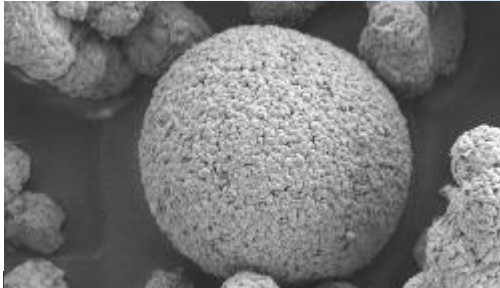




Introduction to CAMX Power



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CAMX Power Innovations & Offers:

CAM-7® cathode material platform

- Ø Licensed to BASF and Johnson Matthey (2016)

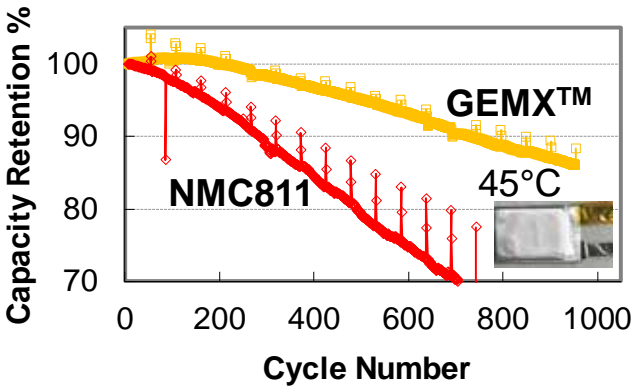
GEMX™ cathode material platform

- Ø Non-exclusive license to Johnson Matthey (2018)

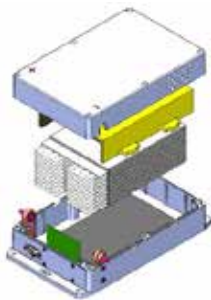
Technologies for detection of internal short circuits in Li-ion batteries

- Ø Cell screening to improve production throughput
- Ø In-pack short detection

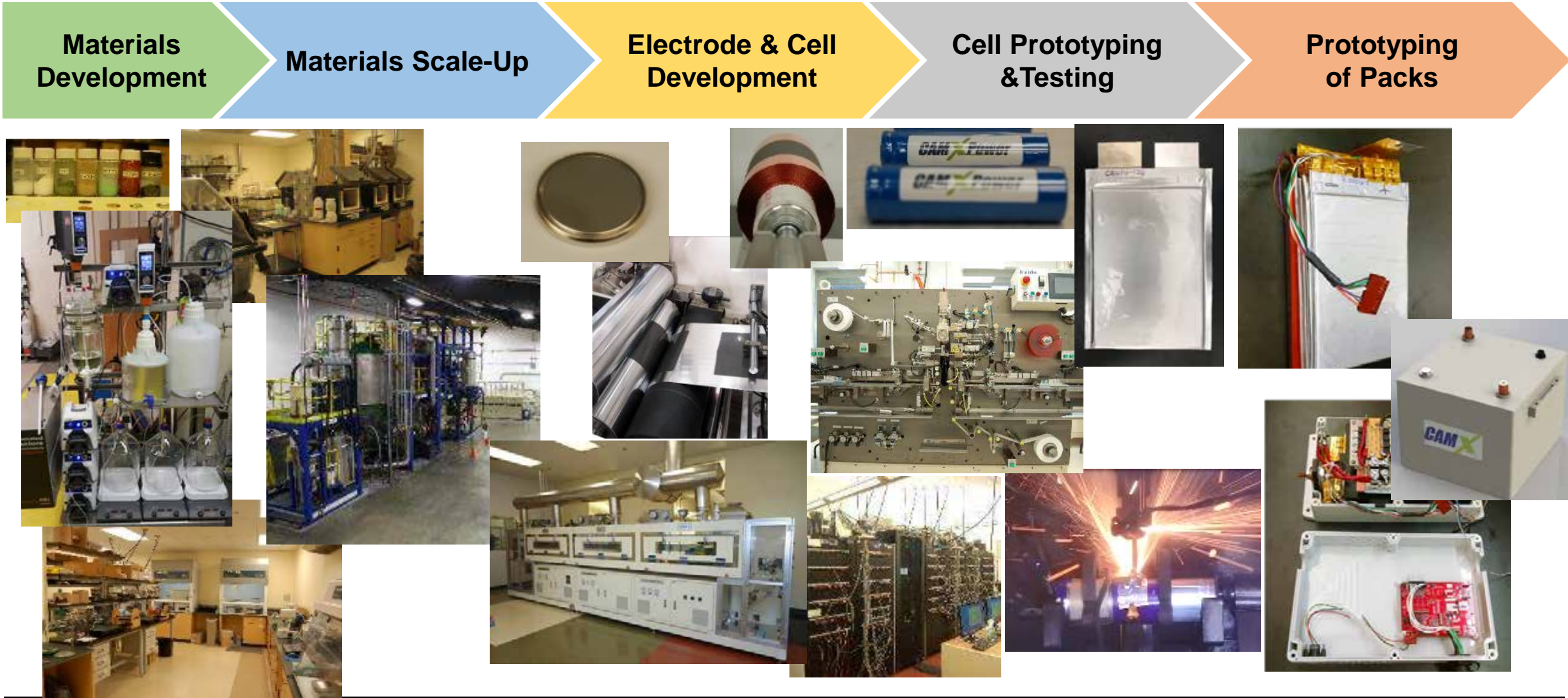
Limited production of specialty Li-ion cells and batteries



Time for detecting 125kW internal short circuit	Std. OCV meas.	CAMX Technology
	14 days	< 2 hours

