AmapSim : Black box simulation

1

- Parameter file
- age

2

3

Event Manager

Plant Manager

Plant Manager

Init

AmapSim

Output

Events

Plant

Parameters

Managers

Data
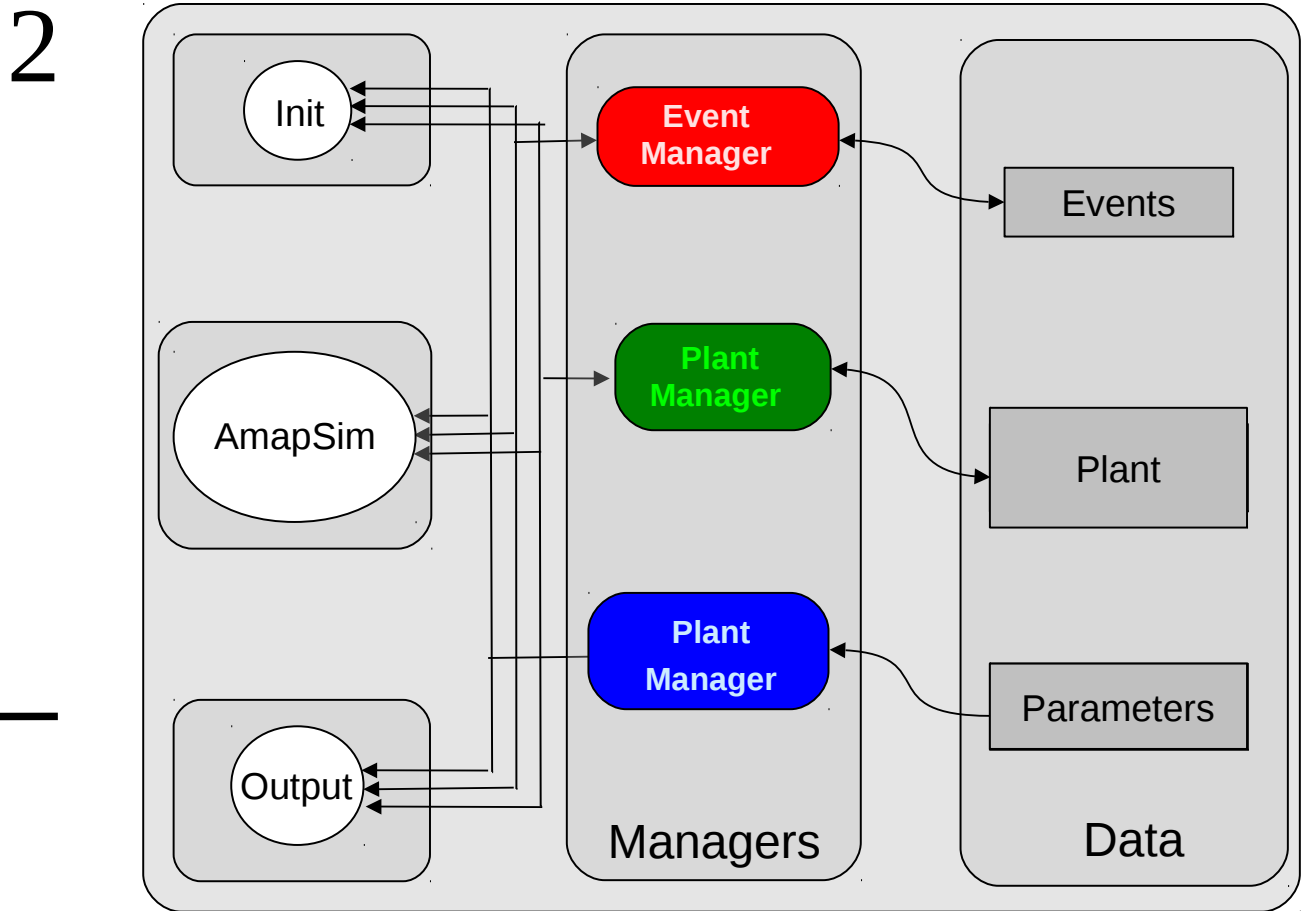
Abstract

