Battery regulation – first vision

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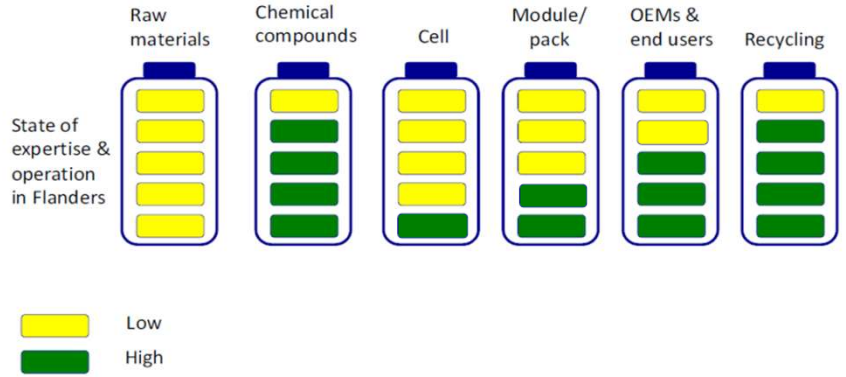
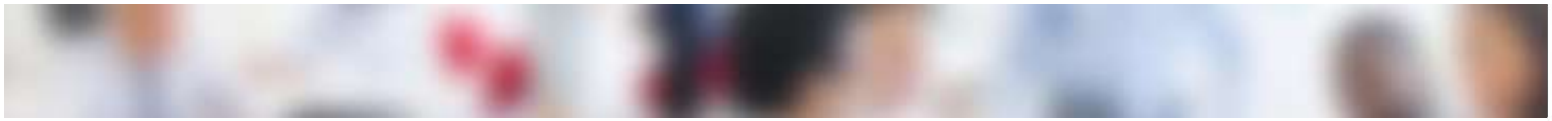
Proposal of new battery regulation

- **Belgian battery eco-system:**
  - Strong in materials & recycling
  - Different end-users (automotive)
- **New battery regulation:**
  - From directive to regulation = level playing field
  - Ambitious timeframe (1/1/2022) for adoption
  - Regulation over the lifecycle of batteries
- **Very broad proposal, but:**
  - Still different 'delegated/implementing acts' need to be developed
  - Clear view on feasibility at this stage is difficult & puts doubts on feasibility targets!



Important Project of Common European Interest (IPCEI) on batteries

Raw & advanced materials	Cells & modules	Battery systems	Recycling & sustainability
• Hydrometal • Nanocyl • Prayon • Solvay • Umicore			• Hydrometal • Umicore



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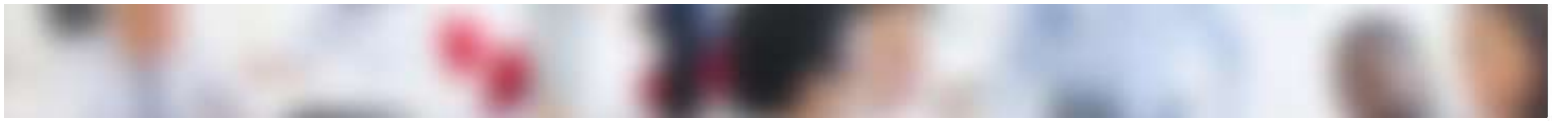
Improve regulatory coherence

- **Batteries contain hazardous substances:**
  - Needed for technical performance for a given application
- **Multiple legal frameworks are applicable to manage potential risks:**
  - Battery regulation, ELV, OHS, environmental regulations, REACH, … but also the waste shipment regulation
- **Our recommendation avoid duplication of risk management measures by improving regulatory coherence:**
  - Ensure a proper risk management option analysis in order to determine the most appropriate risk management measure recognizing the life cycle of batteries
  - Ensure that any substitution, if relevant, is based on an analysis of alternatives recognising economic & technical feasibility
  - Develop a 'fast track' notification procedure under the Waste Shipment regulation for intra-EU shipments to pre-consented facilities



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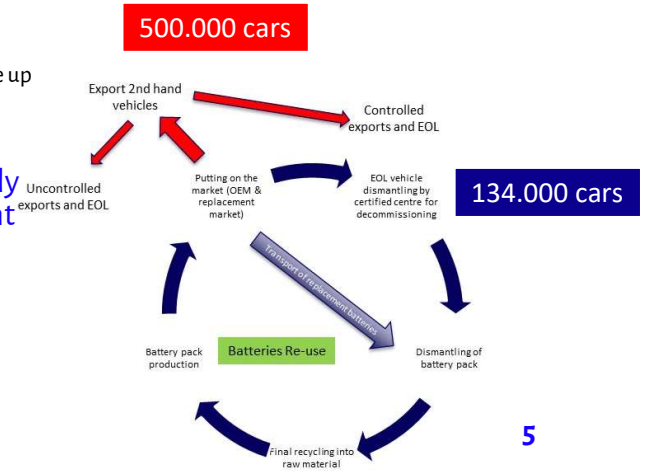
Carbon footprint for EV & industrial batteries (> 2kWh)

- **Full support to use life cycle assessment for the environmental performance of products**
- **Attention should be paid on the methodology (still to be developed - for instance what is the service life time):**
  - Calculation methodology for carbon footprint (7/2023)
  - Determination of performance classes (12/2024)
  - Maximum carbon footprint over the lifecycle (12/2026)
- **Important to recognise the work in the Product Environmental Footprint (rechargeable batteries for portable batteries):**
  - Experience should be integrated in methodology
  - Time frame needed for the adoption of PEF portable batteries was long (4 years)
- **Our recommendation:**
  - Use a realistic timeframe taking into account the PEF portable batteries experience
  - Make full use of the existing experience

