



Welcome & Introduction

Sjoerd van de Velde

Managing Director EMEA

Briggs & Stratton

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Introduction

The importance of standardization

- Energy transition
- Opportunities & complexity
- Upfront cost & TCO or cost vs TCO
- Standardization
- Technology adoption rates
- Growth & acceleration

Facts & Figures

- Inaugural event 2024

Representation from:

- 18 Countries
- 74 Organizations/Companies
- 100 Industry experts
- 18 Rental companies
- 6 Rental associations
- 32 Equipment manufacturers
- 9 Service providers
- 2 Media groups

Industry representation

RENTAL



ASSOCIATIONS



OEMs



SERVICE PROVIDERS



MEDIA



Thank you

Main Sponsor



Proud partners



Speakers



Sjoerd van de Velde
Managing Director - EMEA
Briggs & Stratton

Introduction



Klävs Otisons
Chair European Rental
Association Technical Committee

The energy transition challenges
facing European rental



Murray Pollok
Managing Editor
International Rental News, KHL Group

The changing landscape of construction
machinery in European/global rental



Jon Overman
Chief Executive Officer
HSS Hire

The importance of standardization:
The European rental perspective



Nicholas Schomer
Director of Category Management
Site One

The importance of standardization:
Supplying rental - a US perspective



Anders Olsson
CEO & Founder
EqLab

Optimizing product performance to
succeed in the energy transition



David Frank & Nick Moore
SVP & President of Electrification |
Senior Director Product Management and Sales
Briggs & Stratton

Key learnings in developing a standardized
electrification solution for rental



Prins Doornekamp
Chief Executive Officer
NOWOS

The importance of standardizing repairing,
2nd life and EOL for electrification



The energy transition challenges facing European rental

Klāvs Otisons

Chair Technical Committee

European Rental Association

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ERA is the Voice of the Equipment Rental Industry

Representing over 5,000 rental companies
from across Europe



The mission of the Technical Committee is to make fleet management safer, easier, more cost-effective and more sustainable for the rental industry by working together with equipment stakeholders.

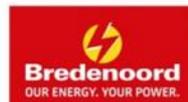
Rental Companies' Members of ERA Technical Committee