- Plant architecture simulation faithfull to botanical concepts

- Based on measurements and stochastic modeling

- Mix between endogeneous and exogeneous process
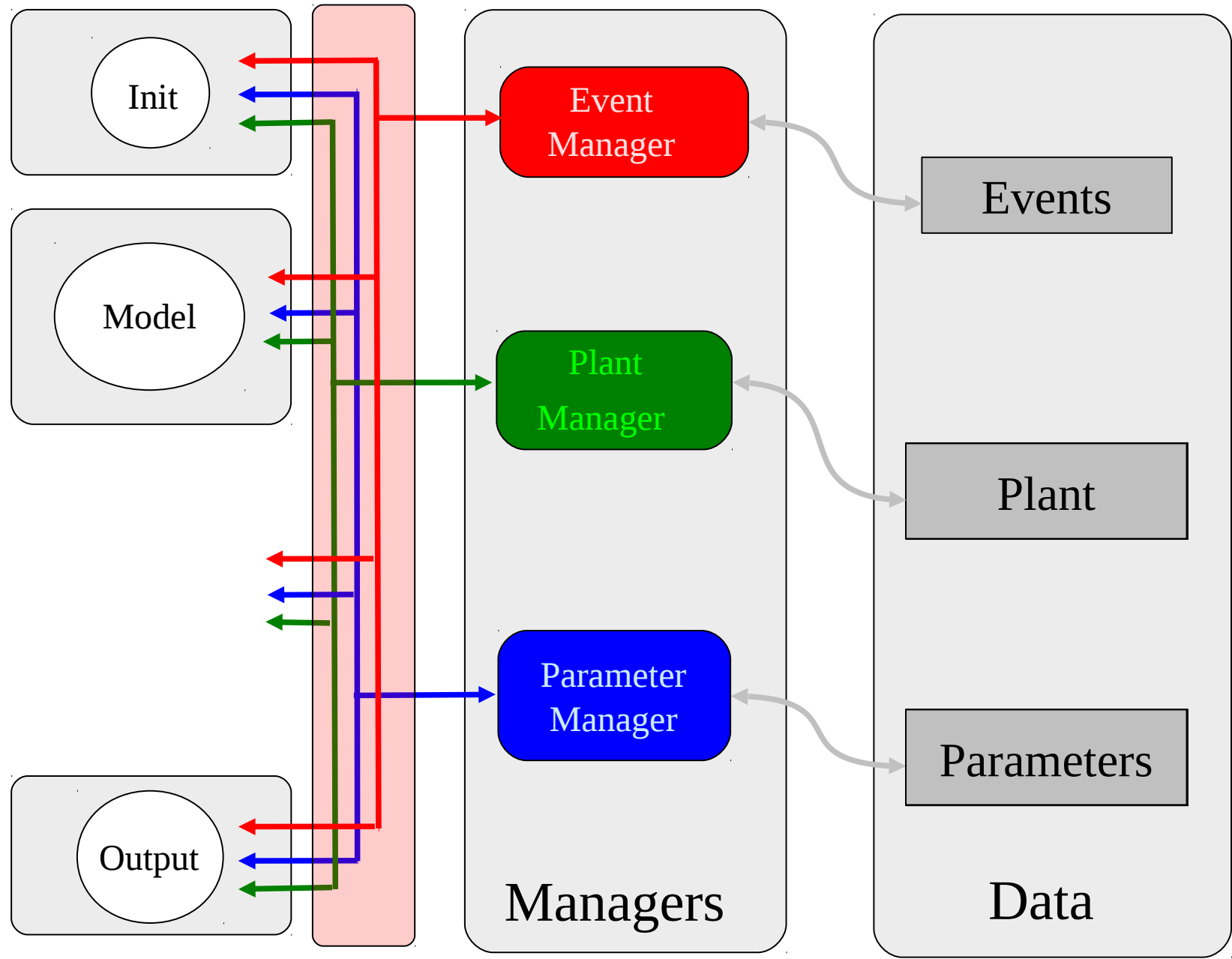
- Black box

