

## SOCIAL STATEMENTS

# Social statements



### SOCIAL KEY FIGURES

	UNIT	NOTES	2012	2013	2014	2015	2016
Workforce (fully consolidated companies)	N°	S2	10,396	10,190	10,368	10,429	<b>9,921</b>
Temporary contracts	% of workforce	S2	4.21	3.42	3.62	3.91	<b>3.45</b>
Women amongst all employees	% of workforce	S2	21.88	21.53	21.68	21.72	<b>21.60</b>
Women amongst all managers	% of workforce	S2	20.25	20.52	21.25	22.18	<b>22.11</b>
Women amongst senior management	% of workforce	S2	7.41	8.70	8.33	9.49	<b>9.09</b>
Women in 'business operations' management functions	%	S2	-	-	-	-	<b>14.27</b>
Non-European representation in senior management functions	%	S2	-	-	-	-	<b>16.67</b>
Average training hours per employee	hours/employee	S3	50.72	45.18	45.59	45.06	<b>41.49</b>
Employees having a yearly appraisal	% of workforce	S3	91.80	95.65	95.82	95.97	<b>96.03</b>
Voluntary leavers - ratio	% of workforce	S3	3.20	3.33	3.42	3.35	<b>4.10</b>
Employees represented by union or Collective Labour Agreement (CLA)	% of workforce	S4	70.80	71.33	71.44	71.11	<b>69.41</b>
Exposure ratio 'all biomarkers aggregated' <sup>(1)</sup>	%	S6	4.3	2.6	1.8	2.3	<b>3.2</b>
Number of occupational linked diseases	N°	S6	20	14	21	12	<b>12</b>
People with platinum sensitisation	N°	S6	6	4	4	0	<b>1</b>
Fatal accidents	N°	S7	0	0	2	0	<b>1</b>
Lost Time Accidents (LTA)	N°	S7	49	35	37	47	<b>59</b>
Lost Time Accidents (LTA) for sub-contractors	N°	S7	33	22	11	9	<b>15</b>
LTA frequency rate	LTA/million hours worked	S7	2.86	2.08	2.16	2.66	<b>3.34</b>
LTA severity rate	lost days/thousand hours worked	S7	0.11	0.10	0.94	0.12	<b>0.56</b>

(1) Ratio between the number of monitoring results exceeding the Umicore target value, defined for relevant hazardous substances, and the total number of monitoring results.

### NOTES TO THE SOCIAL KEY FIGURES

#### S1 SCOPE OF SOCIAL STATEMENTS

In total, 102 consolidated sites are included in the HR related notes of the social reporting (S2 to S5).

This is 13 fewer than in 2015, mainly because of the divestment of the Business Unit Zinc Chemicals. Furthermore, two commercial offices were moved to a larger nearby Umicore site.

The sites report full year data for the social indicators.

The indicators presented are based on data from fully consolidated companies unless indicated otherwise.

The historical numbers (2015 and before) were not restated.

## S2 WORKFORCE

### GROUP DATA

	UNIT	2012	2013	2014	2015	2016
Workforce (fully consolidated companies)	N°	10,396	10,190	10,368	10,429	9,921
Workforce from associated companies	N°	4,042	3,867	3,706	3,301	3,196
Employees men	N°	8,121	7,996	8,120	8,164	7,778
Employees women	N°	2,275	2,194	2,248	2,265	2,143
Full-time equivalent	N°	-	-	-	-	9,716
Employees < 30 years	N°	-	-	-	-	1,620
Employees between 30 and 50 years	N°	-	-	-	-	5,605
Employees > 50 years	N°	-	-	-	-	2,696
Temporary contracts	% of workforce	4.21	3.42	3.62	3.91	3.45
Women amongst all employees	% of workforce	21.88	21.53	21.68	21.72	21.60
Women amongst all managers	% of workforce	20.25	20.52	21.25	22.18	22.11
Women amongst senior management	% of workforce	7.41	8.70	8.33	9.49	9.09
Women in 'business operations' management functions	%	-	-	-	-	14.27
Non-European representation in senior management functions	%	-	-	-	-	16.67

**Workforce:** Number of employees on Umicore payroll at the end of the period in fully consolidated companies.

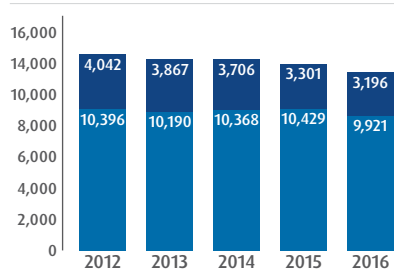
The number includes part-time and temporary employees but excludes employees with a dormant contract, employees on long term illness and sub-contracted employees.