Recycled content (EV & industrial batteries)

- **Recycled content is sector specific & needs to be supported by a mature market:**
  - EV Li-ion batteries market is constant growing and end-of-life will only be in 10 to 15 years (re-use could extent this further)
  - Primary & secondary metals have the same quality & price (<> plastics) & they are mixed very often together in the metallurgic process
- **Rather difficult to predict the amount of materials available for recycling in 10 to 15 years:**
  - Conclusion of Öko-institute on impact assessment: 'Especially, for critical metals needed in rapidly growing markets, e.g. Li, Co in lithium ion batteries, not enough secondary materials will be available up to 2035 to specify relevant shares of recycled content in batteries placed on the market'.
- **Our recommendations:**
  - Start with a voluntary approach for recycled content before setting at this early stage mandatory, develop meanwhile detailed methodology & market insight and evaluate
  - Adapt the timeline of the development of the calculation methodology to make sure that it is robust and involve all relevant stakeholders

	From 01/01/2030	From 01/01/2035
Co	12%	20%
Pb	85%	85%
Li	4%	10%
Ni	4%	12%

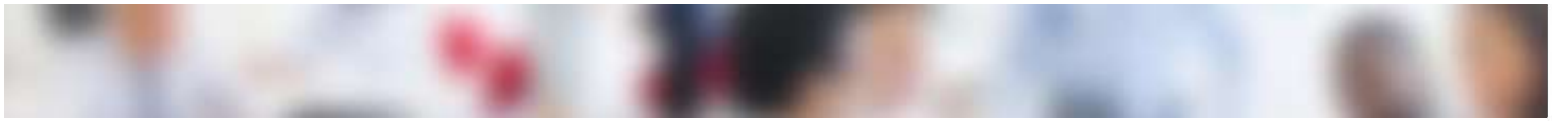


End of life management

- **Collection targets – difference between portable vs automotive, industrial & EV**
  - Portable: 45% (2023), 65% (2025), 70% (2030)
  - Automotive, industrial & EV: in principal all batteries have to be collected – only reporting
- **Recycling targets: only differentation between battery composition not type of battery**
  - Recycling efficiency process & material:
    - Lead acid batteries: 75% in 2025 & 80% in 2030
    - Li-based: 65% in 2025 & 70% in 2030
    - Other batteries: 50% in 2025

Recovery targets		
	Not later than 01/01/2026	Not later than 01/01/2030
Co	90%	95%
Cu	90%	95%
Pb	90%	95%
Li	35%	70%
Ni	90%	95%

  - P.e.: Li-based portable battery – 40% of content is O and graphite how to achieve 65 & 70% target?
- **Our recommendations:**
  - Focus on improving collection rates for portable batteries and work on leakages (mobile phone collection & ELV)
  - Proposed targets should be underpinned by a proper calculation methodology taking into account proven recycling technology, market dynamics, etc.…: however already targets proposed – quid feasibility!?
  - Urgent need to develop a delegated act on equivalent conditions of export for recycling: include beside technical elements also workers conditions & social rights!



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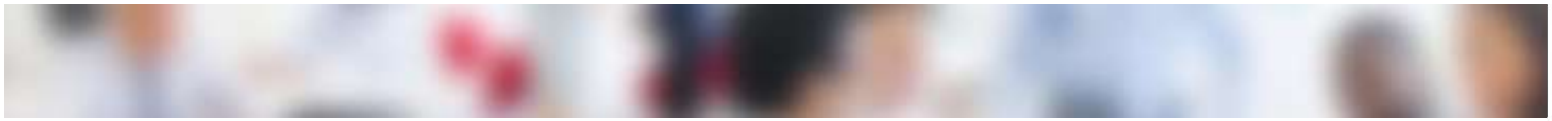
Due dilligence in the value chain & battery passport

- **Responsible & ethical sourcing of batteries should be an essential part of EU policy on batteries**
- **Broad range of existing initiatives:**
  - Cobalt industries responsible assessment framework (CIRAF), the copper mark, joint due dilligence standards for copper, lead, nickel & zinc, the metal alliance for responsible sourcing (Mars)
  - Contribution to the OECD Due Dilligence guidelines
- **Our recommendations:**
  - Incorporate a smart mix of minimum legislative requirements and industry voluntary initiatives / incentives
  - Include environmental due dilligence, human rights & health as well as responsible business conduct obligations and standards
  - Build on existing voluntary due dilligence schemes to promote transparency, alignment & cross recognition: avoid fragmentation, reducing duplication work in the value chain whilst aiming for a wider adoption
  - Analyse whether the battery passport can be used for due dilligence on imported batteries
- **Electronic exchange of information (applicable to industrial & EV batteries > 2kWh):**
  - A lot of different informations such as: composition (incl. Critical raw materials), due dilligence, carbon footprint, recycled content: cfr. Battery passport of the Global Battery Alliance
  - Pay attention to overshoot & IP (battery management system)



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Key take-aways

- **Some positive elements but THE DEVIL IS IN THE DETAIL:**
  - Multiple 'delegated acts' still have to be developed
- **Important to involve stakeholders in the development of those delegated acts and methodology to come to correct, realistic and feasible ambitions:**
  - Carbon footprint, recycled content, collection & recycling targets (process & material), …
  - Improved collection & efficient recycling of batteries
  - Due dilligence in the value chain & battery passport
  - Holostic chemicals management recognising the extensive framework in place & ensure regulatory coherence

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Thank you

For your attention

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