Julien Launay



Guy Cremer
John Smeets



Gert-Jan Elfrink



Marco Moncada



Marcus Worthmann



François Renault
Adrien Dufloer



Thierry Lahuppe
David Gravez



Manuel Niederstaetter



Anders Wictorsson

Amaury Delepoulle



Miia Konttinen



Philippe Witte



Andrew Winlow
Matthew Ross
Glyn Matthews

mateco
Jean-Pierre de Nil
Wim Carlier



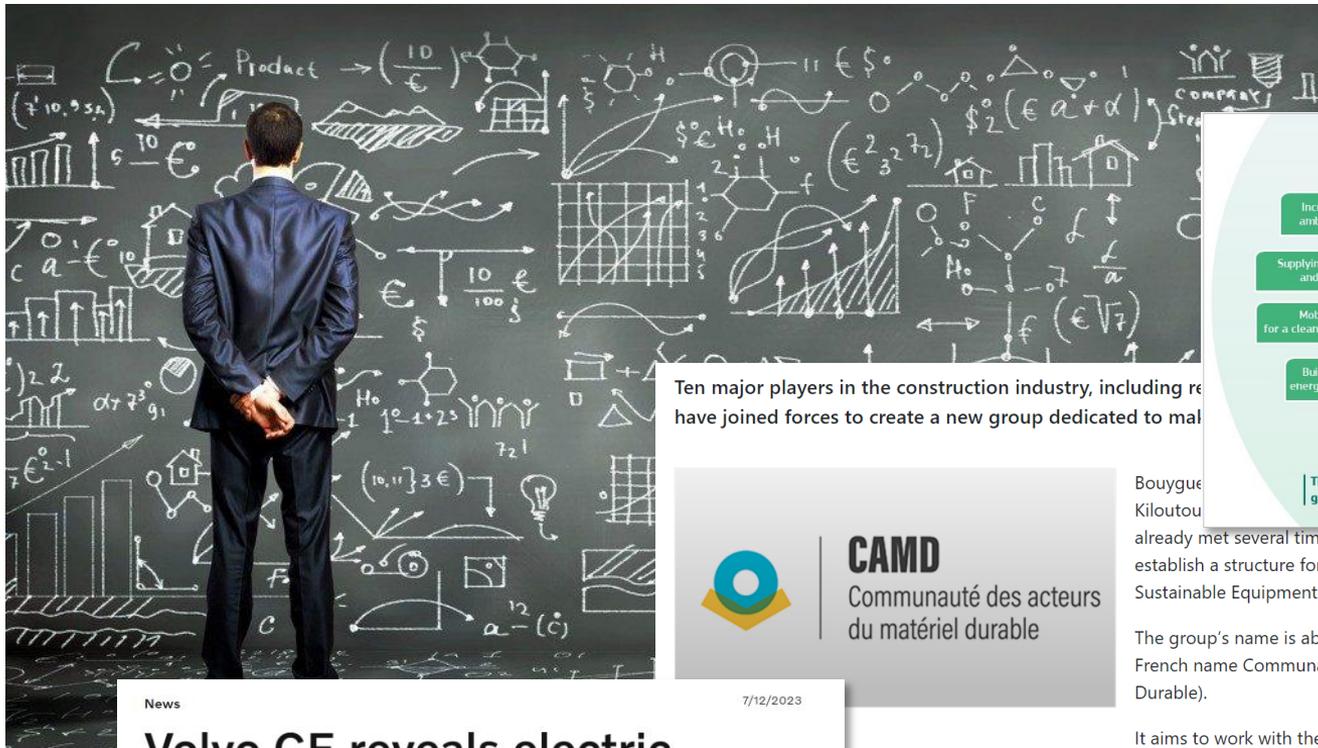
Martin Sebestyen
Lasse Ludvigsen



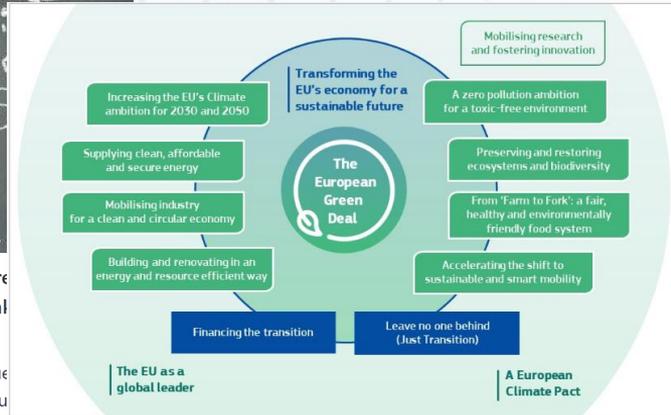
Anthony Livermore
Graeme Beadling



EUROPEAN
RENTAL
ASSOCIATION



Ten major players in the construction industry, including Renault, have joined forces to create a new group dedicated to making



CAMD
Communauté des acteurs du matériel durable

Bouygues and Kiloutou have already met several times over the past year to establish a structure for the Community of Sustainable Equipment Players. The group's name is abbreviated to CAMD (from the French name Communauté des Acteurs du Matériel Durable). It aims to work with the construction industry's trade associations to accelerate the environmental transformation of the construction equipment industry.

News 7/12/2023

Volvo CE reveals electric charging protocol to accelerate transformation

Volvo CE is making available its 48 voltage DC protocol for electric charging solutions in a bid to accelerate electrification and make it easier for customers with a multi-branded fleet.

TECH

Battery giant Northvolt to lay off staff in huge cost-cutting drive amid EV market slowdown

PUBLISHED MON, SEP 9 2024-8:24 AM EDT | UPDATED MON, SEP 9 2024-11:36 AM EDT

Challenges

Rental companies

Availability



Cost

TOTAL COST OF OWNERSHIP OF CONSTRUCTION EQUIPMENT

Equipment	Category	Sub-category	Manufacturer	Model	Year	Price	Hours	Cost per hour
Excavator	Earthmoving	Hydraulic Excavator	Caterpillar	320GC	2010	\$120,000	10,000	\$12,000
					2011	\$125,000	10,000	\$12,500
					2012	\$130,000	10,000	\$13,000
					2013	\$135,000	10,000	\$13,500
					2014	\$140,000	10,000	\$14,000
					2015	\$145,000	10,000	\$14,500
					2016	\$150,000	10,000	\$15,000
					2017	\$155,000	10,000	\$15,500
					2018	\$160,000	10,000	\$16,000
					2019	\$165,000	10,000	\$16,500
Generator	Power Generation	Diesel Generator	Cummins	K19	2010	\$100,000	10,000	\$10,000
					2011	\$105,000	10,000	\$10,500
					2012	\$110,000	10,000	\$11,000
					2013	\$115,000	10,000	\$11,500
					2014	\$120,000	10,000	\$12,000
					2015	\$125,000	10,000	\$12,500
					2016	\$130,000	10,000	\$13,000
					2017	\$135,000	10,000	\$13,500
					2018	\$140,000	10,000	\$14,000
					2019	\$145,000	10,000	\$14,500