**Temporary contract:** Umicore employees with a temporary contract, included in the workforce of fully consolidated companies.

**Full time equivalent:** The FTE of a worker is calculated by dividing the actual working regime, hours, shifts by the regime, hours, shifts of a full-time worker at the end of the period in fully consolidated companies.

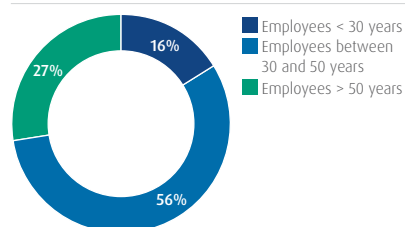
This applies to all hourly paid, monthly paid, managers and interns on Umicore's payroll at the end of the reported semester including part-time and temporary employees but excludes employees with a dormant contract (career interruption, maternity leave, parental leave, etc.), employees on long term illness (> 3 months at end of semester) and early retirees.

### TOTAL WORKFORCE

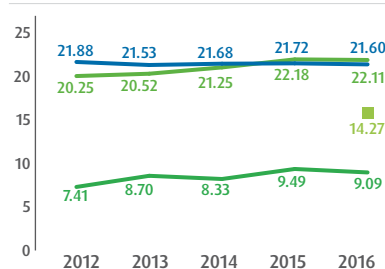


■ Fully consolidated companies  
■ Associated companies

### WORKFORCE – AGE SPLIT



### WOMEN REPRESENTATION



■ Amongst all employees  
■ Amongst all managers  
■ Amongst senior management  
■ In 'business operations' management functions

### TOTAL WORKFORCE

The total workforce decreased by 613 employees to a total of 13,117. For the fully consolidated companies, the workforce decreased by 508 people to 9,921, mainly because of the divestment of Zinc Chemicals. While the divestment of Zinc Chemicals alone would have seen a larger decrease in workforce, Business Groups Catalysis and Energy & Surface Technologies saw growth to bring the reduction to a lesser number.

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Amongst the associated companies there was a decrease of 105 employees as a result of production realignments and also by the fact that two of the associated companies were divested.

The report also publishes for the first time the FTE. The FTE of 9,716 (consolidated) comes very close to the reported headcount of 9,921, illustrating that most of Umicore employees are working on a full-time basis.

#### TEMPORARY CONTRACTS

Temporary contracts as a percentage of the workforce of fully consolidated companies decreased slightly to 3.45% in 2016.

#### GENDER SPLIT

The percentage of women was 21.60% as a proportion of the workforce of fully consolidated companies. It has remained in a narrow range of between 21% and 22% during the last six years. Women are more represented in administrative and commercial functions, compared to functions in the industrial operations. There are significant regional variations with Belgium and Northern Europe having a lower percentage of women employees compared to the rest of the world.

#### GENDER SPLIT – SENIOR MANAGERS

While the total percentage of women employees has remained rather stable (see above), the percentage of women managers has shown a steady increase from 18.65% in 2010 to 22.11% in 2016. Also the percentage of women in senior management has increased from 6.40% in 2010 to 9.09% in 2016 (although there is a drop from previous year due to attrition). We have set a 15% voluntary target for women in senior management functions by 2020.

#### WOMEN IN 'BUSINESS OPERATIONS' MANAGEMENT FUNCTIONS

In order to monitor career development we have defined the notion of "business operations" management functions, referring to those in the fields of operations, sales and General Management. Within the senior management group, these functions represent 55% of the group, as opposed to 45% for the support functions.

As from the year 2016, we monitor the percentage of women in these "business operations" functions, because these functions seem to offer a clearer pathway into the senior functions. In 2016, the percentage of women within this management group employed in business operations functions was 14.27%.

#### NON-EUROPEAN REPRESENTATION IN SENIOR MANAGEMENT FUNCTIONS

As from 2016, we also monitor the percentage of non-European representation in senior management functions, as an indicator for diversity. In 2016 this percentage amounted to 16.67%.

