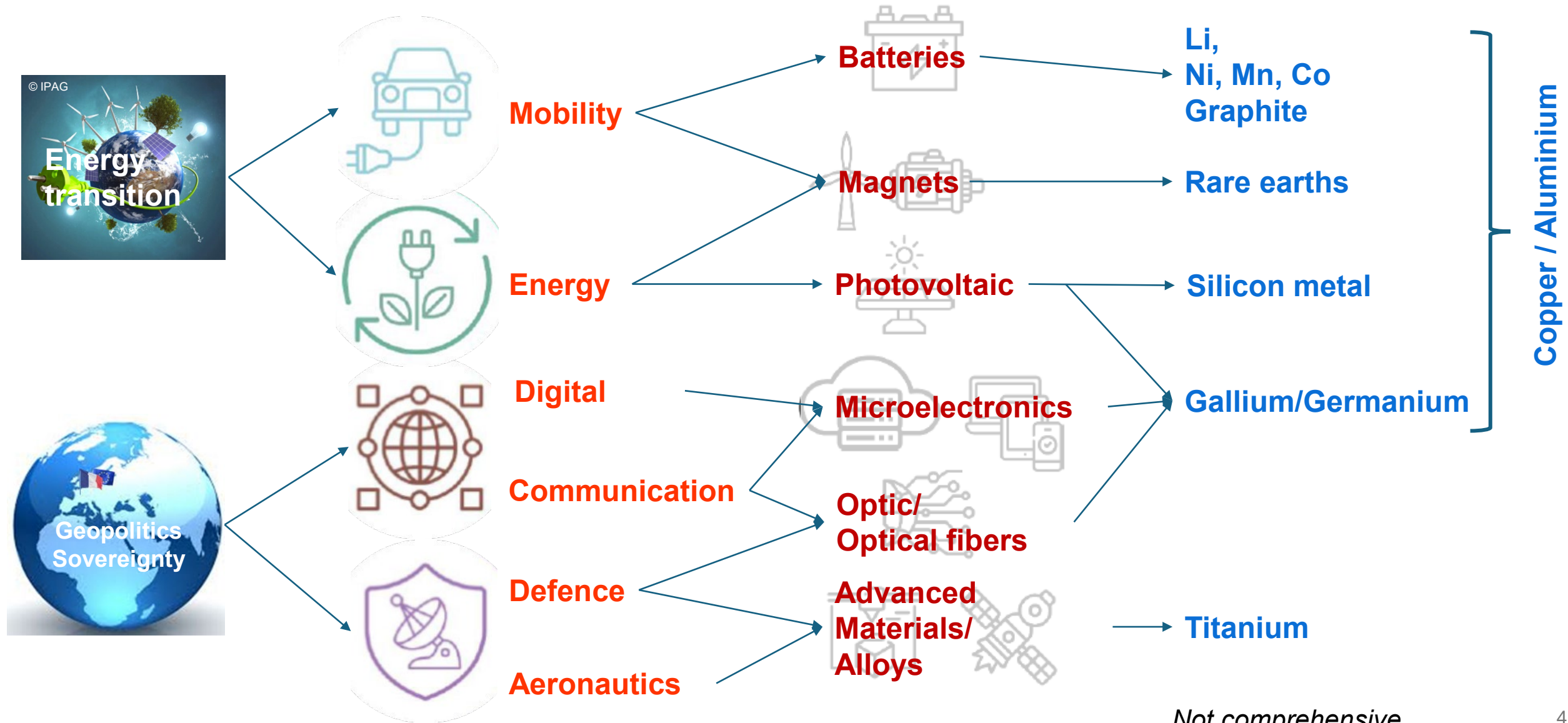
Information System

A continuous monitoring of markets and strategic sectors to anticipate developments

Technical groups involving experts and public/private partners for a targeted response

Dedicated tools and an international alert network for maximum responsiveness

A strategic value chain approach



How to analyse the resilience of our supply chains?

