

GENESYS

Pioneering Space Exploration Through Gaming

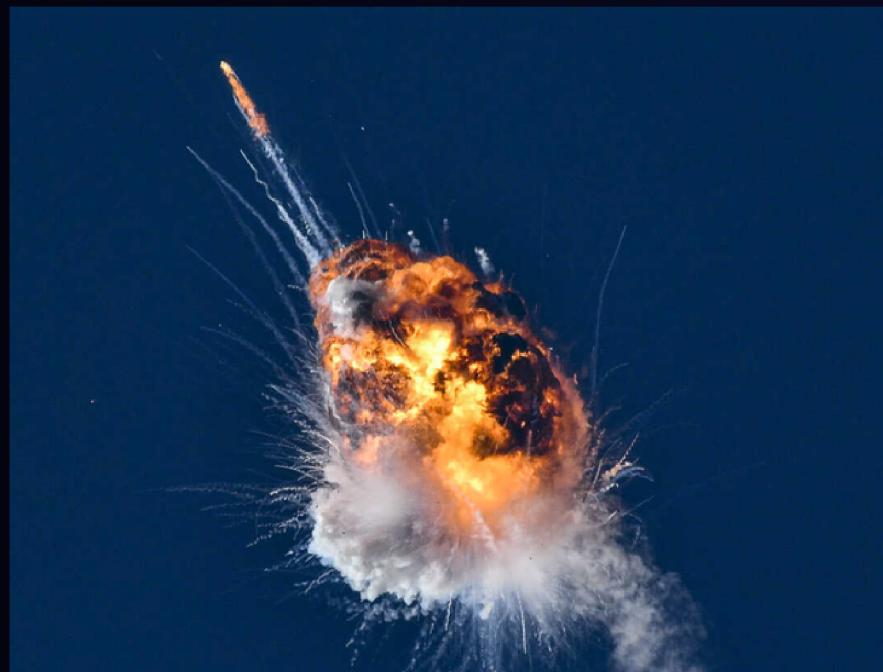
P. Ferreira - Physicist
R. Ferreira - 3D Modeler
I. Negreiros - BioTech