#### 2016 REGIONAL DATA

	UNIT	EUROPE	NORTH AMERICA	SOUTH AMERICA	ASIA-PACIFIC	AFRICA	UMICORE GROUP
Workforce (fully consolidated companies)	N°	6,401	831	675	1,751	263	9,921
Workforce from associated companies	N°	977	17	420	1,139	643	3,196
Employees men	N°	5,135	644	507	1,334	158	7,778
Employees women	N°	1,266	187	168	417	105	2,143
Full-time equivalent	N°	6,213.74	826.50	672.00	1,747.25	257.00	9,716.49
Temporary contracts	% of workforce	4.98	0.72	0.59	0.69	0.38	3.45

#### 2016 BUSINESS GROUP DATA

	UNIT	CATALYSIS	ENERGY & SURFACE TECHNOLOGIES	RECYCLING	DISCONTINUED OPERATIONS	CORPORATE	UMICORE GROUP
Workforce (fully consolidated companies)	N°	2,464	2,357	3,170	946	984	9,921
Workforce from associated companies	N°	177	847	0	420	1,752	3,196
Employees men	N°	1,944	1,906	2,598	752	578	7,778
Employees women	N°	520	451	572	194	406	2,143
Full-time equivalent	N°	2,437.65	2,344.23	3,137.94	935.55	861.10	9,716.49
Temporary contracts	% of workforce	5.32	2.59	2.49	5.60	1.83	3.45

## SOCIAL STATEMENTS

## GENERAL OVERVIEW OF SITES AND EMPLOYEES

	INDUSTRIAL SITES	OTHER SITES	EMPLOYEES
<b>Europe</b>			
Austria	1		133
Belgium	4	1	2,849
Czech Republic		1	3
Denmark		1	12
France	5	2	795
Germany	6 (1)	1 (1)	2,100 (360)
Hungary		1	6
Ireland	(1)		(433)
Italy	1	3	84
Liechtenstein	1		74
Luxembourg		1	11
Netherlands	1		47
Poland	1	2	89
Portugal		1	5
Russia		1	6
Slovakia	1		41
Spain		2	18
Sweden	1	1(1)	38 (8)
Switzerland	1	2	32
Turkey		1	4
United Kingdom	1 (1)	3 (1)	54 (176)
<b>Asia-Pacific</b>			
Australia		3	15
China	6 (3)	6 (1)	836 (949)
India	1	1	78
Japan	4	3 (1)	168 (9)
Philippines	1		78
South Korea	2 (1)	1	387 (177)
Taiwan	1	1	23
Thailand	3		166
United Arab Emirates		(1)	(4)
<b>North America</b>			
Canada	3		236
Mexico		1	4
United States	9	2 (1)	591 (17)
<b>South America</b>			
Argentina	1		58
Brazil	3		617
Peru	(1)		(420)
<b>Africa</b>			
South Africa	1 (1)	1	263 (643)
<b>Total</b>	<b>59 (9)</b>	<b>43 (7)</b>	<b>9,921 (3,196)</b>

## S3 PEOPLE ENGAGEMENT

### GROUP DATA

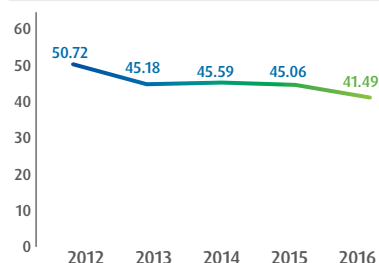
	UNIT	2012	2013	2014	2015	2016
Employees having a yearly appraisal	% of workforce	91.80	95.65	95.82	95.97	<b>96.03</b>
Average number of training hours per employee	hours/employee	50.72	45.18	45.59	45.06	<b>41.49</b>
Average number of training hours per employee – Men	hours/employee	51.75	45.82	48.09	45.32	<b>42.38</b>
Average number of training hours per employee – Women	hours/employee	46.04	42.26	39.76	47.39	<b>38.28</b>
Average number of training hours per employee – Managers	hours/employee	64.15	41.41	37.18	34.24	<b>41.03</b>
Average number of training hours per employee – Other employee categories	hours/employee	45.57	44.82	46.29	46.09	<b>41.52</b>
Voluntary leavers ratio	% of workforce	3.20	3.33	3.42	3.35	<b>4.10</b>
Voluntary leavers men	N°	251	253	273	280	<b>309.00</b>
Voluntary leavers women	N°	81	89	80	69	<b>97.00</b>

**Training hours:** Average number of training hours per employee, including all types of training (formal, training on the job, E-learning, etc.) in which the company provides support and which are relevant to the business unit or the company. The total number of training hours is divided by the total workforce of fully consolidated companies.

**Voluntary leavers:** Number of employees leaving the company of their own will (excluding retirement and the expiry of a fixed-term contract). This figure is related to the workforce from fully consolidated companies.