I. Introduction
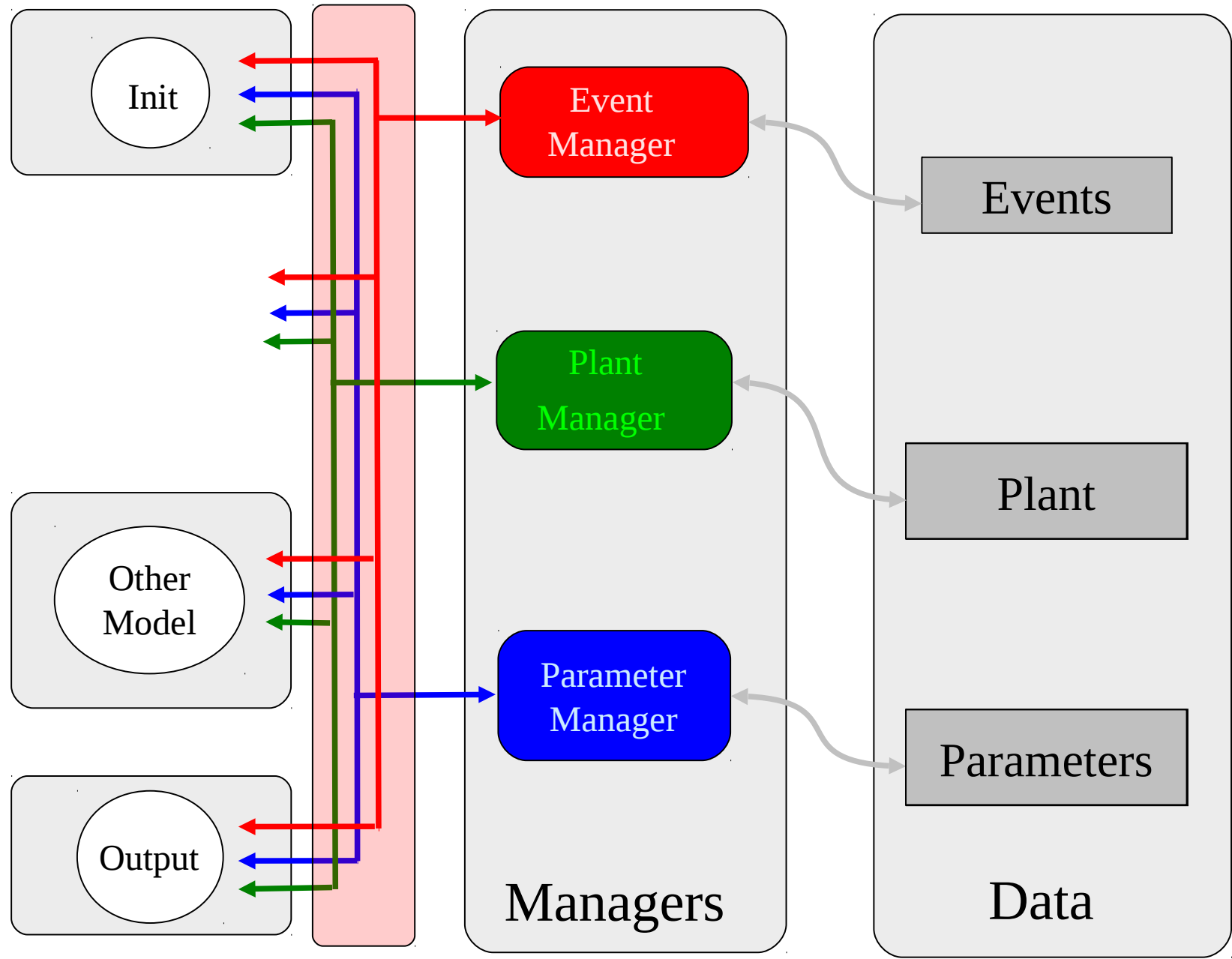
II. Plant model

III. Software architecture

