

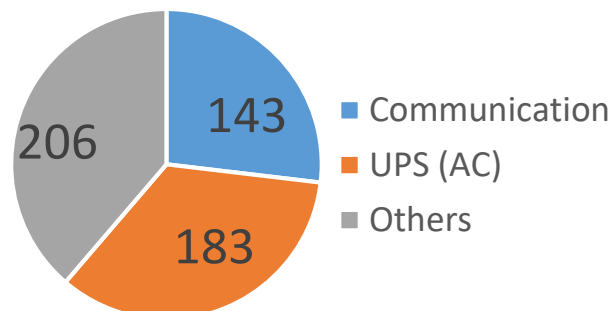
# Industrial Battery Committee

*Battery Markets Outlook – Update June 2018*

## EUROBAT IBC Internal Sales Surveys\* – lead batteries

### Stand-by market 2017: Total EMEA: 538 M€ (+0.3%)

*Stand-by applications: Sealed 86% - Flooded 13%*



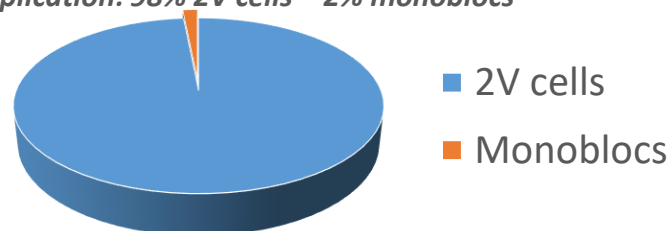
Status-quo compared to 2016 (+0.3%)

- Communication : +3%
- UPS AC : +1,5%
- Others (including ES) : -2%

### Traction batteries market 2017: Total EMEA: 908 M€ (+6%)

Flooded technology only

*Traction application: 98% 2V cells – 2% monoblocs*

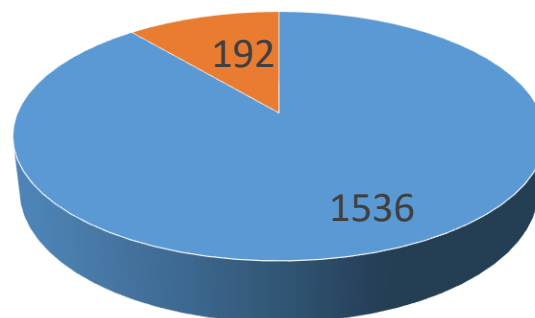


## EUROBAT IBC Internal Sales Surveys\* – non-lead batteries

**Total battery Market EMEA: 1,728 M€**

**Stationary and traction markets, excluding automotive and road electric vehicles**

*Lead batteries 89% - non-lead batteries 11%*

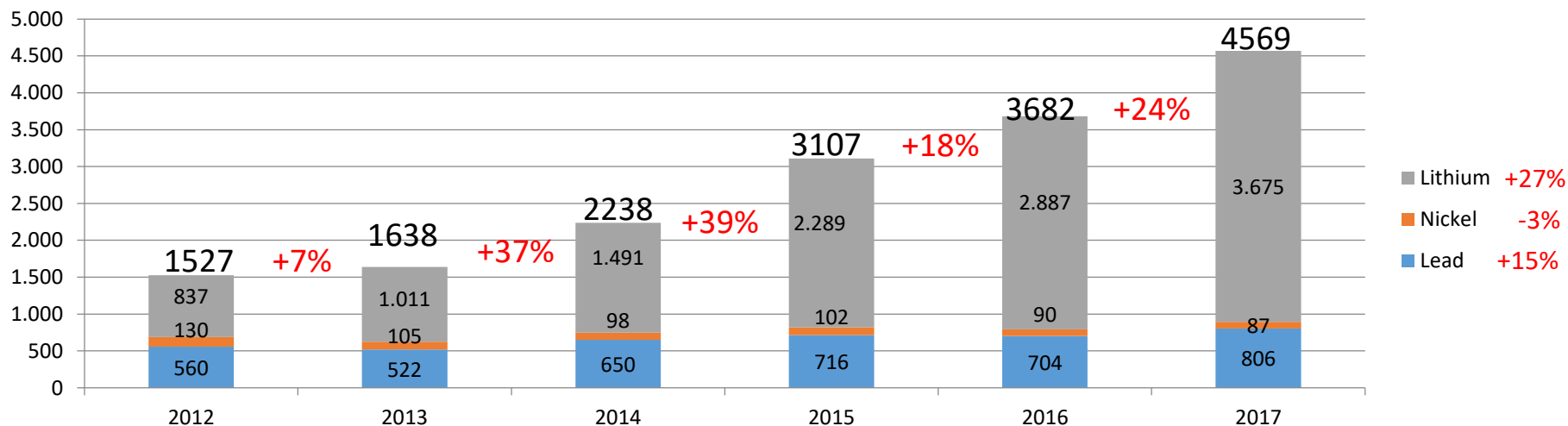


■ lead batteries    ■ Non-lead

\*Member data only

\*\* non- lead = Lithium, nickel and sodium based batteries

### Import Statistics EUROSTAT - in currency (M€)



#### **Pb-based batteries**

##### **(stationary and traction, excluding starters)**

- Double digit growth stopped in 2016
- 2017: increase with +14,5% up to 806 M€

##### Top 3 countries 70% of EU imports:

- China: 347 M€ (+10%)
- Vietnam: 110 M€ (+50%)
- US: 97 M€ (-8%)

##### Smaller contributors very fast growing:

- S-Korea (17 M€): +100%
- Turkey (7 M€): +200%

#### **Ni-based (mainly portable but also stationary and traction)**

##### Niche market

##### Total EU imports

- Continue to lower (-3,5%)
- Still under the level of 2014

##### Due to

- China (-17%) and Japan(-25%)

##### Some contributors increasing

- US (+15%) and Vietnam (+62%)

#### **Li-based batteries (portable, stationary, motive and automotive)**

##### Year after year double digit growth: 2017: + 27%

- Two countries 60% of EU imports
  - S-Korea; passing over China with 1,200 M€ (+50% annual grow)
  - China 1,000 M€ with annual growth of 29%
- Two other strong contributors:
  - US: 500 M€ (+ 7%)
  - Japan: 500M€ (+10%)