Asset complexity



Infrastructure



Safety



Asset variability



Customers & end users

Efficiency



Culture

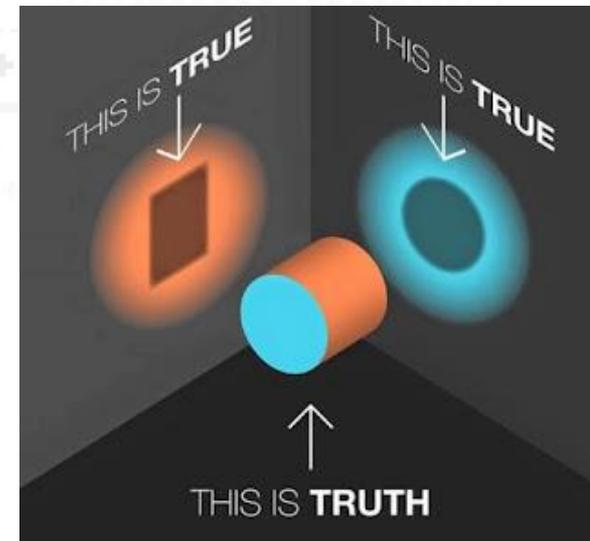


Ease

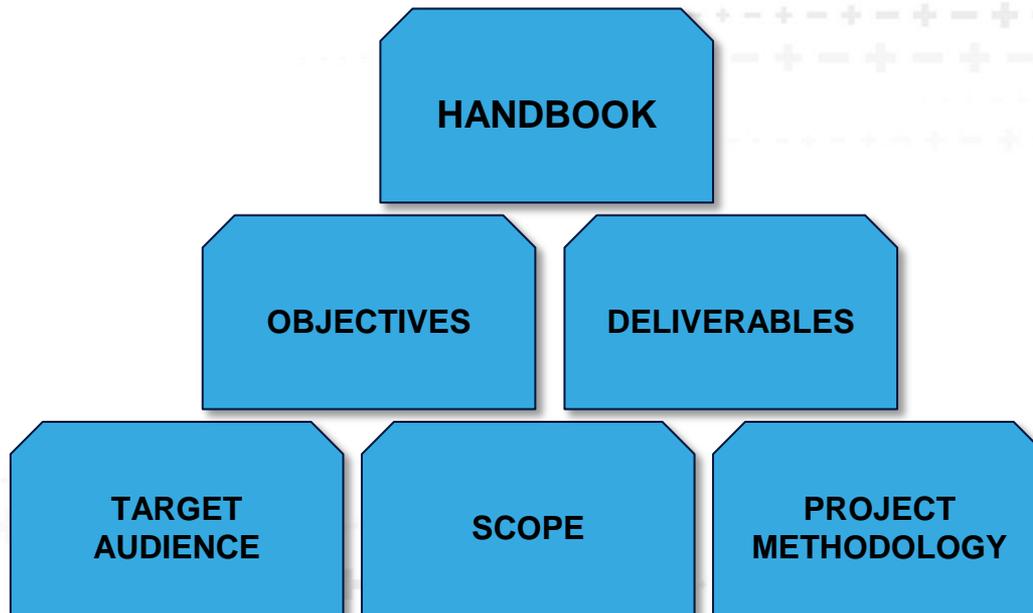


Rental companies viewpoint

- Rental companies are keen to move to greener asset technologies.
- Complexities faced directly by the nature of asset rental make this challenging
- Customers are reluctant, for multiple reasons, to adopt Electric (or later any other technology) assets over traditional ones.
- A joint approach to reducing these restrictions should help the industry, as a whole.
- Overall, we need to work together to hit targets set out by each company, customer and country...
...even if electric is not the «end» solution.



Energy Transition Project



Some are further than others
but it's not a race...



We all have to engage and collaborate
to accelerate the Energy Transition

Any questions or
comments?



The changing landscape of construction machinery in European/global rental

Murray Pollok

Managing Editor

International Rental News, KHL Group

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Changing landscape – but very early days

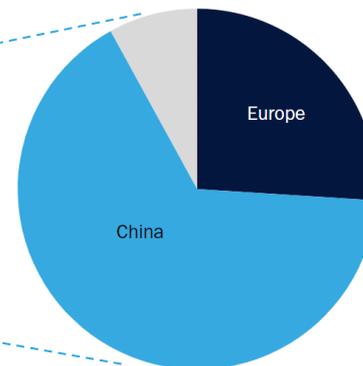
- + Equipment fleets just one part of the equation
 - + Wider context: sustainability, Scope 1 & 2 emissions, Scope 3
 - + Regulatory uncertainty (incentives, carbon pricing)
 - + Technological uncertainty (hydrogen, batteries, new fuels)
- + New data on electric machine sales
 - + Construction machinery, not smaller tools/light equipment
- + What machines are available?
- + What are rental companies saying/doing?

Electric construction machinery: World



7.300 units with electric drive
<1% of total market

- + Machines traditionally powered by diesel: CTL, wheeled loaders, excavators, telehandlers
- + Buyers: extraction industries, industry, contractors, rental

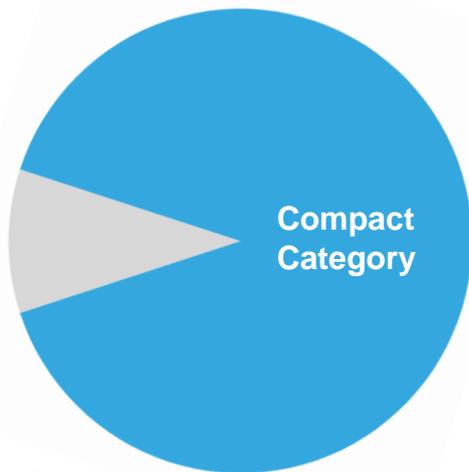


2/3 sold in China (by 30 OEMs)