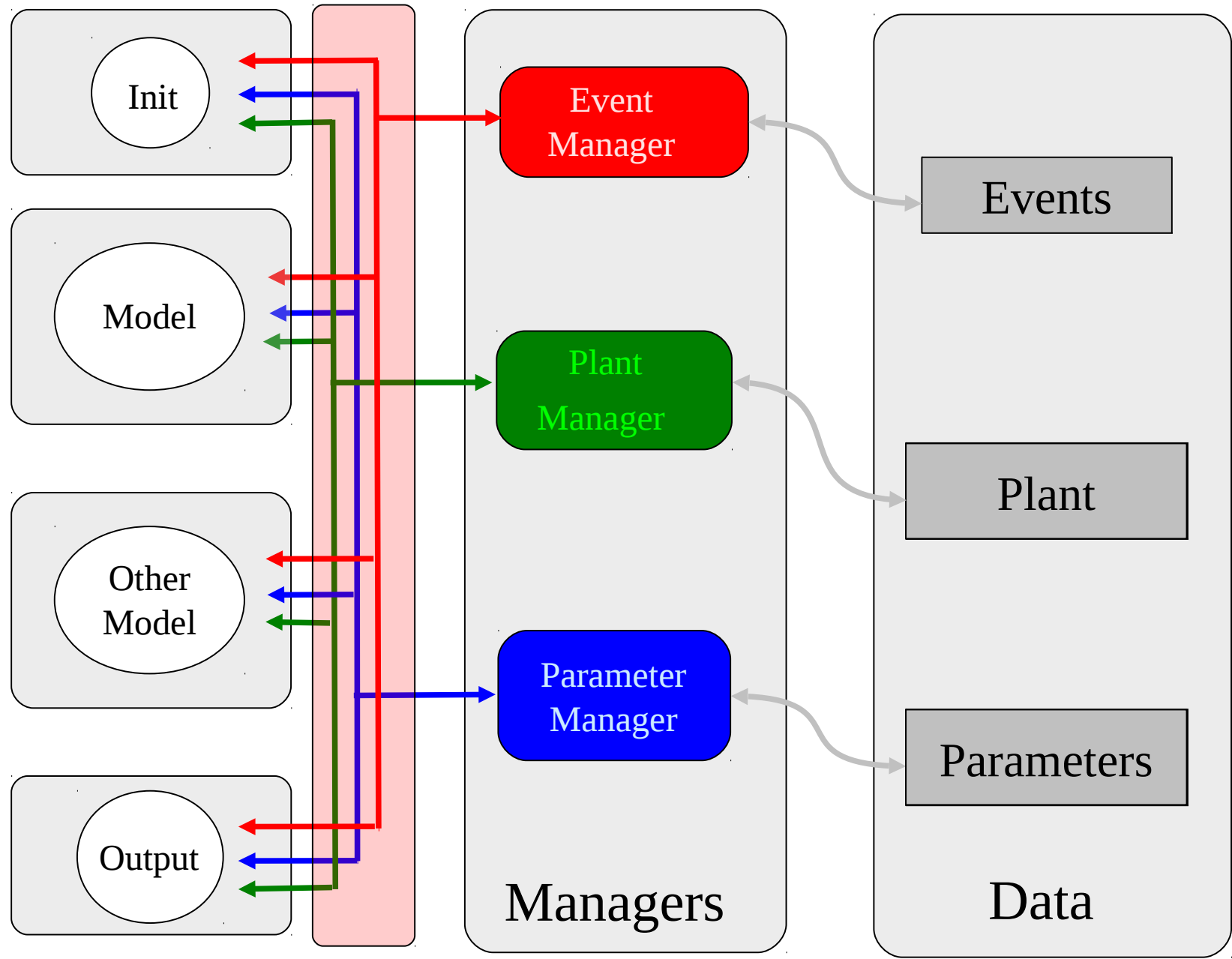IV. **Interactive software interface**

V. Conclusion and future works
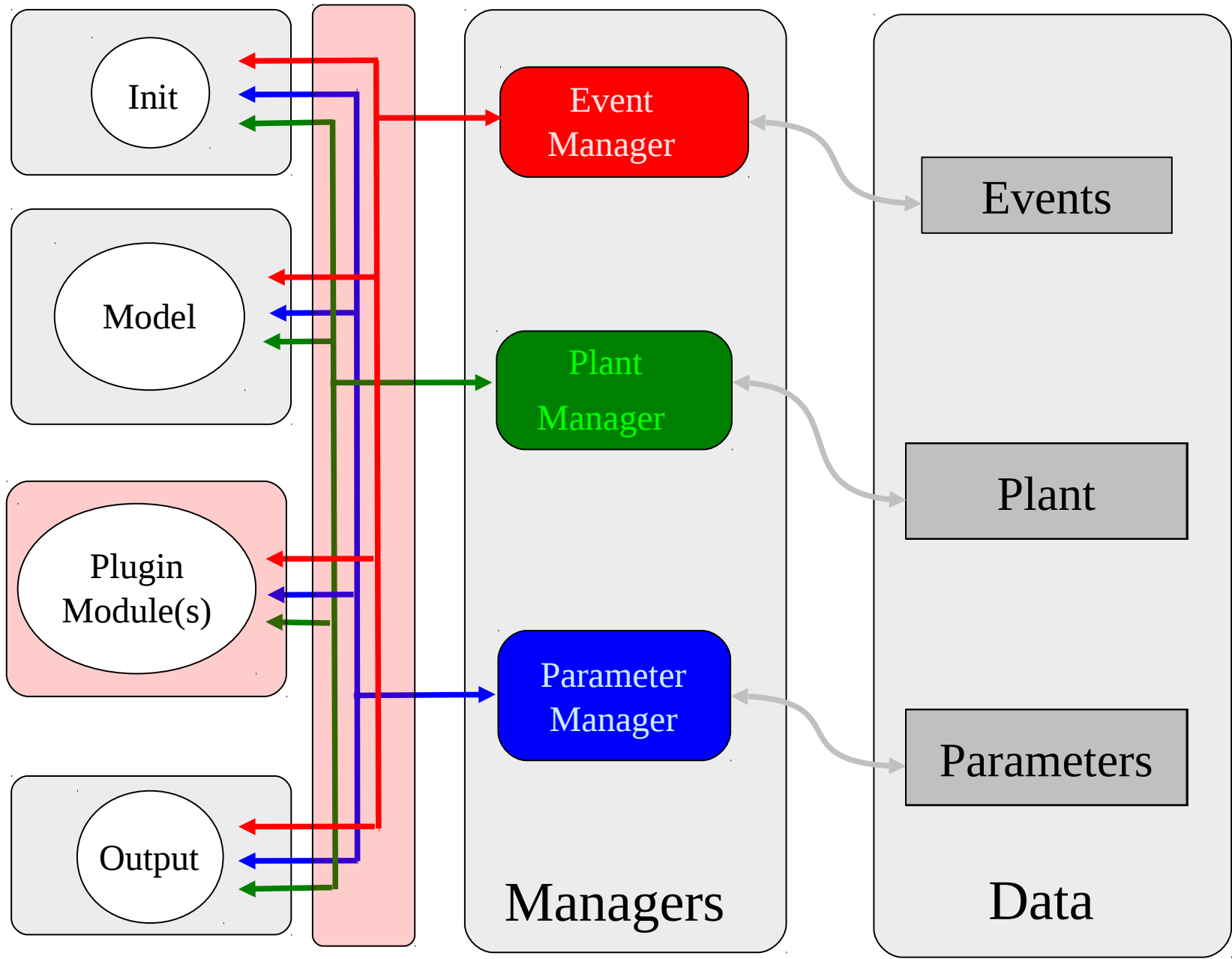