P. Lopes - Developer
L. Chaves - Developer



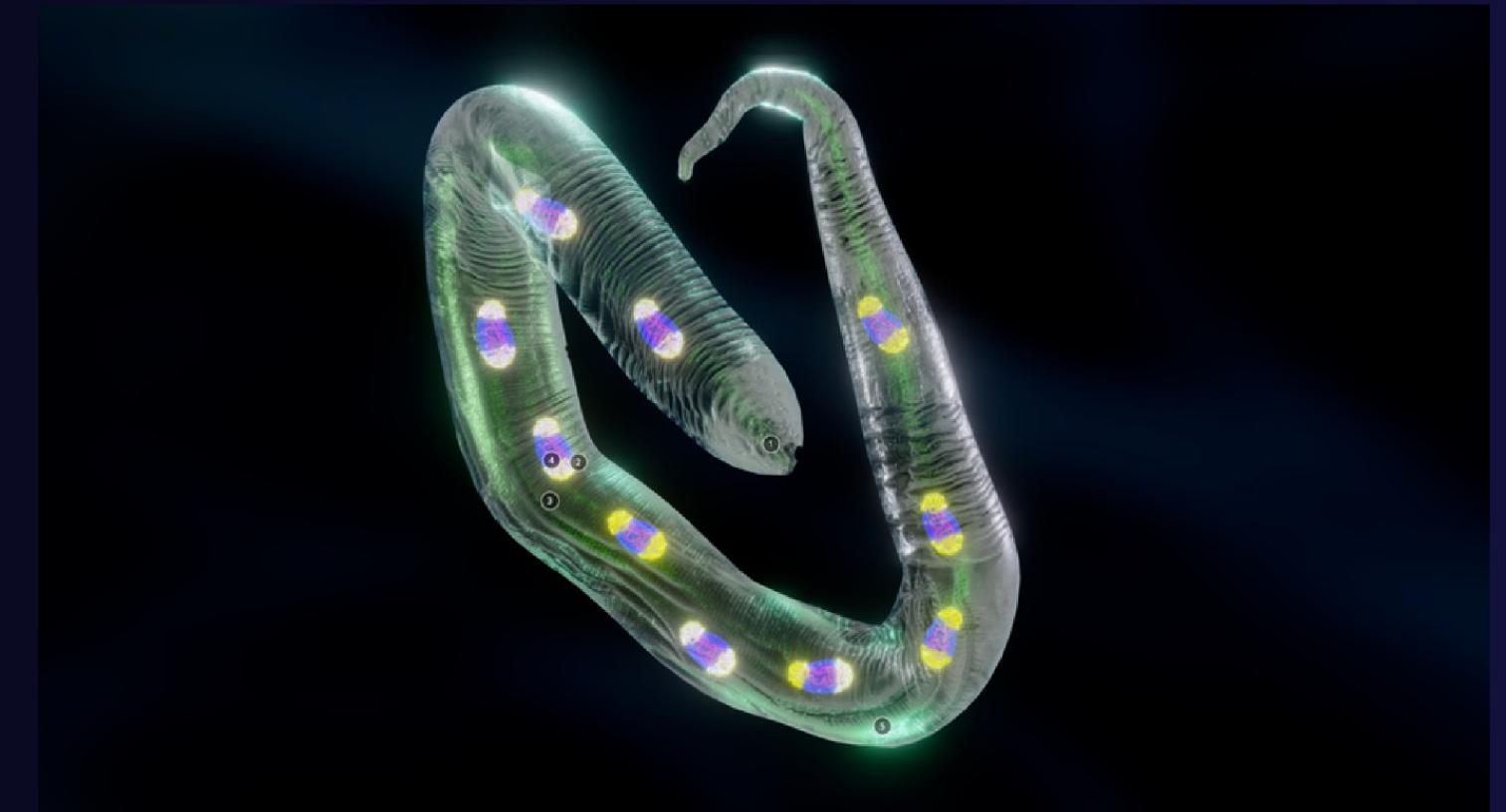