- + Mostly mid- to large-sized wheeled loaders

Europe: just over 1/4 of the sales

Electric construction machinery: Europe



< 2.000 electric construction machines sold

90% of sales are compact category

- + Compact wheeled loaders, mini excavators

Contractors, not rental, the main buyers

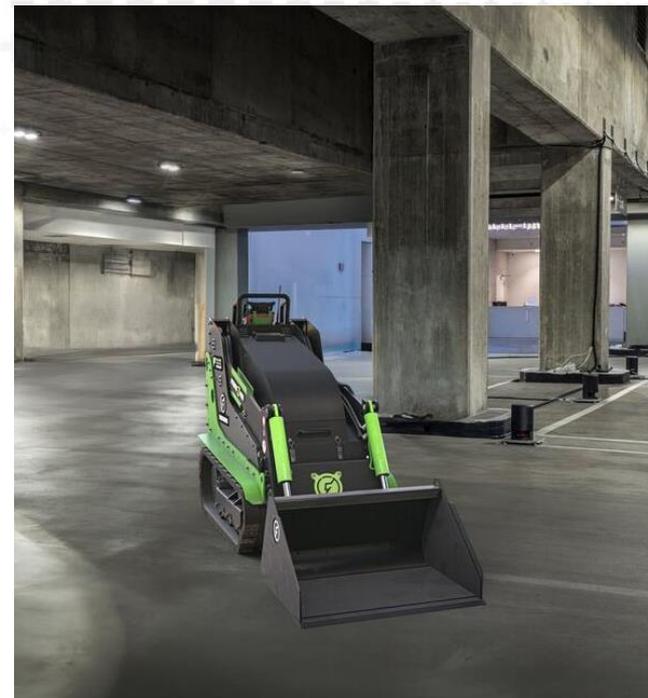
- + Rental buyers less than 20% share

NL and Norway are the biggest markets



What machines are available?

- + Just 8% of all models are electric
(main categories: backhoe loaders, CTL, excavators, wheeled loaders)
- + 179 electric models out of 2265 machines in production
 - + Wheeled loaders: 79 electric models
 - + Mini excavators: 38
 - + Tracked excavators: 35
 - + Wheeled excavators: 25
- + A further 125 models are concept/
pre-series/prototypes/retrofit low-volume
- + Impact on carbon emissions, from KPG: - <56kW
segment comprises 9% of fuel consumption, but 61%
of electric machine availability



What do rental companies say?

- + Market not ready
 - + Costs
 - + Limited to niche applications
 - + 'Cosmetic' uses
 - + Need to 'see and touch' machines
 - + Need more machines, and fully electric
- + Not much regulatory support
 - + Unlike EV sector
 - + Carbon pricing?
 - + Incentives for HVO



What do rental companies say?

- + Market realities
 - + Charging infrastructure (BESS)
 - + Moving machines to charging source
 - + Hydrogen production and distribution
- + Rental operations
 - + Charging infrastructure in depots (the right chargers, consolidated 'charging depots')
 - + Local network limitations
 - + Standardization of batteries



What do rental companies say?

- + Phased transition: no panic
- + Experience with electric access equipment and forklifts
- + Light equipment an easier proposition
- + Availability of transition technology (HVO fuel)
- + Grow rental market (help customers manage transition)

Any questions or
comments?



The importance of standardization: The European rental perspective

Jon Overman

Chief Executive Officer

HSS The Hire Service Company

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A commitment to the environment ...

- + Aiming to NetZero by 2040
- + Aligned with Business Ambition 1.5°C campaign
- + Part of the Science Based Targets initiative (SBTi)
- + Moved our electric supply to renewable sources
- + Proud to have achieved Gold EcoVadis status
- + Commitment to low carbon vehicle fleet
 - + Electric and Hybrid company cars, fitters vans and drop sides
 - + Satalia route optimisation technology

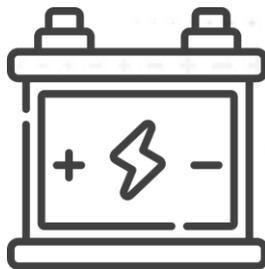


And now also a low carbon equipment fleet ...

Where we've been ...



Diesel



110v and cables



Propane

What we've been doing ...



