

Which KPIs for more growth and more value creation with less materials?

World Materials Forum

June 28, 2018

Gilles Michel, Chairman
Imerys



Imerys offers high value-added solutions that contribute essential properties and performance to its industrial customers' products

- Beneficiated mineral resources
- Formulations
- Synthetic minerals

- Unique portfolio of mineral resources
- Wide range of exclusive technologies
- Know how and customers' applications knowledge

€4.6 bn
Revenue



18,300
Employees



270
Operating sites



30+
Minerals



Whiteness and
toughness of
sanitaryware, floor
and wall tiles



World leader in ceramic
pastes for sanitaryware

Lifespan and fast
charging
of electric vehicle
lithium-ion batteries



World leader in
conducting additives
(graphite, carbon black)

Gloss and opacity
for paint



World leader in
wollastonite
and talc for paint

Resistance and
lightness
of automotive plastic
parts



World leader in talc-
based performance
additives for plastics

Thermal and
mechanical
resistance
of industrial abrasives



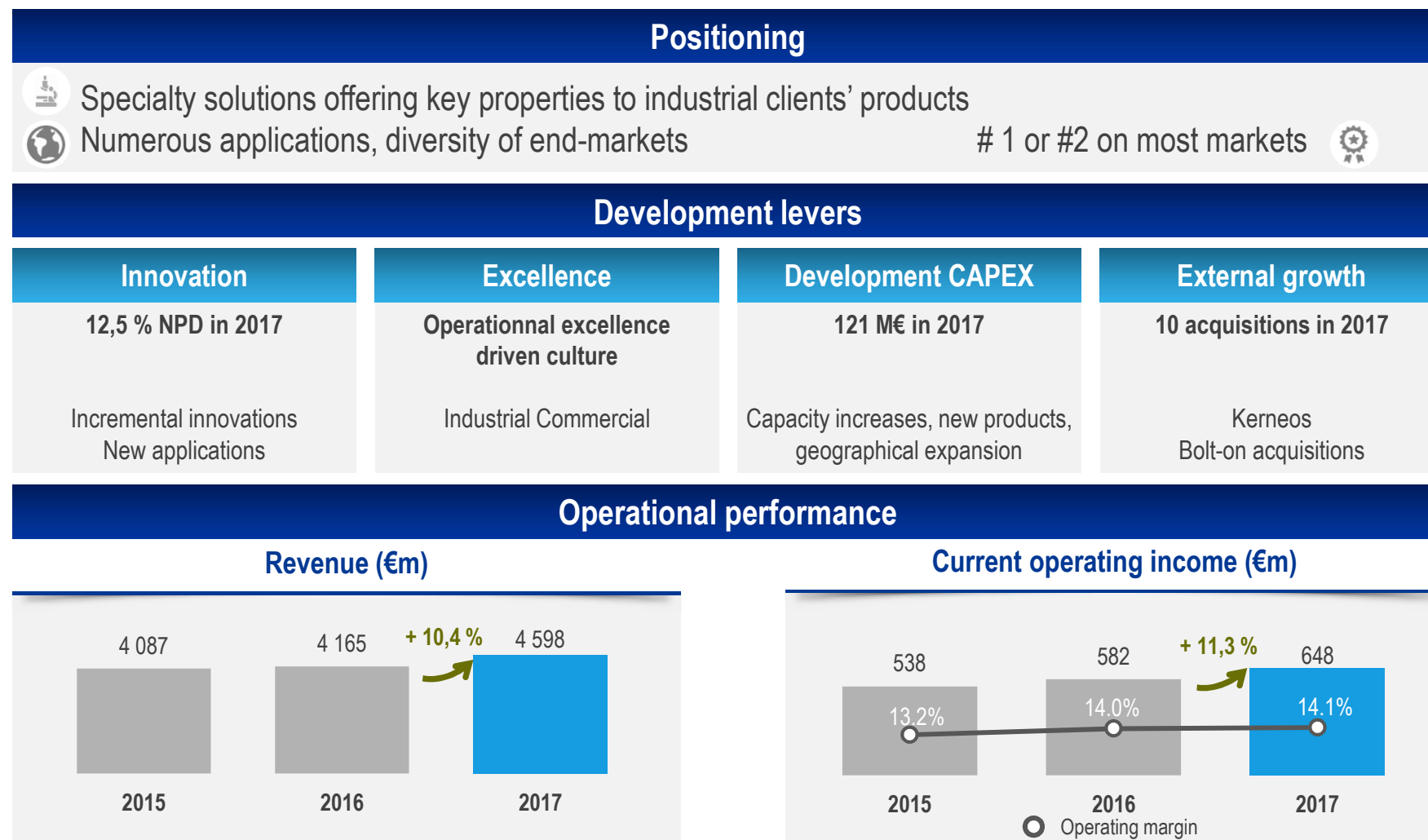
World leader in fused
minerals for abrasives