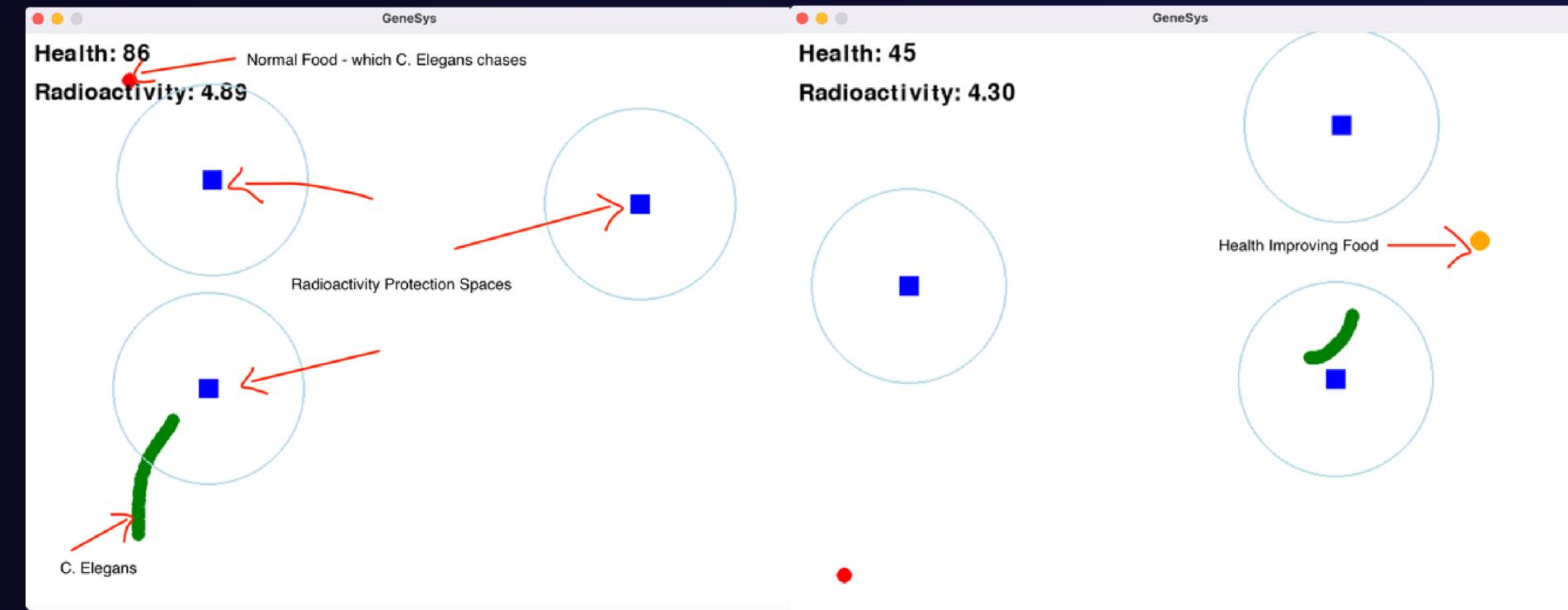
The Challenge in Space Missions