Software interface to access data
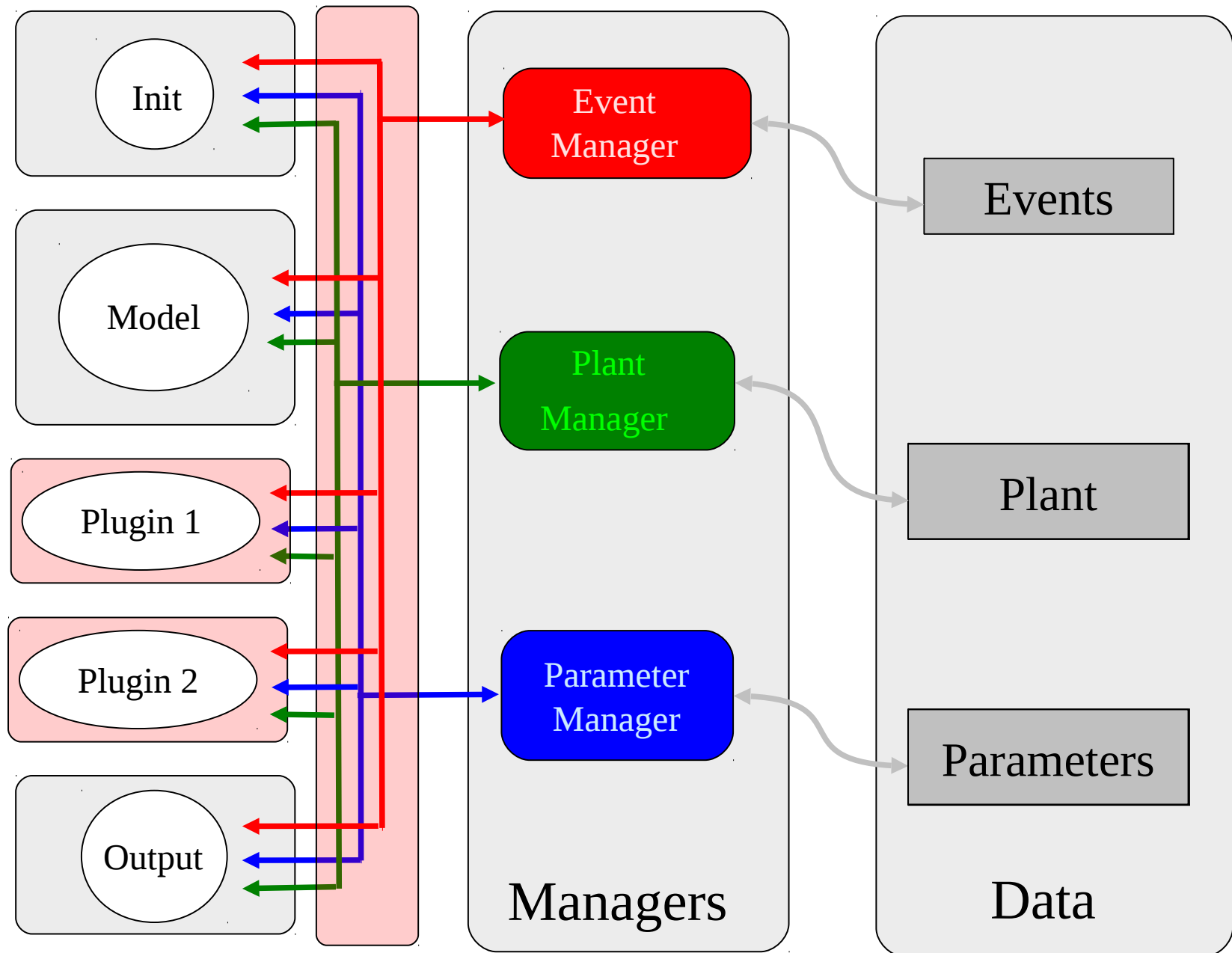
Software interface to test models