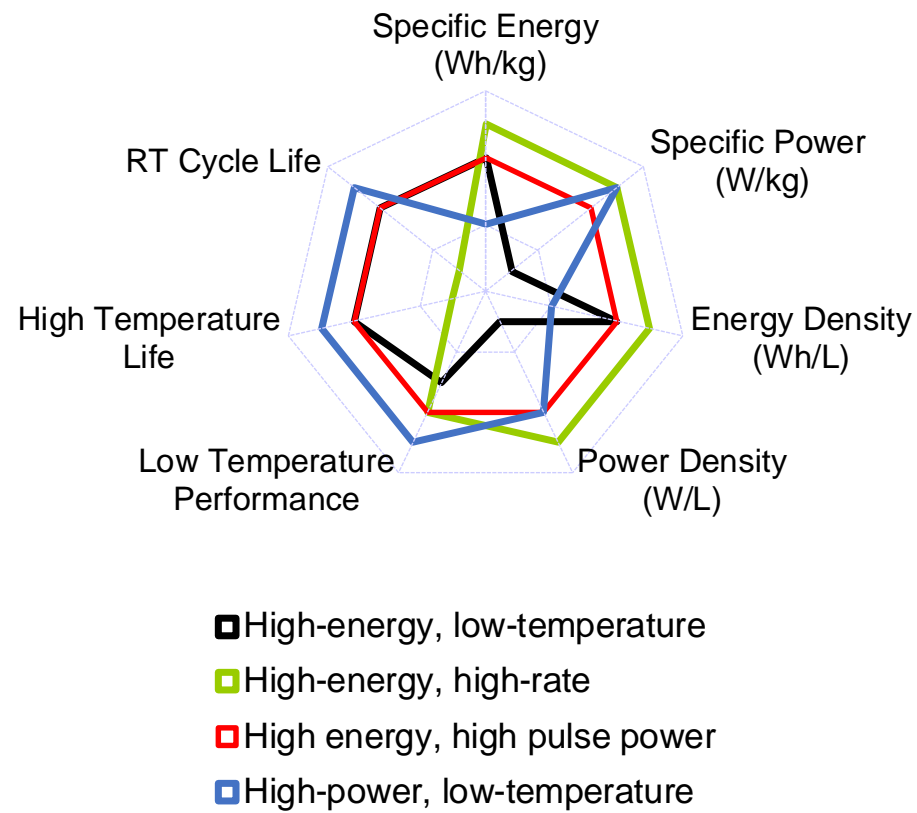


CAMX Power’s technology processing is enabled by: facilities, staff, and location.



By combining GEMX cathodes with different anode, electrolyte, and separators, we have been able to develop Li-ion cells with a wide range of attributes not available in COTS cells today.

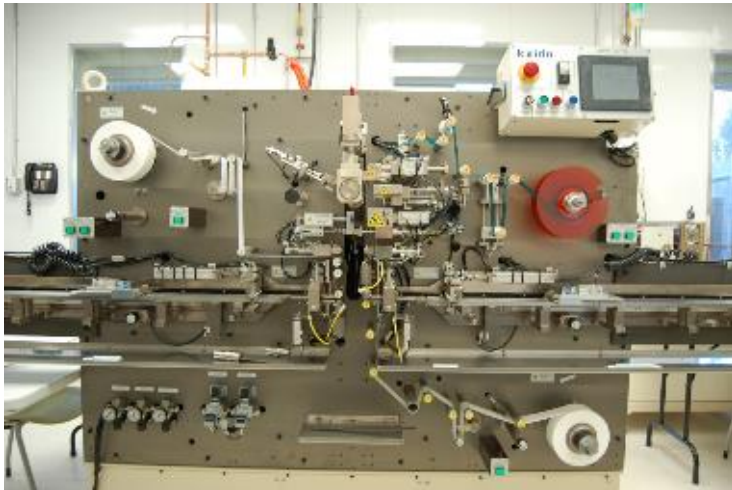
Combining GEMX cathodes with suitable cell components can deliver performance not possible with COTS cells.



Cell Design	Cell Type	Key Attributes	Potential Applications
gLNO/LTO: CELX-RC™	Pouch	<ul style="list-style-type: none">Very long lifeZero-V storageCharge & discharge at -50°C	<ul style="list-style-type: none">Ultracap-replacementVehicle structural batteryLead acid replacement - 6T batteryBB2590 – fast charge
gLNO/Gr-Si	18650	<ul style="list-style-type: none">High pulse power over wide SoC800 W/kg, 10 s pulse at 10% SoCLong life	<ul style="list-style-type: none">Military robotsApplications that require energy and power
gLNO/Gr	18650	<ul style="list-style-type: none">-40°C discharge operationLong life	<ul style="list-style-type: none">Military rifleman radiosBB2590
gLNO/Si	Pouch	<ul style="list-style-type: none">High energy and high powerExcellent power delivery at -40°C	<ul style="list-style-type: none">Missions needing very high energy and power

Introduction to CAMX Power

CAMX Power operates a Li-ion cell prototyping facility to support the development of Li-ion materials, cell and pack technologies, and battery safety solutions.



- Flexibility in cell formats
 - Ø Cylindrical
 - Ø Wound prismatic
 - Ø Stacked prismatic
- Flexibility in electrode design
 - Ø High energy
 - Ø High power
- Flexibility in active materials:
 - Ø Anodes: Gr, Si, LTO
 - Ø Cathodes: CAM-7, GEMX, LCO, NCA, NCM, LCFP
- Upgrades in the works
 - Ø 21700 cylindrical cells
 - Ø Scaling-up production capacity

Materials synthesis starting from precursors to cathode materials at small-scale, and scaled-up synthesis in the pilot plant.