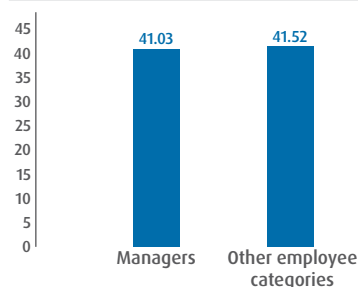
### AVERAGE NUMBER OF TRAINING HOURS PER EMPLOYEE

Hours/employee



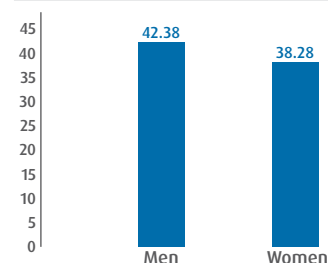
### AVERAGE NUMBER OF TRAINING HOURS PER EMPLOYEE CATEGORY

Hours/employee



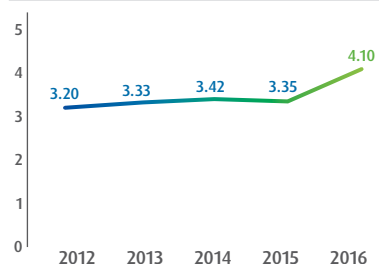
### AVERAGE NUMBER OF TRAINING HOURS PER EMPLOYEE – GENDER SPLIT

Million EUR



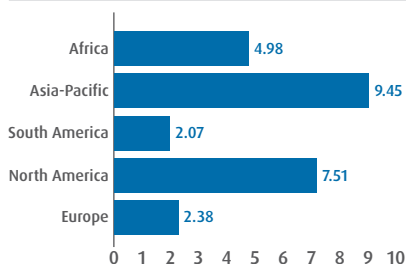
### VOLUNTARY LEAVERS RATIO

%



### VOLUNTARY LEAVERS RATIO

% of workforce



## SOCIAL STATEMENTS

## 2016 REGIONAL DATA

	UNIT	EUROPE	NORTH AMERICA	SOUTH AMERICA	ASIA-PACIFIC	AFRICA	UMICORE GROUP
Average number of training hours per employee	hours/employee	38.78	33.63	69.26	46.31	29.97	41.49
Employees having a yearly appraisal	% of workforce	98.75	96.75	100.00	82.75	99.62	96.03
Voluntary leavers ratio	% of workforce	2.38	7.51	2.07	9.45	4.98	4.10

## 2016 BUSINESS GROUP DATA

	UNIT	CATALYSIS	ENERGY & SURFACE TECHNOLOGIES	RECYCLING	DISCONTINUED OPERATIONS	CORPORATE	UMICORE GROUP
Average number of training hours per employee	hours/employee	41.67	46.82	40.06	35.16	39.06	41.49
Employees having a yearly appraisal	% of workforce	97.12	87.99	99.27	97.99	100.00	96.03
Voluntary leavers ratio	% of workforce	5.54	6.46	2.23	1.60	3.27	4.10

## TRAINING HOURS

In 2016, the average training hours per employee reached 41.49 hours. This is somewhat lower than the previous years.

The reduction is attributed to fewer hirings compared to the previous years and some sites anticipating on staff reductions, resulting in less training at those sites.

Data shows that managers training hours (41.03 hours) is in balance with other employees (41,52 hours).

## YEARLY APPRAISAL

In 2016, 96.03% of all employees from fully consolidated companies have an appraisal interview to discuss their development at least once a year.

## VOLUNTARY LEAVERS

In the previous five years, the percentage of voluntary leavers has fluctuated between 3.2 and 3.8. In 2016 the percentage increased to 4.10%. As was the case in previous years, significant regional differences can be observed with Asia Pacific reporting the highest turnover rate (9.45%) and Europe (2.38%) the lowest. The high turnover rate in Asia Pacific is not unique to Umicore and can be explained by a highly competitive and fluid labour market in some of the growth markets.

## VOLUNTARY LEAVERS - GENDER

23.89% of the voluntary leavers are women, which is slightly higher than the 21.60% presence of women in the workforce of fully consolidated companies.



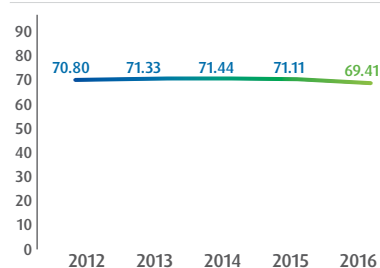
## S4 EMPLOYEE RELATIONS

### GROUP DATA

	UNIT	2012	2013	2014	2015	2016
Employees represented by union or Collective Labour Agreement (CLA)	% of workforce	70.80	71.33	71.44	71.11	69.41

### EMPLOYEES REPRESENTED BY UNION OR COLLECTIVE LABOUR AGREEMENT (CLA)

% of workforce



### 2016 REGIONAL DATA

	UNIT	EUROPE	NORTH AMERICA	SOUTH AMERICA	ASIA-PACIFIC	AFRICA	UMICORE GROUP
Employees represented by union or Collective Labour Agreement (CLA)	% of workforce	85.47	8.90	93.04	31.81	59.32	69.41