Cordless

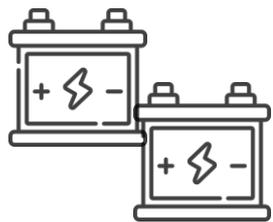


Batteries



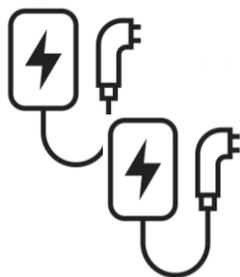
Hybrid

Unintended Consequences



multiple battery
platforms

+



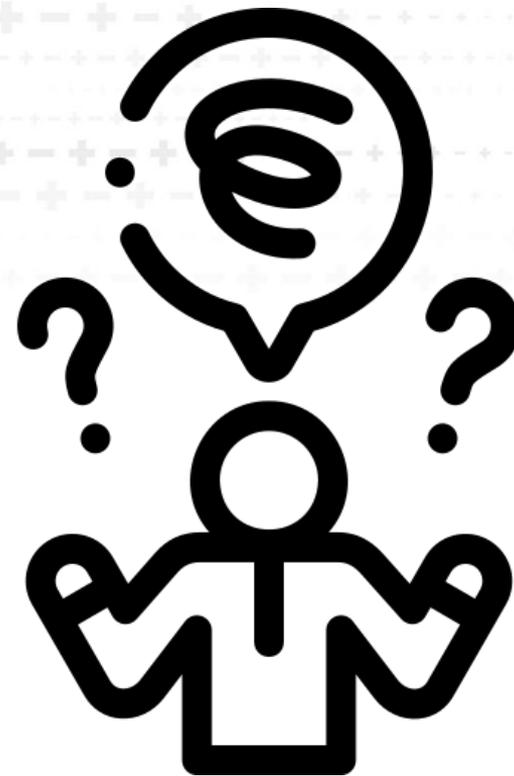
multiple charging
solutions

+



multiple HVO
and fuel types

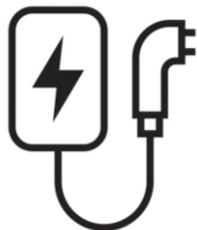
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What is needed now?



give the
equipment
users a voice



simplify and
standardize
charging platforms



greater clarity
on fuel types





The importance of standardization: Supplying rental - a US perspective

Nicholas Schomer

Director of Category Management

Site One

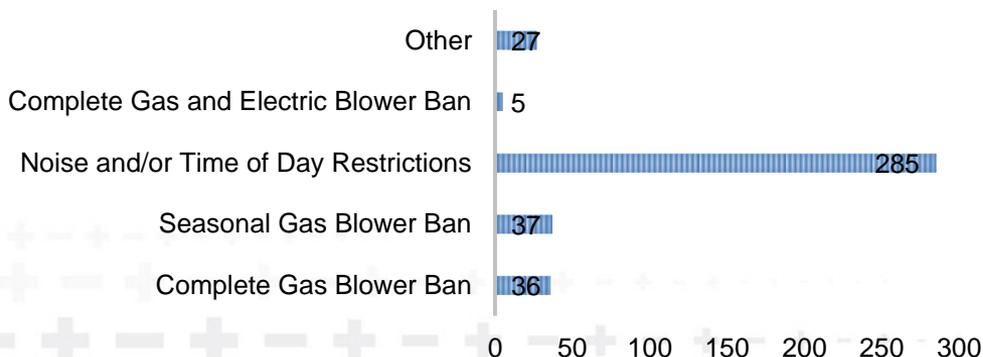
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Macro US Trends: Why electric now?

390 Total Bans and Restrictions on Petrol Powered Blowers

- 73 Outright Citywide Bans
- 312 Citywide Restrictions

City-level blower bans by type



2023

- California
- All-Properties Ban on Gas Equipment

2024

- Colorado
- State-Property Ban on Gas Equipment

We can see what's happening?

Speed to market is important, standardization accelerates time to market and lowers costs!

Complete Petrol Blower Bans (36)	
State	Count of Cities Impacted
California	24 (State Ban Supersedes Local Bans)
Colorado	2
District of Columbia	1
Florida	4
Maryland	1
Michigan	1
New York	2
Vermont	1

Noise & Time Restricted Bans (285)	
State	Count of Cities Impacted
California	63 (State Ban Supersedes Local Bans)
Connecticut	4
Florida	2
Hawaii	151 (All Cities)
Illinois	2
Maryland	18
Massachusetts	2
Michigan	6
New Hampshire	1
New Jersey	2
New York	10
North Carolina	1
Oregon	1
Texas	1
Virginia	20
Washington	1

Who is Winning in North America?

Customers need a proper tool . . .
. . . not a petrol solution pretending to be electric

Engineer the product for the problem . . . Not just the power source



Before



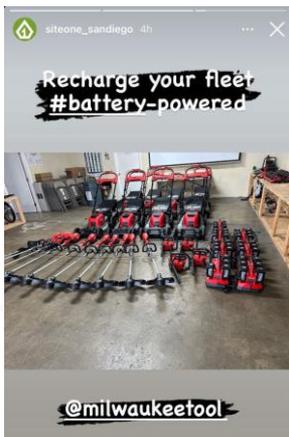
After

The brands who get the engineering for battery right first win
. . . Customer focused and market driven solutions

Business & Sales Model

It's critical to give your customers a path to success

A uniform standardized power solution allows optimization of the life cycle of the battery and actually lower true cost of ownership



Understand the problem



Deliver the solution

Uniformity & Scalability for Success



This won't cut it . . .



No . . .



Much Better . . .

