Robots!

Figure 1: Robots!

Sensors, actuators and controllers

Sensors are devices that detect or measure physical quantities such as temperature, light, pressure, and distance. In robotics, sensors are used to detect changes in the environment and provide feedback to the system. For example, a robot may use sensors to detect obstacles in its path or to measure the distance to an object.

Actuators, on the other hand, are devices that are responsible for controlling motion or movement in a robot. They are used to make a robot move or perform a specific action based on the input received from the controller. Examples of actuators include motors, pneumatic cylinders, and solenoids.

Controllers are devices or systems that manage and control the overall behavior of a robot. They process input from sensors and provide output to actuators to ensure the robot moves or behaves in a specific way. Controllers can be simple or complex, depending on the complexity of the robot and the tasks it is designed to perform.

To summarize, sensors detect changes in the environment, actuators create motion or movement, and controllers manage the overall behavior of the robot. All three components work together to allow a robot to perform specific tasks and interact with its environment.