### 2016 BUSINESS GROUP DATA

	UNIT	CATALYSIS	ENERGY & SURFACE TECHNOLOGIES	RECYCLING	DISCONTINUED OPERATIONS	CORPORATE	UMICORE GROUP
Employees represented by union or Collective Labour Agreement (CLA)	% of workforce	59.38	54.05	84.10	76.64	77.03	69.41

### UNION AND COLLECTIVE LABOUR AGREEMENT

In total, 69.41% of Umicore employees belong to a trade union organisation and/or the level of their wages are negotiated through a collective bargaining agreement. On a regional basis, there are important differences in union representation, with the highest representation in South America and Europe and the lowest in North America and Asia Pacific.

### SUSTAINABLE DEVELOPMENT AGREEMENT

In 2007, Umicore signed a Sustainable Development Agreement with the International union IndustriALL, which was again renewed in 2015 for a period of four years. In this agreement, Umicore commits to a number of principles including: the banning of child labour and forced labour, recognising the right to its employees to organise themselves and to participate in collective bargaining.

All sites are screened internally each year. This screening showed that none of Umicore's sites demonstrated a particular risk of infringement in any of the principles of the agreement.



## S5 CODE OF CONDUCT

Since 2011, Umicore has organised for the first time a systematic Group-wide internal reporting on Code of Conduct issues. In 2016 a total of 14 cases were reported, involving a total of 21 employees. The type of action taken varies from a warning letter to dismissal.

## S6 OCCUPATIONAL HEALTH

All consolidated industrial sites where Umicore has operational control are included in the scope of the occupational health reporting. Compared to 2015, data of nine sites are not reported anymore: Angleur, Heusden-Zolder, Overpelt (all Belgium), Changsha (China), Eijsden (Netherlands), Larvik (Norway), Pasir Gudang (Malaysia) (all Zinc Chemicals), Shanghai (China, Cobalt & Specialty Materials and Zinc Chemicals) and Yokohama (Japan, Platinum Engineered Materials). Two sites were added to the reporting scope: Nowa Ruda (Poland, Automotive Catalysts) and Qingyuan (China, Thin Film Products). This brings the total number of reporting sites to 58.

The information in this note only relates to Umicore's employees. Data on sub-contractors' occupational health are not included. Additional information on Umicore's management approach on occupational health can be found in the corresponding section on page 66.

### GROUP DATA

	UNIT	2012	2013	2014	2015	2016
Exposure ratio 'all biomarkers aggregated' <sup>(1)</sup>	%	4.3	2.6	1.8	2.3	3.2
Exposure ratio lead (blood) <sup>(2)</sup>	%	0.5	0.9	1.0	0.8	0.5
Exposure ratio arsenic (urine) <sup>(2)</sup>	%	1.4	1.6	1.1	1.3	2.0
Exposure ratio cobalt (urine) <sup>(2)</sup>	%	14.8	10.7	7.3	8.7	9.0
Exposure ratio cadmium (urine) <sup>(2)</sup>	%	3.0	1.0	0.6	1.1	1.4
Exposure ratio nickel (urine) <sup>(2)</sup>	%	7.1	1.1	0.3	1.3	2.0
Exposure ratio indium (blood) <sup>(2)</sup>	%	-	-	-	-	11.3
People with platinum salts sensitisation	N°	6	4	4	0	1
People with noise induced hearing loss	N°	4	3	5	2	4
People with contact dermatitis	N°	2	2	2	3	0
People with occupational asthma other than Pt-salts	N°	1	0	0	1	0
People with muskulo-skeletal ailments	N°	7	5	14	7	7

(1) Ratio between the number of monitoring results exceeding the Umicore target value, defined for relevant hazardous substances, and the total number of monitoring results.

(2) The exposure ratio of a specific metal is defined as the ratio between the number of employees with a biological monitoring result exceeding the Umicore target value for that specific metal and the total number of employees exposed to that metal. The Umicore target values are inspired by the biological exposure indices of the American Conference of Governmental Industrial Hygienists (ref. 2011) and are at least as strict as any legal limits in force in countries where we operate.





It is Umicore's objective to have by 2020 no exceedance for the biomarkers of exposure for the metals listed below. The following target values have been defined:

- **Cadmium:** 2 microgramme per gramme of creatinine in urine.
- **Lead:** 30 microgramme per 100 ml of blood.
- **Cobalt:** 15 microgramme per gramme of creatinine.
- **Indium:** 1 microgramme per liter of plasma.
- **Arsenic and nickel:** 30 microgramme per gramme of creatinine.
- **Platinum salts:** no new cases of platinum salt sensitisation.