Standardization in Large Battery Systems

- Key safety standardization reduces risk
 - Reduce the risk of unknown or untested solutions
- Reduces risk of not having proper power
 - Common battery powers most of our tools
- Streamlines operations
 - Fewer SKU's
 - Fewer errors in ordering
 - Repeatable positive customer experience/service
 - Standardized in 2nd life or EoL processing





Optimising product performance to succeed in the energy transition

Anders Olsson

CEO & Founder

EqLab

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About me

Anders Olsson, CEO & Founder EqLab AB
Master of Science in Electronics and Mechatronics



2005



2024

The Challenge of the Energy Transition

Understanding the Complex Landscape

- No standardization
- Old mindset
- Energy wise, many inefficient machines
- OEM = product performance & standardization
- Rental = standardization & total cost of ownership



The Role of Product Optimization

Batteries are often the biggest cost and weight on machines.

Efficiency: 10-20% → 80-90%



Case Studies 1 (Optimization)



Case Studies 2 (No cord, one battery)



The Future of Energy-Efficient Products

They will outperform traditional products with combustion engines.

- Cheaper
- Lighter
- No Services needed
- Smarter
- Emission free
- Reduced noise
- Do the work faster



Call to Action

Rental companies

- Find one Standardized battery system and invite OEMs using it.
- Electrical machines will be more productive and more cost efficient.
- Use one battery to all machines!

For OEMs

- Start the energy transition, otherwise somebody else will do it!
- Your products will be cheaper, smarter and better!
- Invest in knowledge before solutions.





Key learnings in developing a standardized electrification solution for rental

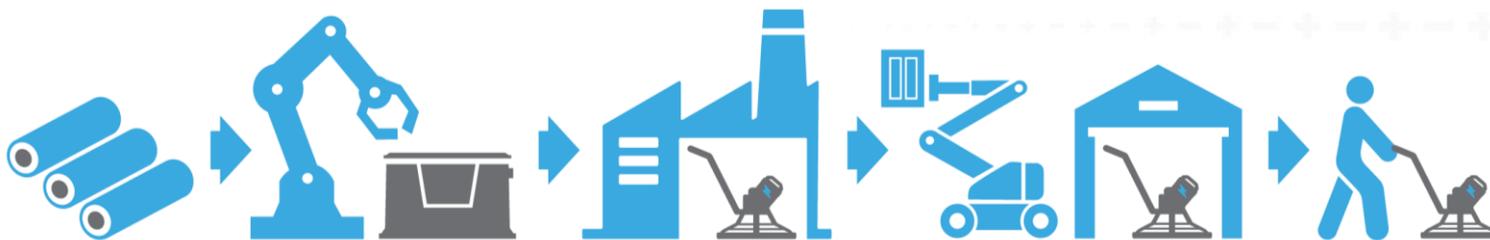
David Frank

SVP & President of Electrification
Briggs & Stratton

Nick Moore

Director of Product Management
Briggs & Stratton

The path to stakeholder innovation.

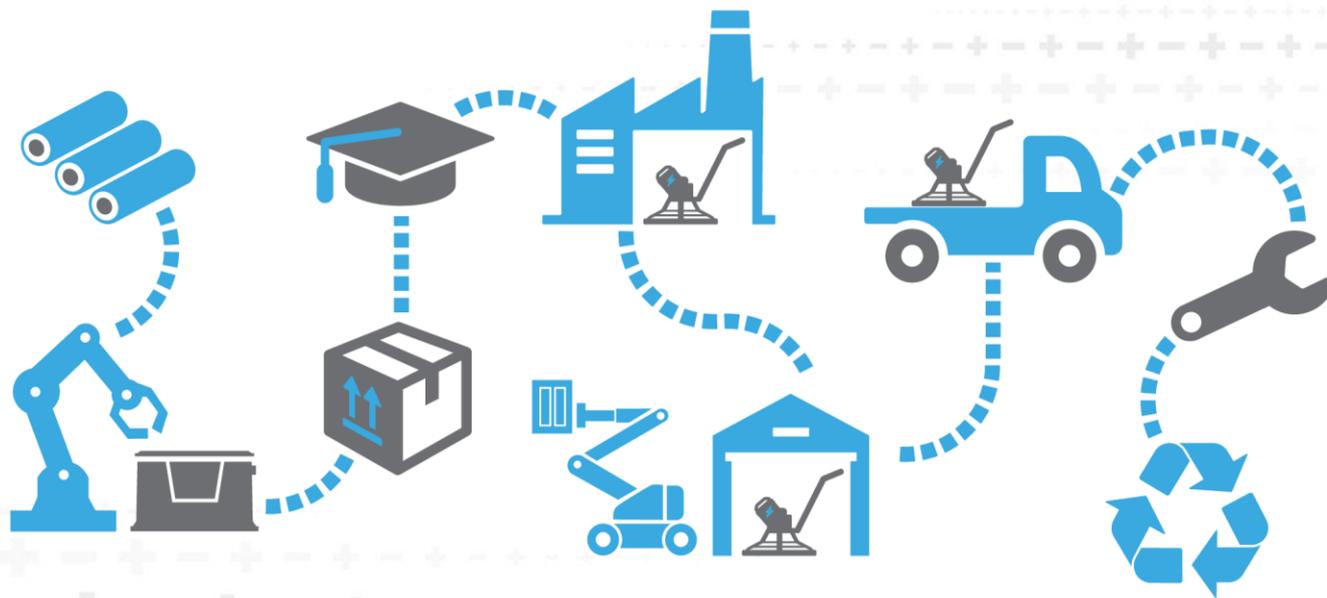


One battery for all.