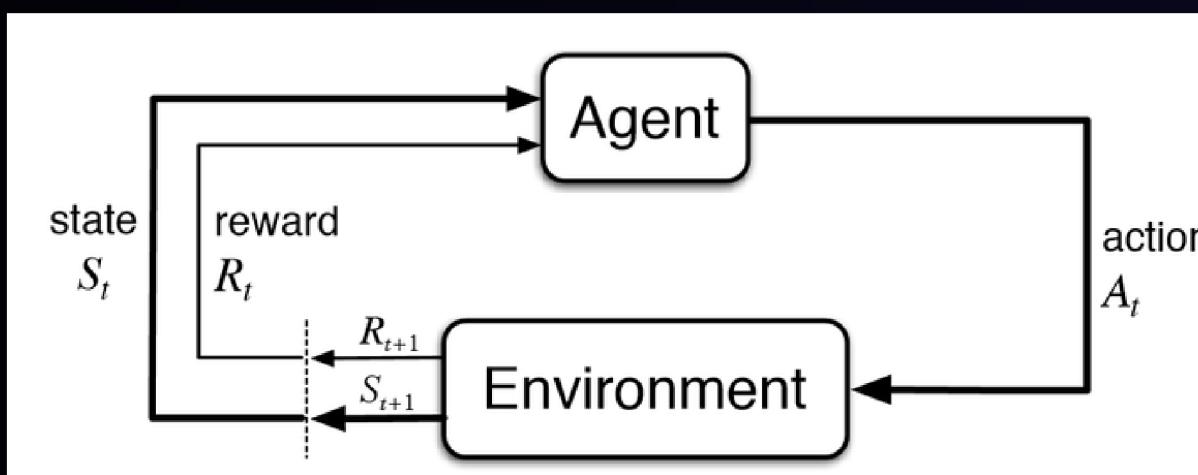
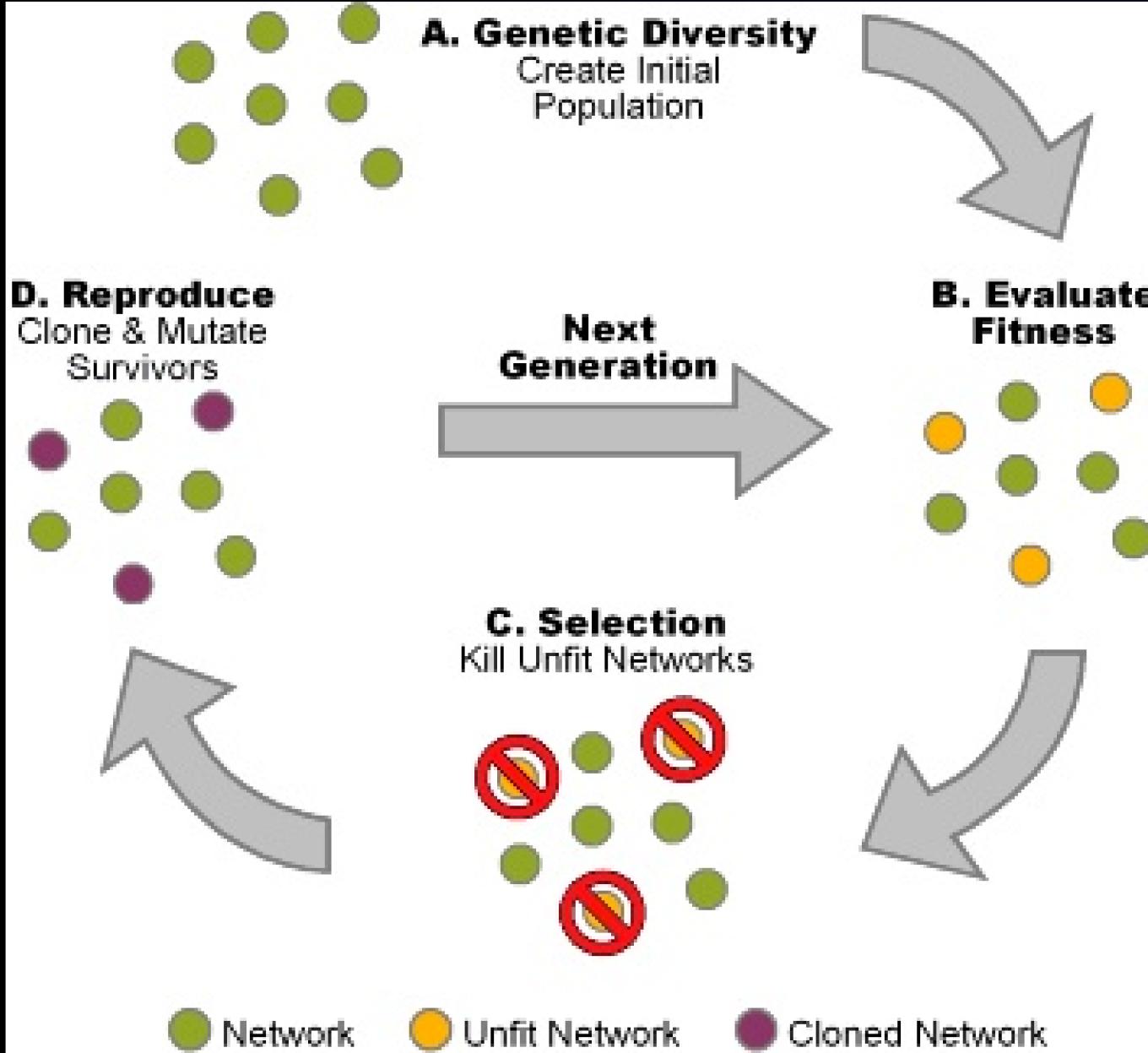
- The quest for expansive, intricate biological data in space environments.
- Conventional research methods: comprehensive but confined.
- NASA's pressing need for diverse datasets for informed decision-making.



