Robot nose
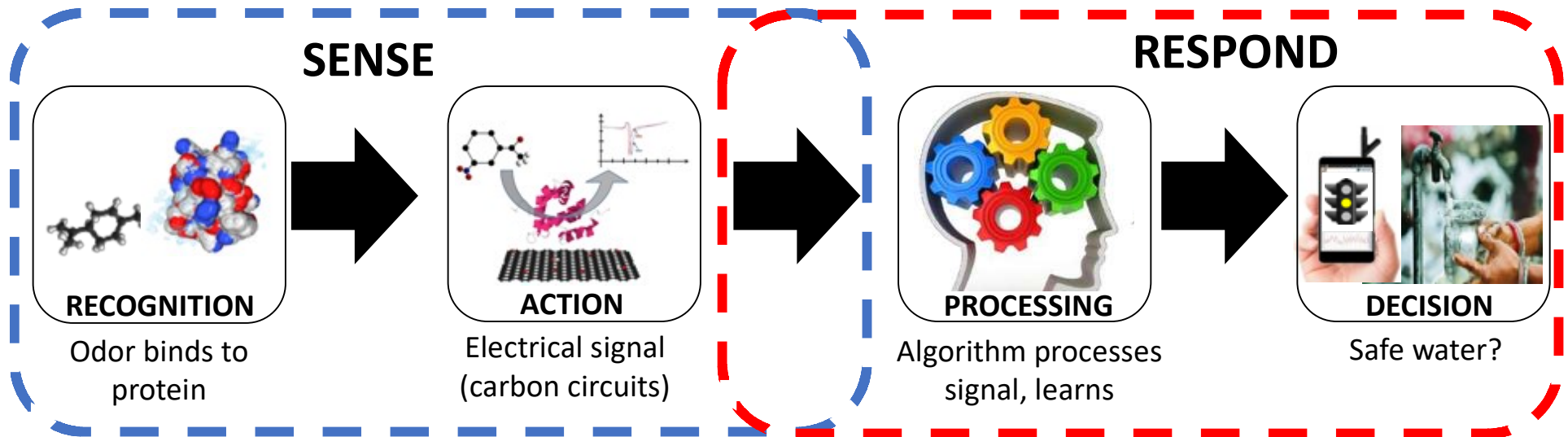
The robot nose in our lab uses a **lock and key** process that mimics olfaction. Targets stick to insect-derived **olfactory proteins** that are on the surface of **carbon circuits** within a gas sampling device. The electrical signals are converted to data, and **algorithms** are then used for signal processing and decision support.

SENSE

RESPOND

RECOGNITION
Odor binds to protein

ACTION
Electrical signal (carbon circuits)

PROCESSING
Algorithm processes signal, learns

DECISION
Safe water?

Robot nose biosensors are used to provide decision support to the user regarding safe water, food, medicine, and livelihood.