Seamless
Capacity Charging Future
Standardization OEMS Integration
Regulations Safety Scalable
Run Time Rental Productivity
End of Life Training Commercial Utilization
Intelligent TCO Downtime
Rugged Recycling Full System Ease of Use
Weight Robustness

Product life cycle journey



The Vanguard battery solution



Any questions or
comments?



The importance of standardising repairing, second life and end of life for electrification

Prins Doornekamp

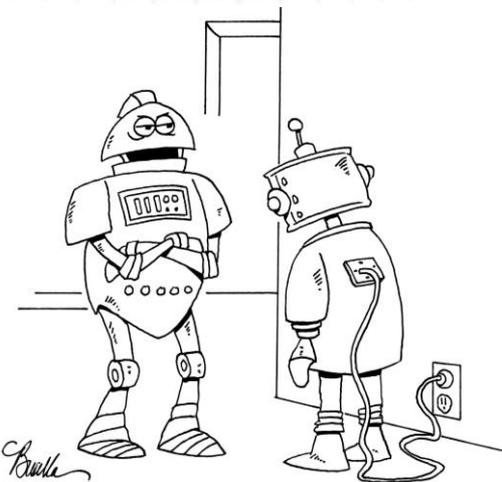
Chief Executive Officer

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A Battery is not just a Power Source

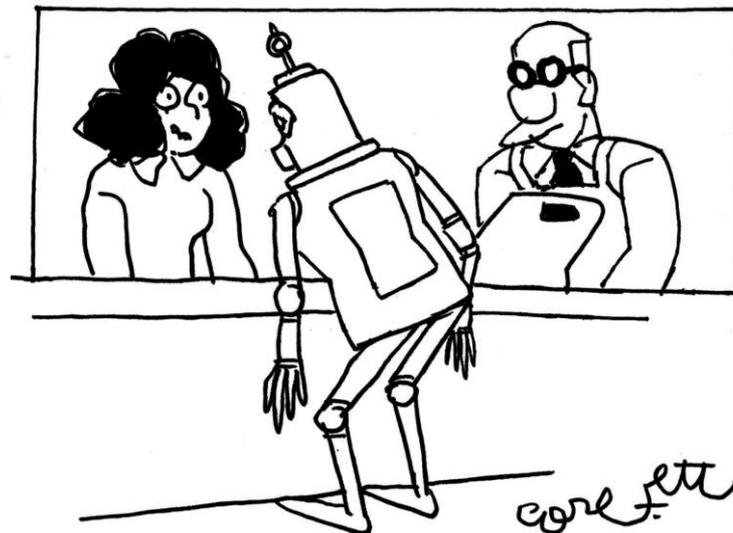
It's a complex, vital component that can drive sustainability or create chaos depending on how we handle it.



"I'll let it go this time, but from now on, you'd better make sure you're charged before you come to work."

The Challenge of Energy Transition

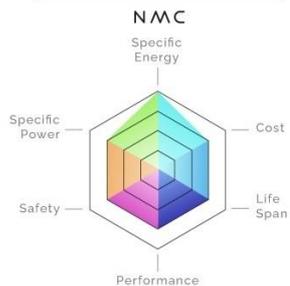
- Diverse technologies
- Urgent need for sustainable solutions



"Twenty-seven 'D' batteries, please, and hurry!"

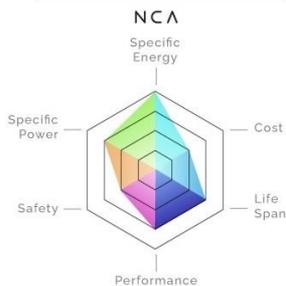
Technologies pros and cons

LITHIUM NICKEL MANGANESE COBALT OXIDE



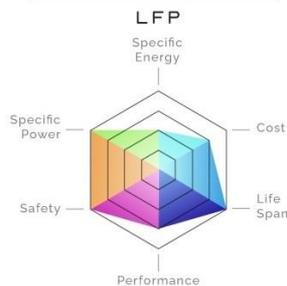
NMC batteries are named after different ratios of minerals in the cathode. For example, the **NMC811** cathode comprises **80% nickel, 10% manganese, and 10% cobalt**, along with lithium.

LITHIUM NICKEL COBALT ALUMINUM OXIDE



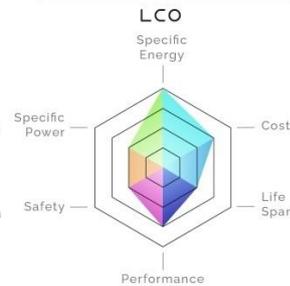
Nickel-based cathodes like **NMC and NCA** offer **high specific energy**, making them ideal for **long-range EVs**.