Software interface to link models

Dynamicaly add knowledge to a model

Dynamicaly add/test complex knowledge

Event insertion/processing

Init

Model

Synchronized Plugin

Output

Event Manager

Plant Manager

Parameter Manager

Events

Plant

Parameters

Managers

Data
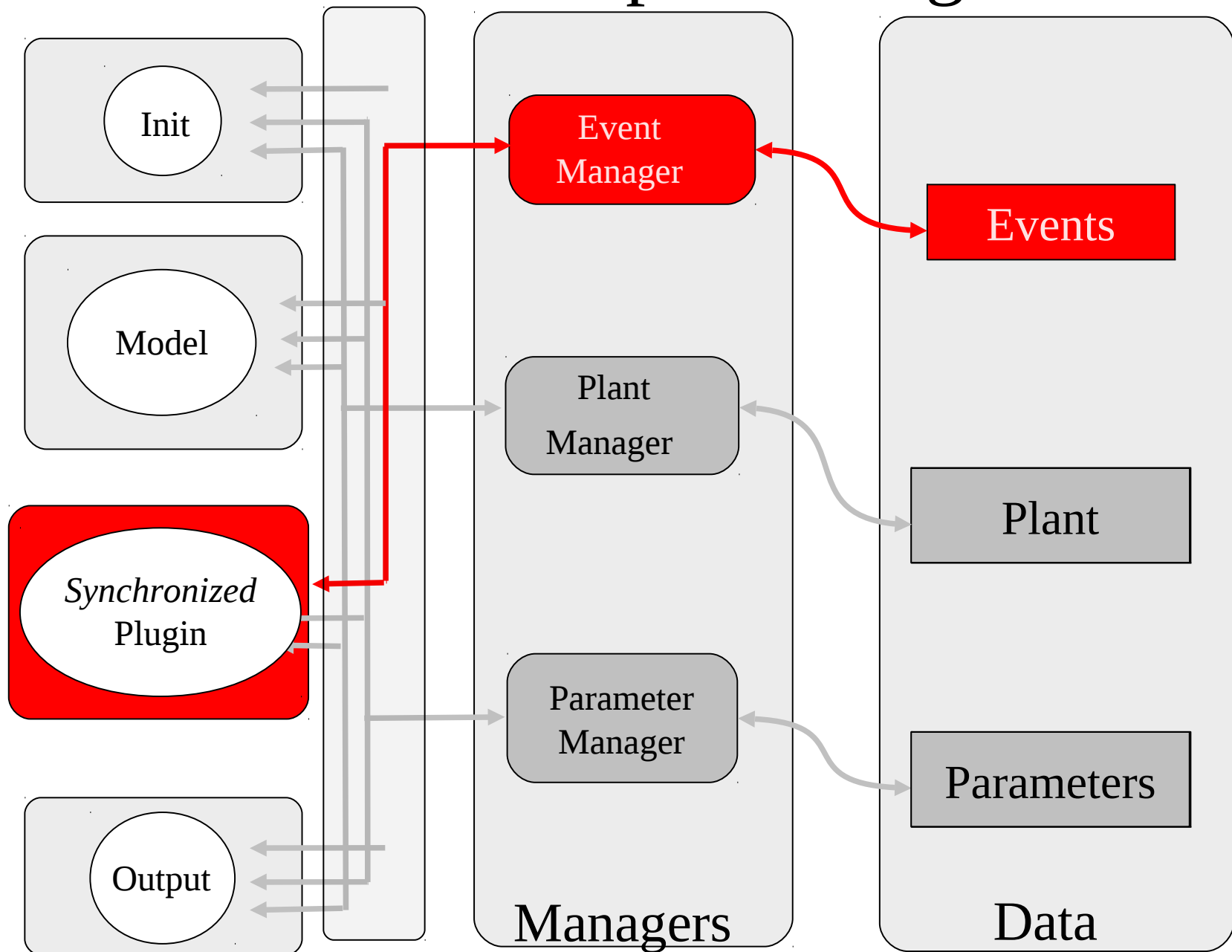
For instance : photosynthesis computing, environnement computing
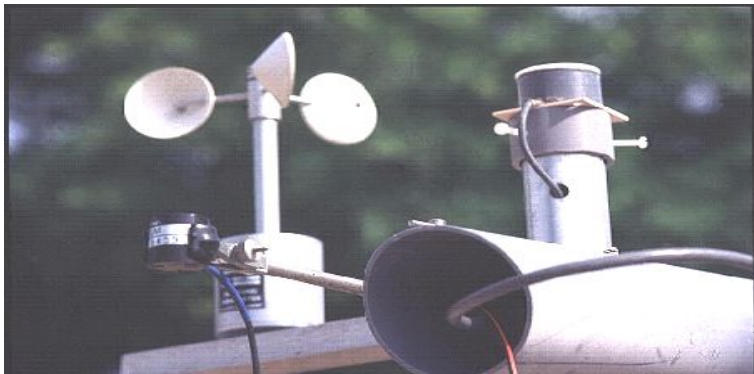
Micrometeorology

radiative climate and organ temperatures

Thermocouples for organ temperatures

General device in May 1999

Global and photosynthetic

Active radiation (+ scattered)

Turtle 6 and 16 faces)

