EnvironmentObject boost::uuids::uuid id std::pair< float, float > position + EnvironmentObject(float x, float y) + boost::uuids::uuid getId () const + virtual ~EnvironmentObject ()=default + virtual void postIteration() + virtual std::pair< float, float > getPosition() const + virtual void setPosition (float x, float y)

Organism Genes genes

- LifeConsumptionCalculator
 - lifeConsumptionCalculator float lifeSpan
- std::pair< float, float
- > movement
- int reactionCounter + Organism()
- + Organism(const Genes
 - &genes)
- + Organism(const Genes &genes, LifeConsumptionCalculator
- lifeConsumptionCalculator) + float getSpeed() const
- + float getSize() const + float getAwareness() const
- + float getLifeConsumption () const
- + float getLifeSpan() const + float getReactionRadius () const
- + void killed() + bool isAlive() const
- + bool canReproduce() const + ~Organism()
- + void react(std::vector < std::shared_ptr< Environment Object > > &reactableObjects)
- + void interact(std::vector < std::shared_ptr< EnvironmentObject >> &interactableObjects)
 - > reproduce()
- + std::shared_ptr< Organism
- + void postIteration() override double calculateDistance
 - (std::shared_ptr< EnvironmentObject > object)
 - void makeMove()