LITHIUM IRON PHOSPHATE



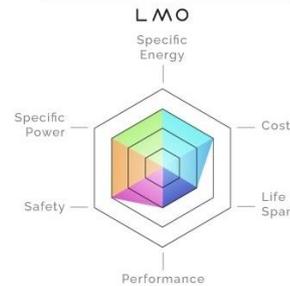
LFP batteries are used in **energy storage systems and short-range EVs** for their unmatched **safety and long lifespans**.

LITHIUM COBALT OXIDE

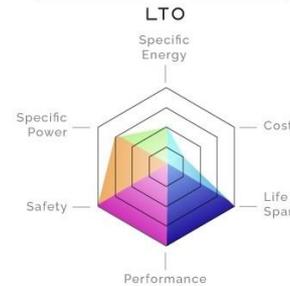


Lithium Cobalt Oxide cathodes are a popular choice for **laptops, smartphones, and digital cameras**.

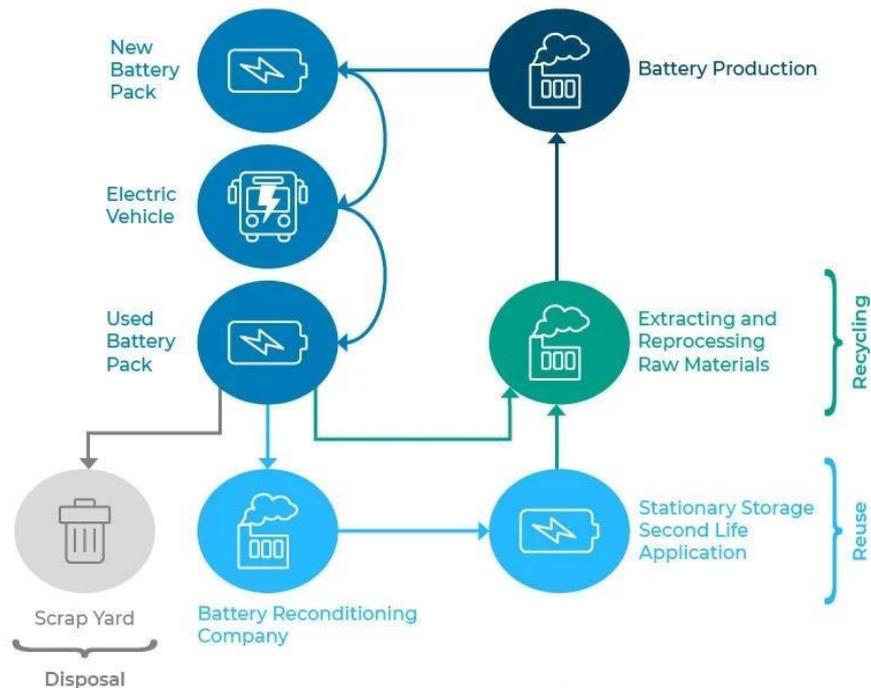
LITHIUM MANGANESE OXIDE



LITHIUM TITANIUM OXIDE



Breaking the “Death Loop”



Power of Standardization

- Simplifies repairs and maintenance
- Increases efficiency
- Economies of scale



Key Considerations for Electrification

- Repair/2nd life/EOL strategies
- Choosing the right battery
- Long-term vs. short-term costs



“The short-term solution is money and the long-term solution more money.”

Recommendations

- Opt for Lithium-ion for scalability
- Avoid compromising safety and longevity
- Educate stakeholders



"Shall I toss these half-dead batteries, or put them in a device we don't use and let them die with dignity?"

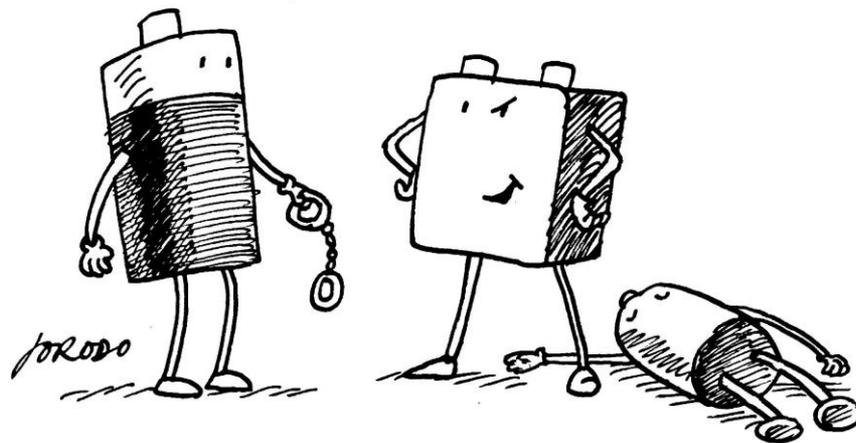
Conclusion

- Unified standardization
- Collaborative efforts
- Open for questions



"We need to develop a long term strategy to achieve consistent quick fixes."

Any questions or comments?



"Okay, Copper - what's the charge? Assault and Battery? I have contacts you know."



Coming up next

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