Softness of natural
mineral powders

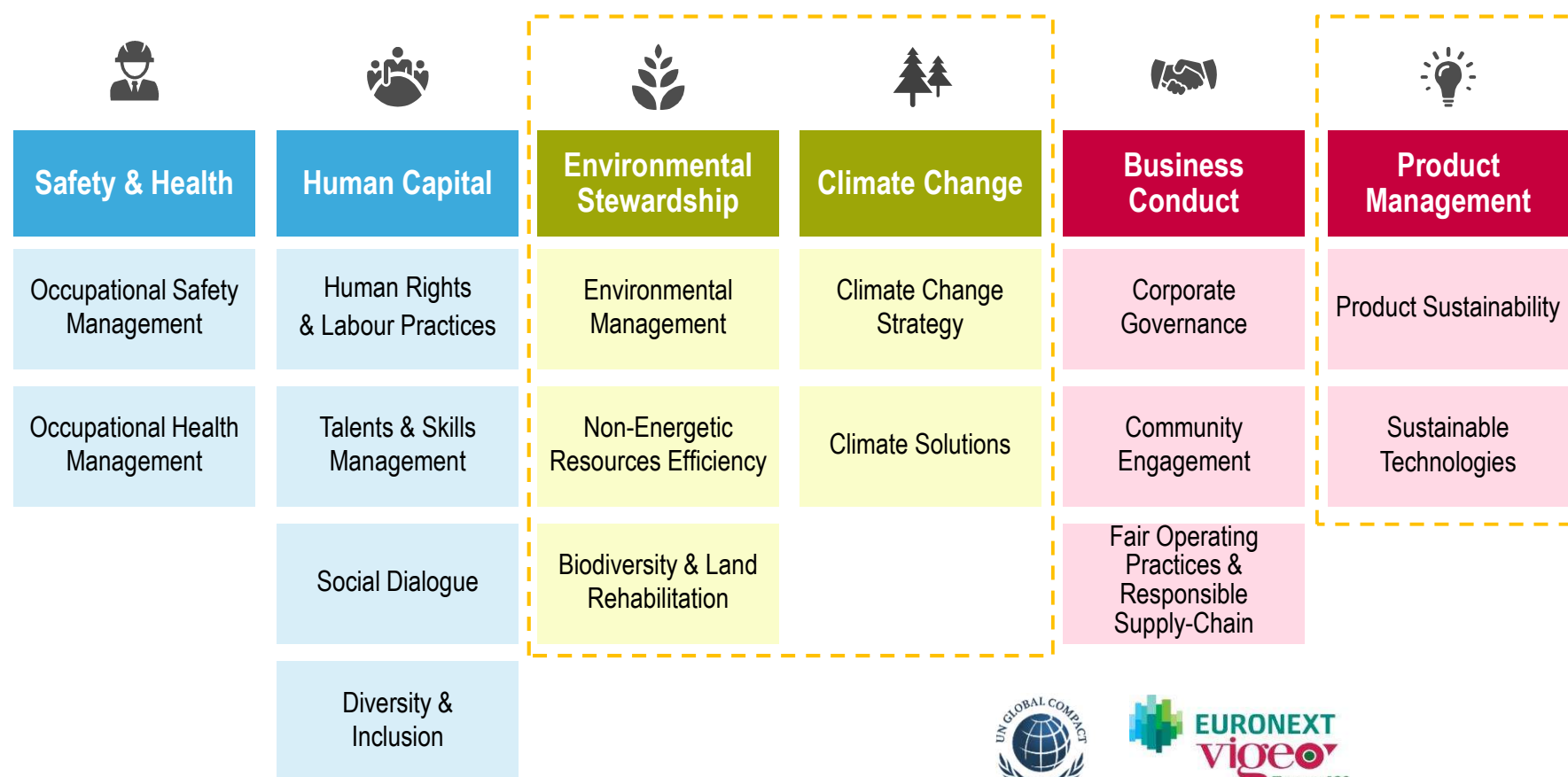


World leader in talc for
health and beauty

Imerys leverages a unique positioning with