Destabilization scenarios

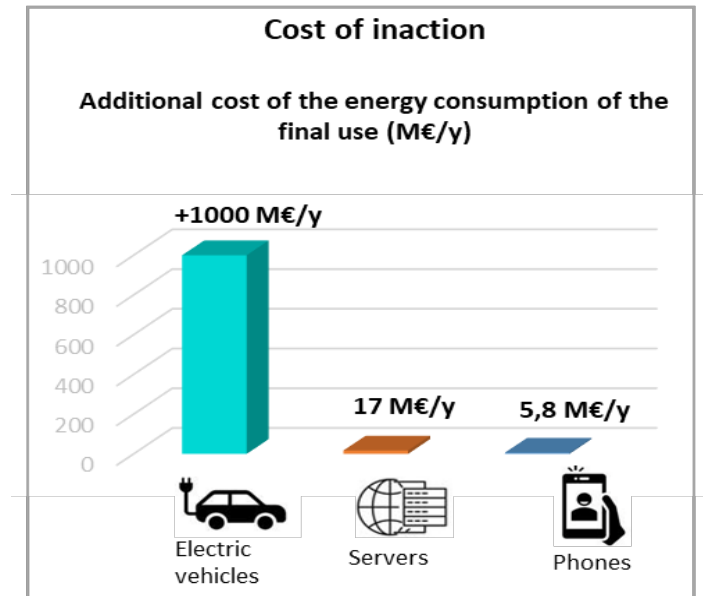
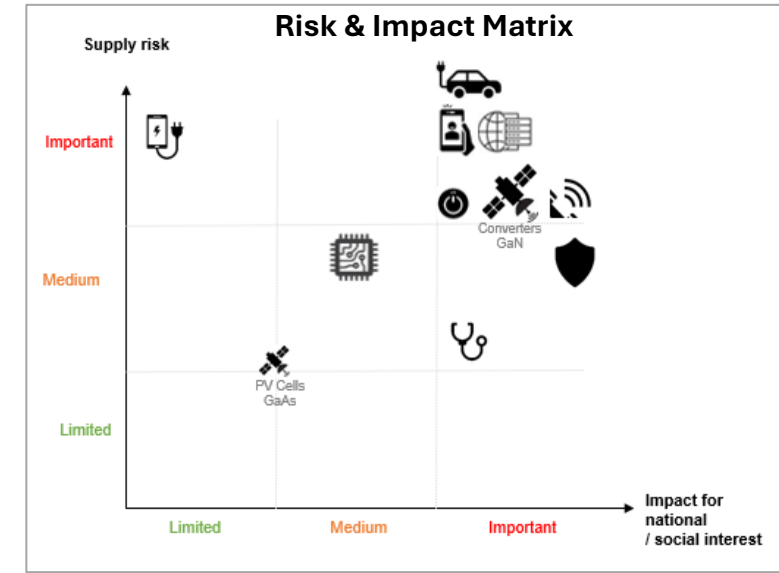
