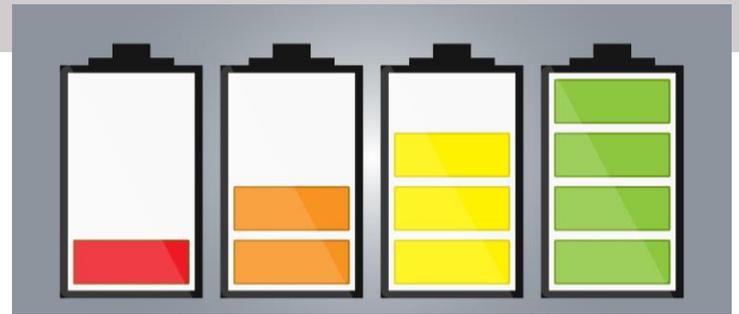


Client overview

An established manufacturer of consumer devices, many of which rely on lithium-ion batteries (LIB) for power generation, was seeking innovative material processing and manufacturing technologies to provide an improvement in cell performance. Research to date had focused on innovations around the cathode, anode and electrolyte materials, and more recently on next generation battery technologies (e.g. solid state), but many of these have a lengthy development trajectory or are exclusively focused on larger scale applications (e.g. electric vehicle market). The client wished to identify innovations that could be utilised in the short-term, modifying existing LIB manufacturing processes (e.g. mixing, coating and drying, slitting, stacking, cell assembly, etc).



The search

SAL initiated a technology and partner search to identify companies and research organisations working on technologies that could be applicable to a production line within 5 years. Opportunities were received from across SAL's network partners, introducing potential technology partners in North America, Asia

and Europe. A variety of approaches enabled one or more benefit, including an increase in energy density, faster charging, safer batteries (e.g. reduced thermal runaway) and the ability to reduce energy consumption or use of solvents in the manufacturing process, so improving the CSR (corporate social responsibility) credentials. SAL undertook interviews with respondents to prioritise those which could demonstrate an ability to provide drop-in solutions for current manufacturing lines with a high TRL (technology readiness level). Technologies that were chemical and form factor agnostic were also of high interest given the range of cells used by the client.

Outcome

Following initial filtering, **over 60 technology partners with potentially applicable technology were interviewed by SAL** to prioritise those most appropriate for the client to evaluate further

14 opportunities were presented and the **client selected 4 organisations for detailed discussions under NDA** and a further 2 are on hold for discussions at a later date

"...a very complex search (subject matter expert)..."

"...progressing nicely with the companies introduced..."