strong development levers



Imerys' corporate social responsibility roadmap



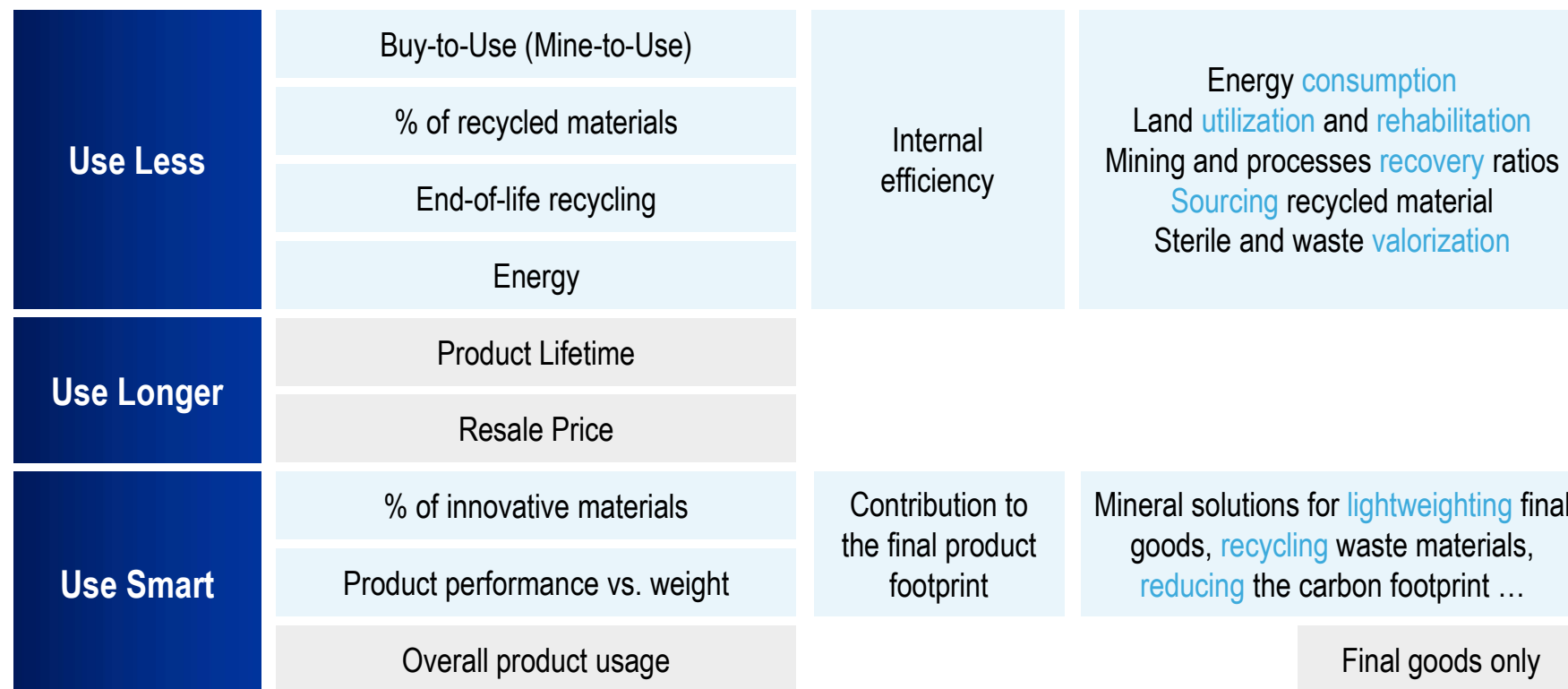
 **SustainAgility**
FOSTERING POSITIVE CHANGES



