

## Obstacle avoidance: sketch of a (simple) solution.

- ▶ **Sense**
  - ▶ Read the proximity sensors.
  - ▶ Determine if obstacle in front.
- ▶ **Think**
  - ▶ If obstacle, select a direction and a number of steps to turn.
- ▶ **Act**
  - ▶ No obstacle? Go straight.
  - ▶ Otherwise turn in the direction chosen in “Think” section.

## Obstacle avoidance: sketch of an other (better) solution.

### ▶ **Sense**

- ▶ Read the proximity sensors.

### ▶ **Think**

- ▶ Transform the proximity readings (length and angle) into cartesian coordinates  $(x,y)$ .
- ▶ Sum the coordinates in an accumulator vector.
- ▶ Compute length and angle of the accumulator vector.

### ▶ **Act**

- ▶ Turn depending on length and angle of the accumulator vector.
  - ▶ Length: the longer the vector, the closer the obstacle.
  - ▶ Angle: the smaller the angle, the quicker the turn.