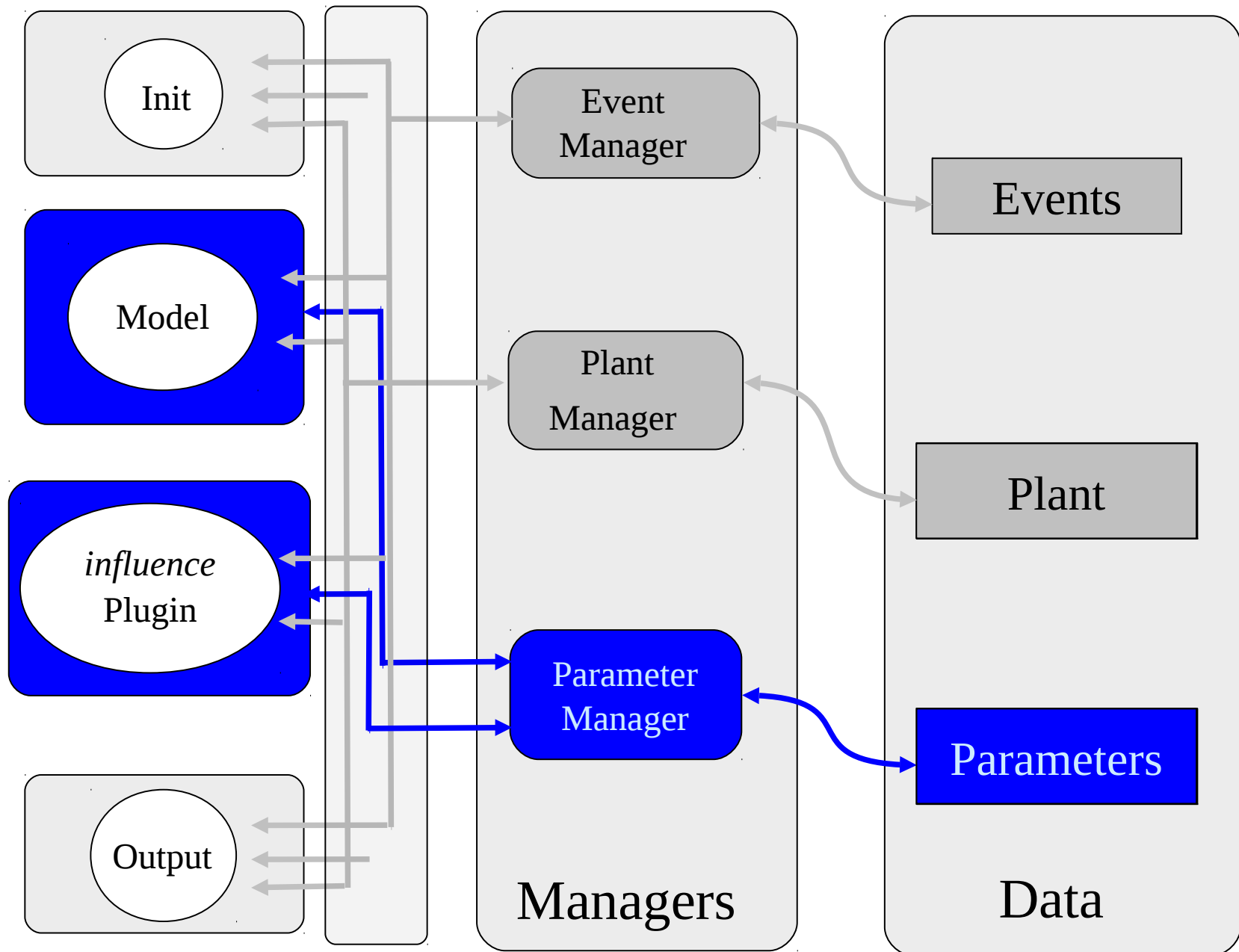to characterize directional

Radiation for artificial devices

Rey et al (2007)