2015 Constituent
MSCI Global
Sustainability Indexes



Material usage approach at Imerys



A coordinated multi-local effort for operational sobriety ...
... globally focused on client needs for sustainability in material usage

Use Less: Internal efficiency

Use Less	Mining	Transforming	Other utilities
Buy-to-Use (Mine-to-Use)	Waste vs. ore Land utilization Biodiversity impact	Material recovery vs. industrial waste	Packaging, transport Chemicals
% of recycled materials	Minerals are recycled with the material they are incorporated in		
End of Life Recycling	Waste valorization and backfilling Land rehabilitation	Re-processing used minerals	Sourcing used minerals
Energy	Fossil and renewable energies Carbon footprint		



Mining and processing minerals with sobriety means a specific focus on land usage, waste ratios, biodiversity impact ...

... while managing standard issues in the industry (energy, water, CO₂ ...)

Use Less: mining with sobriety ... is minimizing waste extraction

Waste vs. Ore (in open pit mining)	Mining 95 million tons of material		
		Ore extracted	Tailings ratio
	■ All sites	29 million tons	2,3 to 1
	■ Top 15 sites	18 million tons	1,6 to 1
	■ Carbonates	7 million tons	0,7 to 1
Land utilization and rehabilitation	■ Minerals for refractory	1,4 million tons	4,9 to 1
	Limited industrial generation		
Impact on biodiversity	<ul style="list-style-type: none"> ■ 252,000 tons in 2017 ■ 98.5% non hazardous and 62.7% recycled ■ Industrial tailings generation: 0.05 kg/€ of turnover (low compared to other mining companies) 		

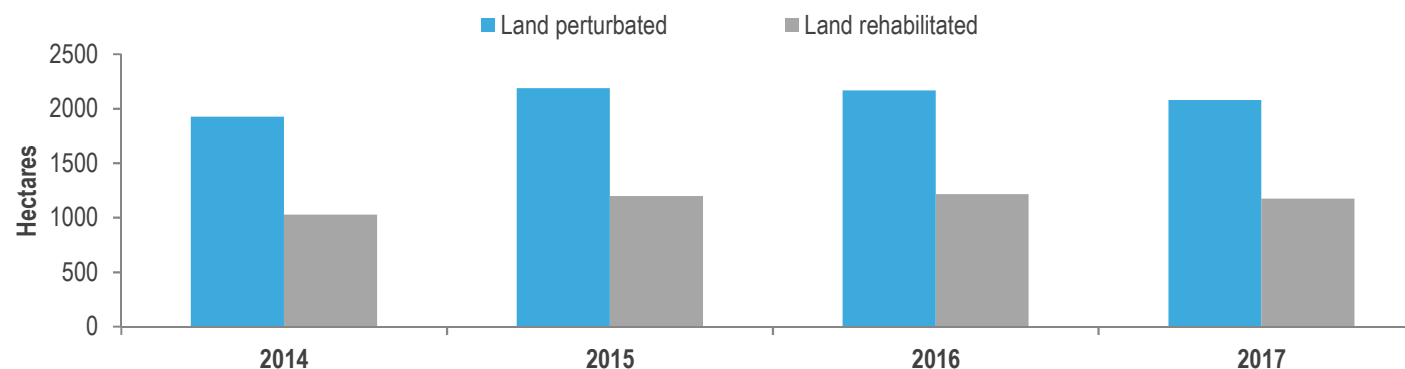
Use Less: mining with sobriety ... is minimizing disturbed land

Waste vs. Ore
(in open pit
mining)

Land
utilization and
rehabilitation

Impact on
biodiversity

48 mines and quarries in Western Europe



UK: 34 MW in renewable energy projects since 2015



Use Less: mining with sobriety ... is preserving biodiversity

Waste vs. Ore
(in open pit
mining)

- **Biodiversity management plans** at every site near areas of high biodiversity value
- **Rehabilitation plans** for all mining projects
- **123 M€** provision for site restoration in 2017

Land
utilization and
rehabilitation

Partnership with **UMS 2006**
Patrimoine Naturel*



Impact on
biodiversity



*Shared expert service between Musée national d'Histoire Naturelle, Agence Française pour la Biodiversité, and CNRS

Use less: recycled minerals in the industry

Recycling glass, plastics, concretes and paper implies recycling 40 to 50 % of all minerals used in Europe

Application	Recycling rate		Mineral	Recycling rate
Paper	72%		Kaolin and clay	49%
Plastics	31%		Talc	57%
Concretes	46%		Calcium carbonate	52%
Container glass	73%		Feldspath	60%
			...	

