Founded in 2008, based on technology licensed from CTVR at NUIM, Socowave is a wireless systems company, pioneering a new class of cellular base station, which substantially increases network capacity while reducing energy consumption.

The breakthrough technology is an ‘interference-rejection’ technique that speeds up data transmissions and actively optimises communication with multimedia users, on-the-move. This is a first for the cellular industry, globally.

With mobile networks struggling to cope with rapid increases in mobile data traffic, Socowave is a cost-efficient solution to a multi-billion-dollar problem.

HARDWARE TECHNOLOGY
Socowave’s AAS (Trident) is an advanced e/NodeB radio subsystem; a combination of innovative hardware and software/algorithm platforms.

The radio subsystem is an antenna-integrated radio unit which interfaces with an infrastructure vendor’s (OEM) baseband unit to form the e/NodeB. Trident delivers superior RAN performance (signal quality and data throughput) through its Active Diversity beam processing platform. This unique form of diversity uses a combination of spatial and polarization diversity paths plus 3D beam placement to maximise uplink quality. The platform is agile and automatically adjusts to the changing cell capacity conditions over time.

SOFTWARE TECHNOLOGY
Socowave has pioneered a new uplink optimisation software system called Active Diversity. Unlike passive diversity, which relies on +45/-45 degree polarisation differences alone to deliver statistical gains, Active Diversity proactively directs complex beams in the direction of users to achieve industry-beating performances. An uplink capacity gain, in excess of 100% over traditional 2-way diversity systems, is easily achieved.

Incorporating Active Diversity into a RAN solution requires minimum integration effort due to our RRU Emulation Software (RES) layer which allows easy retrofitting of TRIDENT to existing remote radio unit (RRU) based networks.