Sunflower growth, architecture, leaves selfpruning

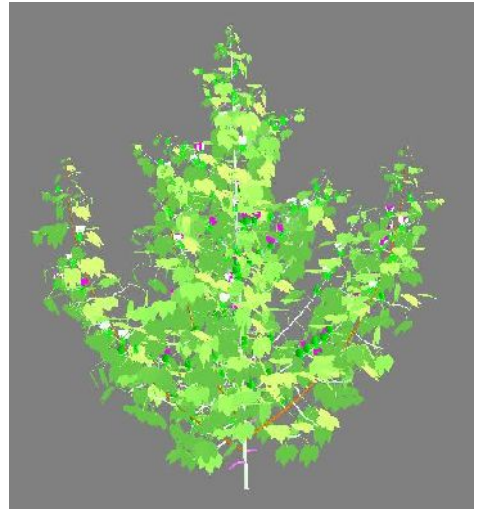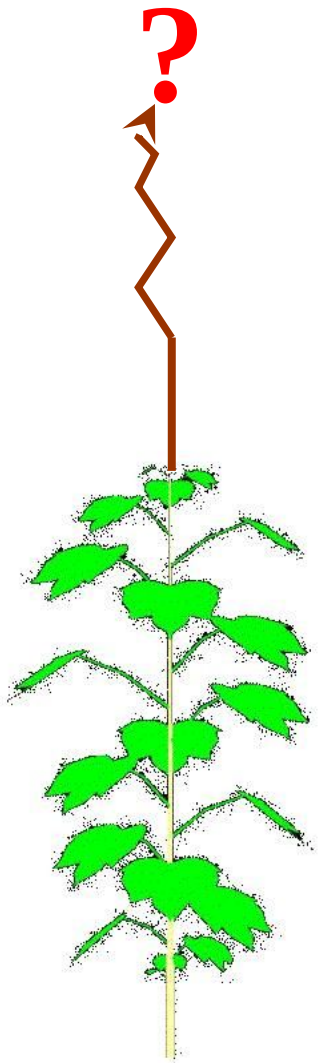

Casadebaig (2004)

Parameter management

For instance : growth rhythm change, nodes distribution change

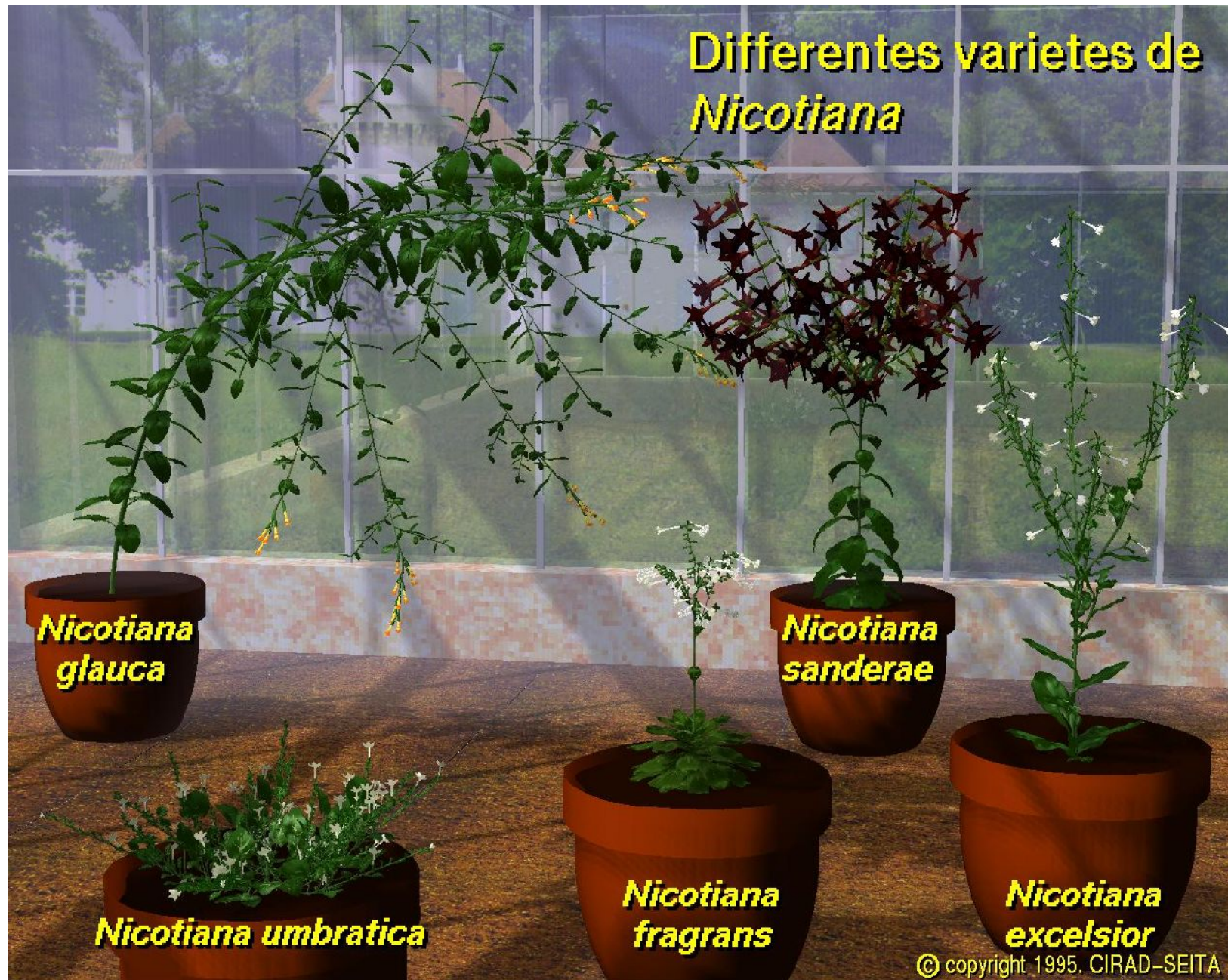# Cotton tree architecture manipulation (LiDong, CAU)

Treatments

Tobaco architecture

Tobaco architecture sensitive to climate