Battery consumption is growing at an ever-increasing rate as modern lifestyles rely more and more on equipment that requires mobile electrical storage solutions. Consequently, the requirement for the components that comprise modern battery chemistries are also experiencing unprecedented levels of demand. Furthermore, the current recycling rates of these materials is also low – for example, ≥ 1% for REEs and Li – meaning that at current rates of use, many of these resources could quickly become exhausted. The purpose of Aalto MET’s projects has been to investigate new ways for the exploitation of this “Resource Rich Urban Mine” in order to maximise the industrial potential of battery waste and as consequence, produce a positive impact on the global environment. Investigations into innovative methodologies based on the twin principles of circular economy and industrial best practice have resulted in a critical understanding to Finland of how to deal with these types of wastes that encompasses manufacturing processes from crushing/sorting to the generation of prospective feedstock materials for both metal and battery/electronics production.