The number of occupational diseases is the number of employees with a newly-diagnosed occupational disease or occupationally linked symptoms during the reporting cycle.

In 2016, a total of 5,294 biological samples were taken from employees with an occupational exposure to at least one of the metals mentioned above (platinum salts excluded). 170 readings showed a result in excess of the internal target value. This brings the total excess rate to 3.2% compared to 2.3% in 2015. All occupationally exposed employees are regularly monitored by an occupational health physician.

#### LEAD

Occupational lead exposure represents a potential health risk in the business groups Energy & Surface Technologies, and Recycling. In total, 8 of the 1,512 occupationally exposed employees exceeded the target value of 30µg/100ml bringing the excess rate for lead exposure to 0.5%, slightly down from 0.8% in 2015.

The majority of the excess readings were in the lead refinery at the Hoboken site (Belgium, Recycling). Besides a strict respiratory protection policy, an increased ventilation is implemented to again reduce exposures at the workplace. All workers are submitted to a detailed medical surveillance programme.

#### ARSENIC

Occupational exposure to arsenic is possible in the business groups Energy & Surface Technologies and Recycling. In total, 2.0% of the 957 occupationally exposed had an excess reading during 2016 compared to 1.3% in 2015.

Higher workplace exposures were noted in the Guarulhos site (Brazil, Recycling) due to an increase in arsenic content of incoming raw materials. The site enhanced its respiratory protection program and is implementing engineering measures to reduce exposures. A medical surveillance programme is in place to closely follow-up the health condition and exposures of all workers exposed to arsenic.

#### COBALT

In total, 854 employees are occupationally exposed to cobalt, mainly in the business group Energy & Surface Technologies.

The number of employees exceeding the target value was 77 resulting in an excess rate of 9.0%, up 8.7% in 2015. Excess readings in the business unit Cobalt & Specialty Materials slightly decreased from 32 in 2015 to 28 in 2016. The site in Wickliffe (USA, Energy & Surface Technologies) is not included into these numbers, as the biological monitoring programme has not yet been fully deployed. After several years of decrease, the site in Fort Saskatchewan (Canada) recorded 17 excess readings compared to 8 last year, due to higher production volumes. Additional technical and hygiene measures are implemented. In the business unit Rechargeable Battery Materials we noticed an increase in excess readings from 34 in 2015 to 49 in 2016. This is caused by a significant increase in production in the new facility in Cheonan (South-Korea, Energy & Surface Technologies). Besides technical measures, the site is further improving compliance with respiratory protection programs and housekeeping measures. The business units Cobalt & Specialty Materials and Rechargeable Battery Materials have for many years been developing an occupational health approach for cobalt including biological monitoring and medical health surveillance.



#### CADMIUM

Occupational exposure to cadmium represents a potential health risk in the business groups Energy & Surface Technologies and Recycling. Cadmium in urine is an excellent biomarker for lifetime exposure. In 2016, a total of 487 employees had an occupational exposure to cadmium.

Seven employees recorded a cadmium in urine reading in excess of the target value compared to 5 in 2015. This resulted in an excess rate of 1.4% compared to 1.1% in 2015.

#### NICKEL

The business groups Energy & Surface Technologies and Recycling have occupational exposure to nickel. In 2016 a total of 1,173 employees were exposed to nickel. In 2016, 24 of the exposed workers exceeded the target level resulting in an excess level of 2.0% compared to 1.3% in 2015.

This increase is caused by the increased production volumes at the site in Jiangmen (Energy & Surface Technologies, China) and the new site in Cheonan (Energy & Surface Technologies, South-Korea) comparable to the increase in cobalt exposures (see above). Measures include technical improvements, stricter housekeeping and personal protective equipment policies.

#### INDIUM

In the past decade, scientific data published in the peer review literature clearly demonstrate that occupational exposure to indium and indium tin oxide may result in adverse health effects, primarily at the level of the respiratory tract. During the period 2012 – 2016, the National Institute of Occupational Safety and Health (NIOSH, USA) has worked with Umicore on a health hazard assessment programme at the site in Providence (Energy & Surface Technologies, USA) to assess the effectiveness of the exposure prevention programmes. While the results by NIOSH clearly demonstrated the reduction in exposures made, the site continues to implement source control measures to continuously decrease exposures at the workplace. The knowledge acquired during this project was instrumental in the design and construction of a new site in Qingyuan (Energy & Surface Technologies, China). Umicore included exposure to indium and indium tin oxide to its occupational exposure reduction programme. Indium in plasma is an excellent life time exposure indicator.

