As previously reported by us, the Copenhagen wheel is an invention that turns your bike, without much fuss, into an electric bike that regenerates its own power supplies by capturing braking and pedaling energy. It’s also a smart device, with a real-time sense of its environment and user. It only turns on its motor when it senses you might need a boost in pedaling, but its environmental sensors are constantly collecting information about sound and air pollution, traffic and road conditions.

All this data is connected to your smartphone, and you can use it to plan ahead for better bike routes or to update your exercise plan. It’s also crowdsourcing at its best, effortless and providing a real service to everyone participating – as everyone’s the data about pollution and traffic is available to Copenhagen wheel users, it’s like a social network meets real-time mapping system. Everyone benefits, and everyone can plan together.

Your phone can also be used to lock and unlock the bike, to change gears and choose how much the electric engine gets to help you. The Copenhagen wheel is different from other electric bikes because you only mount the components around the back hub of your bike – no wiring along the chassis required, and no external battery packs. The hub carries a motor, a 3-speed internal hub gear, a torque sensor, batteries, GPRS and the sensor kit which keeps an eye on CO, NOx, decibels, relative humidity and temperature.
And the best thing? It’s modular. In the future you’ll be able to add power, battery time and sensors to fit your own location and biking habits.