Source: Industrial Mineral Association Europe

Use Less: ambitious objectives for utilities consumption efficiency



COP21 • CMP11
PARIS 2015
UN CLIMATE CHANGE CONFERENCE

		2017 vs. 2016	2017 vs. 2014
Energy	■ Energy efficiency	+ 0,5 %	+ 4,3 % <i>COP21: +6%</i>
	■ Energy consumption per revenue unit	+ 1,3 %	- 15 %
CO ₂	■ CO ₂ emission efficiency	+ 0,4 %	+ 5,5 % <i>COP21: +6%</i>
	■ CO ₂ emission per revenue unit	+ 4,0	- 10 %
Water	■ Water consumption per revenue unit	+ 6,5 %	+ 1,0 %
	■ Water recycled in consumption	- 1 %	+ 4 %

Use Smart: contribution to reducing the final product footprint

Use Smart	Bring added-value solutions improving our clients' performance		
% of innovative material	New Products Development trackers	ImerPlast™ Solution for plastic recycling	
Product performance vs. weight	Talc for plastics Lightening plastics parts	FiberLean® Replace pulp by micro fibrillated cellulose	
As % of sales	2015	2016	2017
Total NPD	12,0 %	12,5 %	12,5 %



NPD: less than 5 years old into Imerys' product range

Mineral solution for recycling

- ImerPlast™: innovative mineral based solution for mixed polyolefin compounds
 - ◆ mechanical properties superior to usual compounds
 - ◆ better than the most heavily sorted HDPE (high-density polyethylene)
 - Widens the possibility of recycled plastics usage to **higher resistance applications**
 - **Uses the residual mix of the recycling chain** that has very little application until now
- Use smart
- Enriches the plastic recycling chain



Mineral solution for lightweighting industrial products

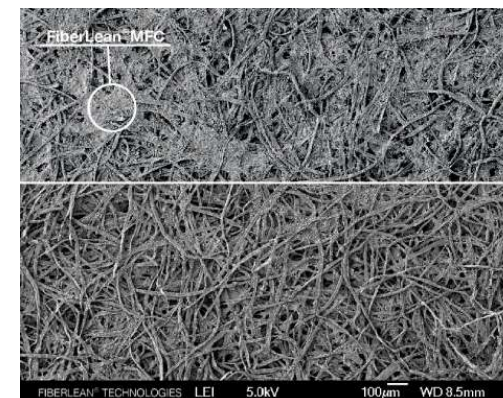
■ HAR® and Mistrocell® talcs for plastics :

- ◆ Replace most of the conventional fillers in automotive bumper or interior trim formulations
- ◆ Excellent reinforcing agents
 - Allow 5 to 10% reduction in the part weight
 - Lower the carbon footprint of the end product usage



Mineral solutions for reducing the final product footprint

- FiberLean®: an innovative composite of micro fibrillated cellulose and mineral for paper and packaging
 - ◆ Replaces cellulose up to 10-15% in base paper
 - ◆ Can be combined with many minerals such as calcium carbonate, kaolin, graphite, talc, ...
 - ◆ Also drying faster (energy, productivity), stronger and smoother (quality)
 - **3% lightening of Folding Boxboard** with maintained stiffness
 - **35% lightening of White Top Liner** with maintained strength, opacity and brightness



What's next?

Bringing high
quality mineral
material ...

- Sustainable reserves portfolio management
- With an always improved impact on environment

... together
with industrial
solutions

- Adding value to our clients processes and products
- Contributing to their sustainable usage of materials

Keys to success





Thank you for your attention



www.imerys.com