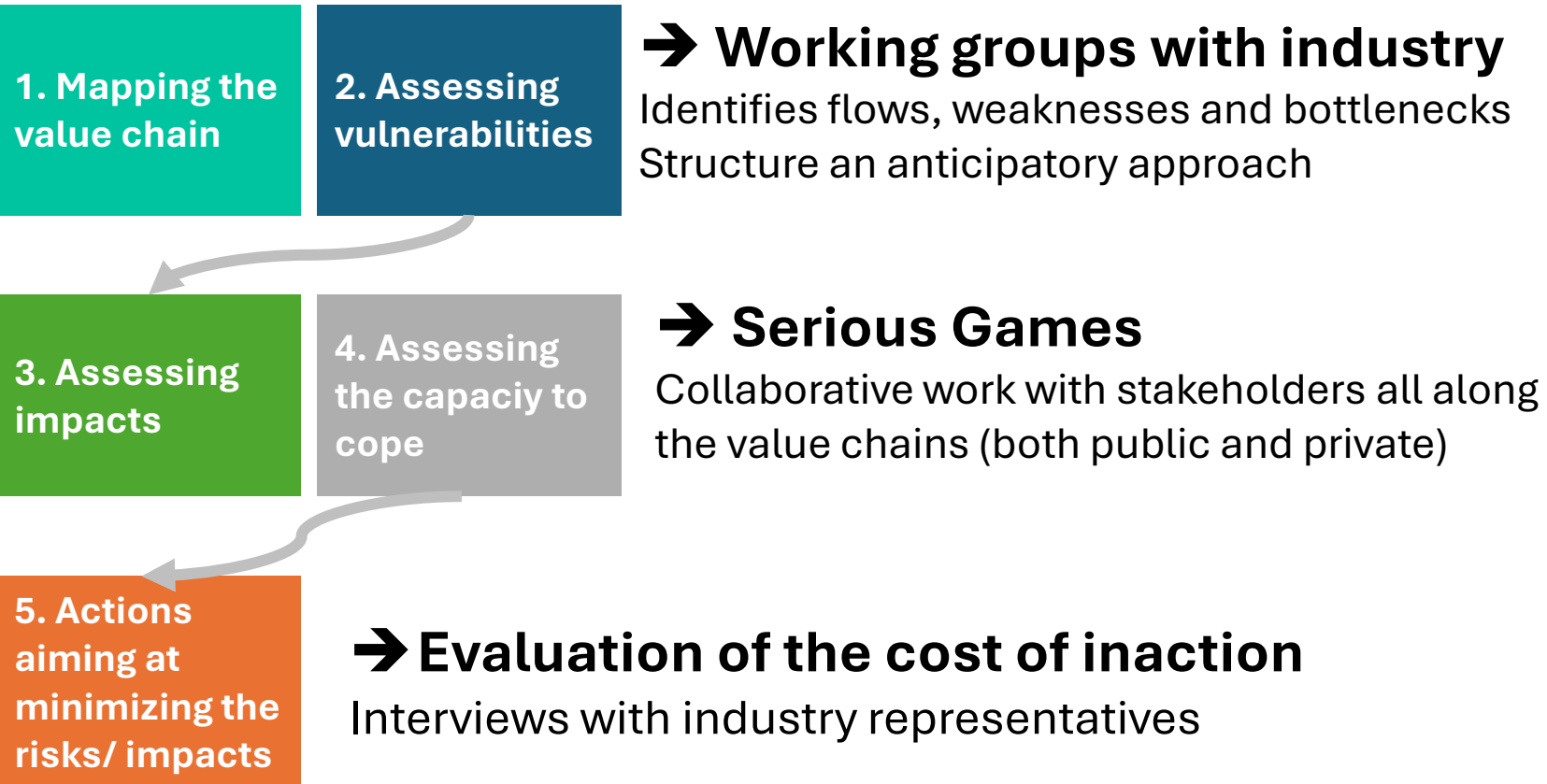
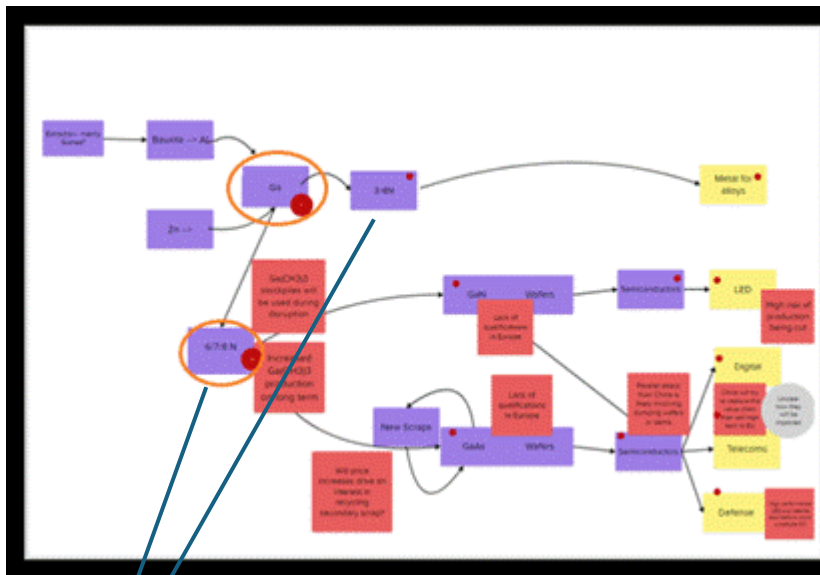
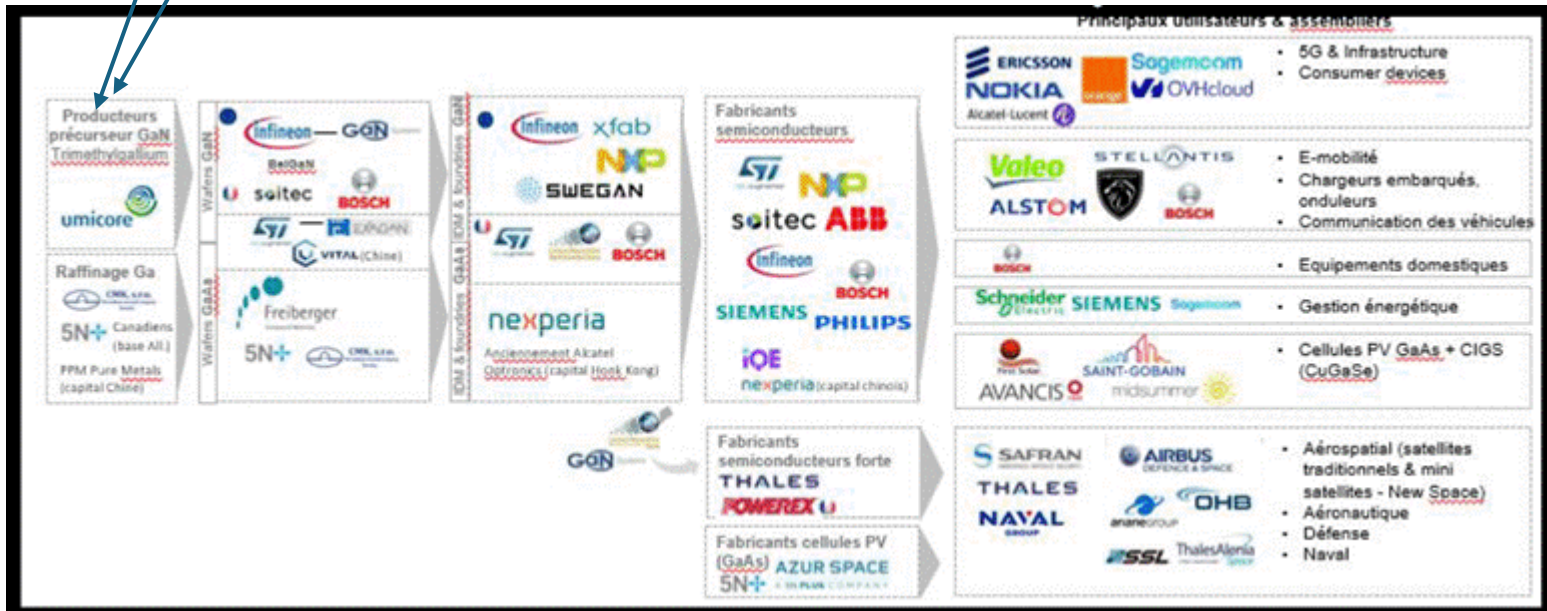