In 2016, 311 workers were exposed to indium and indium tin oxide of which 35 workers were exposed above the target level of 1 microgramme per litre plasma. All workers with indium exposure are submitted to a medical surveillance program with focus on respiratory function.

#### PLATINUM SALTS

The business groups Catalysis and Recycling have workplaces with exposure to platinum salts.

In 2016 we had 1 newly diagnosed employees with a platinum salt sensitisation at the site in Pilar (Recycling, Argentina). All workers exposed to platinum salts are monitored through an occupational health programme and regularly screened on allergy.

#### OTHER OCCUPATIONAL DISEASES

In 2016, 4 employees were diagnosed with industrial noise-induced hearing loss and 7 developed a musculo-skeletal disorder due to their occupation. All people concerned are followed by an occupational health physician.



## S7 OCCUPATIONAL SAFETY

In total, 104 consolidated site, of which 61 are industrial site are included in the safety reporting. This number also includes commercial offices but excludes the sites of the divested Business Unit Zinc Chemicals.

Additional information on Umicore's management approach on safety can be found in the corresponding section on page 66.

The Umicore information in this note only relates to Umicore's employees. Data on sub-contractors' occupational safety are reported separately. It is Umicore's objective to have zero lost time accidents by 2020.

### GROUP DATA

	UNIT	2012	2013	2014	2015	2016
Fatal accidents	N°	0	0	2	0	1
Fatal accidents sub-contractors	N°	0	0	0	0	0
Lost Time Accidents (LTA)	N°	49	35	37	47	59
Lost Time Accidents (LTA) sub-contractors	N°	33	22	11	9	15
LTA frequency rate		2.86	2.08	2.16	2.66	3.34
Calendar days lost	N°	1,897	1,726	16,122	2,134	9,848
LTA severity rate		0.11	0.10	0.94	0.12	0.56
Recordable Injuries (RI)	N°	160	146	112	148	127
Recordable Injuries frequency rate		9.32	8.67	6.53	8.38	6.78
Ratio N° of sites with no LTA/total N° of sites reporting	%	85	79	84	84	84
Sites OHSAS 18001 certified	%	32.0	32.8	40.0	36.6	41.7

### DEFINITION

**Umicore employee:** a person belonging to Umicore's total workforce. A Umicore employee can be a full-time, part-time or temporary employee.

**Sub-contractor:** a person not belonging to Umicore's total workforce, providing services to Umicore in one of its premises under terms specified in a contract.

**Fatal accident:** a work-related accident with fatal outcome.

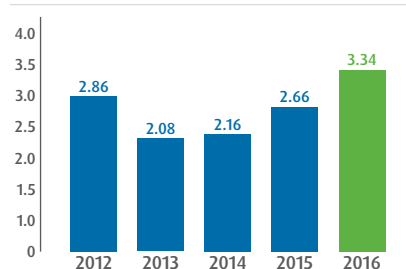
**Lost time accident (LTA):** a work-related injury resulting in more than one shift being lost from work.

**Recordable injury (RI):** a work-related injury resulting in more than one first aid treatment or in a modified working programme but excluding lost time accidents.

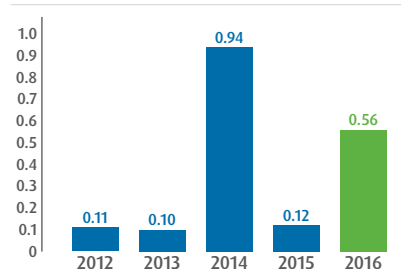
**Frequency rate:** number of lost time accidents per million hours worked.

**Severity rate:** number of lost calendar days due to a lost time accident per thousand hours worked. Accidents to and from work are not part of the scope of the safety data.

### FREQUENCY RATE



### SEVERITY RATE



## SOCIAL STATEMENTS

## 2016 REGIONAL DATA

	UNIT	EUROPE	NORTH AMERICA	SOUTH AMERICA	ASIA-PACIFIC	AFRICA	UMICORE GROUP
Lost Time Accidents (LTA)	N°	53	3	1	2	0	59

## 2016 BUSINESS GROUP DATA

	UNIT	CATALYSIS	ENERGY & SURFACE TECHNOLOGIES	RECYCLING	DISCONTINUED OPERATIONS	CORPORATE	UMICORE GROUP
Fatal accidents	N°	0	1	0	0	0	1
Lost Time Accidents (LTA)	N°	2	11	34	5	7	59
Calendar days lost	N°	40	7,694	1,301	469	344	9,848

In May 2016, a fatal accident occurred in the operations in Manaus (Energy & Surface Technologies, Brazil). An investigation concluded that the accident was the result of an employee carrying out a chemical cyanide handling and not correctly following the prescribed instructions. Umicore is reviewing all its relevant procedures and instructions related to cyanide handling and medical emergency treatment. Efforts will continue in order to ensure that all areas for improvement are identified and pursued.