Illustration: gallium value chain and EU positioning



Joint exercise between DERA and OFREMI



To invest now to secure the value chain may cost millions,

*The direct and indirect impacts of a supply disruption, if no anticipation,
may cost billions*

Support the French government in anticipating the financial and societal impacts of a supply disruption

- Implementing short, medium and long term strategies
- Coordinating the actions
- Defining arbitration measures

Support and incentivize the industrial sectors in anticipating the risks

- Setting up a mitigation and an adaptation plan (circular economy, efficiency of use...)
- Committing in cooperation actions

Illustration: permanent magnets in cars and cost of inaction

Estimations of mass and cost/kg to be evaluated with industry actors

		Masse (kg)	Cost/kg (€/kg)	Cost (€/car)	Share for a 35k€ car	If magnets 50% more expensive	delta	
NdFeB	EV motor	1,5	100	150 €	0,4 %	225	75	
	Auxiliairies	0,25	100	25 €	0,07 %	37,5	12,5	20€ (0,06%)
SmCo	HT components	0,1	150	15 €	0,04 %	22,5	7,5	
Total				≈ 190 €	Total		≈ 285 €	≈ 95 €

Extra cost of EU non EV magnets for 1 million cars : 20 million euros

Potential loss of the car industry if 1 million cars not sold : 10 billion euros

Warning : the figures presented here are purely illustrative and do not reflect the actual market values, however order of magnitude are respected

*Raise the industry's
awareness*

*Deepen the analysis of
geopolitical dynamics and
market strategy*

What we intend to better understand:

- Cooperation at the national / European level vs cross-sectors competition
- Coordination with the national and the European instances
- Investment capacity into downstream / midstream / upstream value chain

First full scale exercise on June 11th 2024

- ➡ More than 15 industrial representatives from the battery value chain (graphite)
- ➡ Build trust and provide the industry with collective knowledge
- ➡ Data collection is not the key, expressing vulnerabilities and opportunities is

- **Involve the industry, enhance collaboration between private and public sectors – building trust**
- Raise awareness among the French ecosystem about the « domino effect » of a supply disruption
- Raise awareness about economical coercion strategies and support the industry in their derisking strategy (foreign interference...)
- More accurate knowledge of the vulnerabilities of the industry
- Supporting the industry to implement risk mitigation solutions (stockpiling, recycling, substitution...)
- Support industrial partnerships across countries (e.g. France-Germany, CRM Act)

Strategic outcomes for the French private & public sectors and for cross-national partnerships



OFREMI: A public/private partnership with strong engagement of the industry

Permanent monitoring with criticality assessment

Value chain analyses with stress-tests

- Value chain mapping
- Risk analyses
- Cost of inaction
- Serious games



RÉPUBLIQUE
FRANÇAISE

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OFREMI

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POUR LES FILIÈRES INDUSTRIELLES

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