In 2016, a total number of 59 lost time accidents were recorded compared to 47 in 2015. This resulted in a frequency rate of 3.34, up from 2.66 in 2015 and a severity rate 0.56. The number of reported recordable injuries decreased to 127 compared to 148 in 2015. The recordable injury frequency rate for 2016 was 6.78 compared to 8.38 in 2015.

A total of 15 lost time accidents were registered for contractors compared to 9 in 2015.

During 2016, 84% of the reporting sites operated without a lost time accident, the same number as in 2015. Forty-two percent of sites were certified using the occupational health and safety management system OHSAS 18001 compared to 37% in 2015.

Fifty-three lost time accidents, or nearly 90% of the total number of lost time accidents, occurred in Europe. Of these, 35 occurred in Belgian sites and 10 in German sites. The Americas accounted for 4 accidents while 2 accidents happened in the Asia-Pacific region.

In 2016, the business group **Catalysis** recorded 2 lost time accidents, both in the Automotive Catalysts business unit. The business unit Automotive Catalysts continues the SafeStart® programme in all its operating sites. This programme focuses on both habitual and unintentional safety behaviour. All Automotive Catalysts production plants are required to be certified against the OHSAS 18001 management system. At year-end, the site in Port Elizabeth (South Africa), Karlskoga (Sweden) and Tsukuba (Japan) had operated more than 5 years without a lost time accident or recordable injury to Umicore staff and no lost time accident to contractors on site. The sites in Burlington (Canada), Himeiji (Japan), and Suzhou (China) had operated at least 3 years without a lost time accident or recordable injury to Umicore staff and no lost time accident to contractors on site.

The business group **Energy & Surface Technologies** recorded 11 lost time accidents, of which 9 were in the business unit Cobalt & Specialty Materials and 2 in the business unit Electroplating including 1 fatal accident in the site in Manaus (Brazil). The business unit Rechargeable Battery Materials successfully invested in an effective and pragmatic in-house developed safety leadership programme based on a behaviour observation and risk intervention technique as part of its safety ACCE programme (Awareness, Competence, Compliance, Excellence). At the end of 2016, the business unit operated more than 1,200 days with no lost time accidents. The business unit Cobalt & Specialty Materials initiated a similar risk awareness programme in several of its sites. The site in Dundee (UK) has been recognised for its excellent and sustained safety performance, recording at least 10 years with no lost time accident or recordable injury to Umicore staff and no lost time accident to contractors. Beijing (China) and Tsukuba (Japan) operated at least 5 years without lost time accident and recordable injury to Umicore staff and lost time accidents to contractors. The sites in Balzers (Liechtenstein) and Quapaw (USA) operated at least 3 years without lost time accident and recordable injury to Umicore staff and lost time accident to contractors.

## SOCIAL STATEMENTS



The business group **Recycling** had 34 lost time accidents. The business unit Precious Metal Refining recorded a disappointing safety performance with 22 lost time accidents. While several initiatives were taken to improve safety leadership and risk awareness, the business unit continues to search for a safety breakthrough and efforts will continue in order to ensure that all possible areas for improvement are identified and pursued. The business unit Jewellery & Industrial Metals, recorded 8 lost time accidents, the business unit Technical Materials had 3 lost time accidents while the business unit Platinum Engineered Materials reported 1 lost time accident.

At the end of 2016 the site in Vicenza (Italy) operated at least 5 years without a lost time accident or recordable injury to Umicore staff and no lost time accident to contractors on site.

The Discontinued operations recorded 5 lost time accidents. At the end of 2016, the site in Vilvoorde (Belgium) had achieved more than 5 years with no lost time accident or recordable injury to Umicore staff and no lost time accident to contractors on site.

An additional of 7 lost time accidents occurred in general services and corporate offices including Group Research & Development.

### S8 PROCESS SAFETY

In 2016 the Group-wide process safety project made further progress by finalising the standards and guidance notes related to 'integrity of design', 'technical integrity' and 'operational integrity'. With their publication, the process safety documentation for the Group has been completed. An in-house developed software integrating all the process safety standards was made available to all sites. The use of this software facilitates the process of risk identification and the implementation of risk reduction measures. To demonstrate the software, the project team engaged in workshops with all industrial sites in all regions, which were attended by several hundreds of colleagues. Since the deployment of the process safety standards and guidelines into the local safety management systems is a key element, Group-wide leading and lagging process safety indicators have been defined for future reporting.