Introduction to GeneSys - Space Exploration Game

- Embark on a cosmic journey, uncovering deep-seated mysteries.
- The microscopic nematode, *C. elegans*, as the sentinel species guiding players.
- Venturing and interacting with a plethora of uncharted terrains.



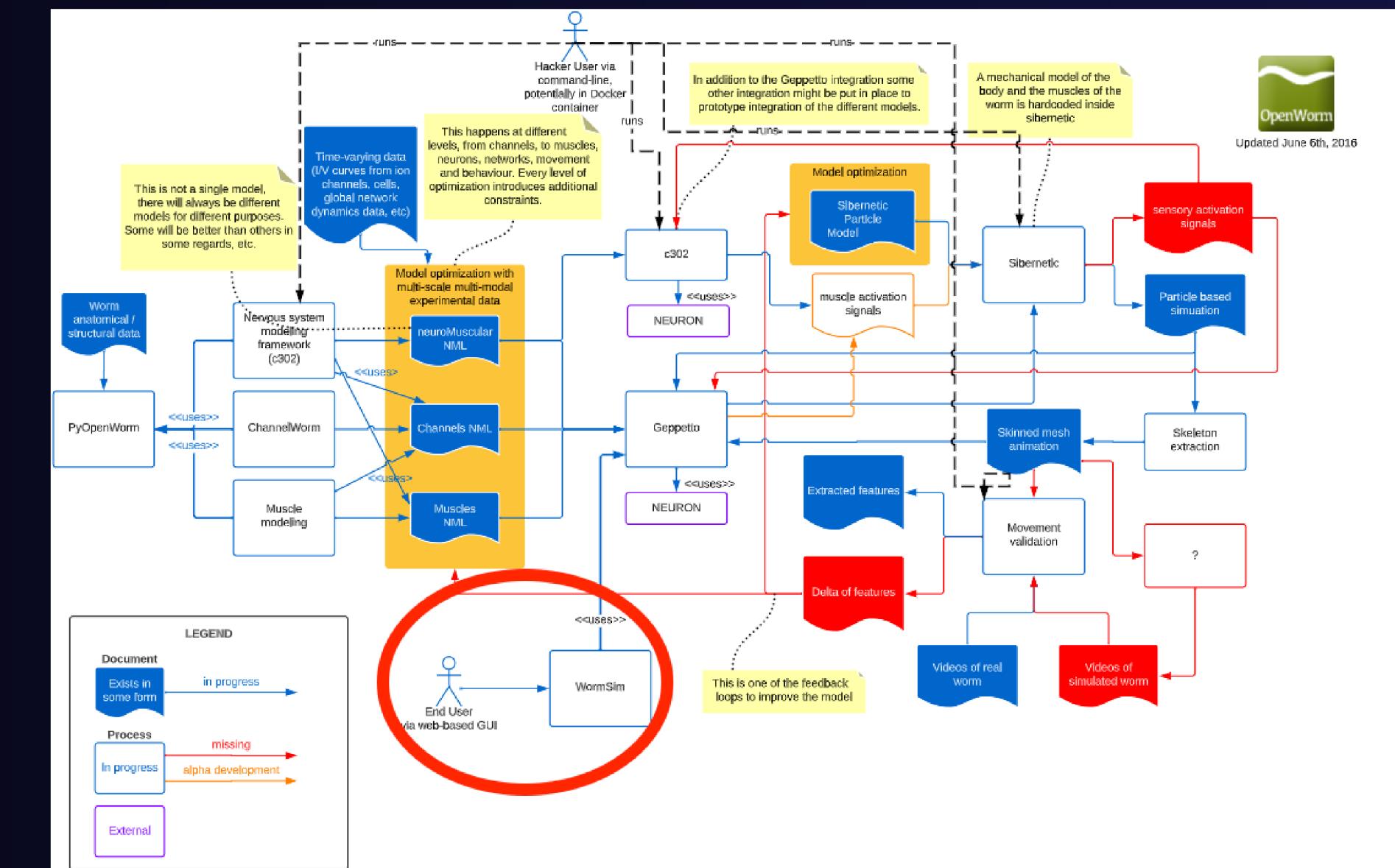


AI: The Heartbeat of GeneSys

- Advanced simulations rooted in state-of-the-art artificial intelligence mechanisms.
- Genetic algorithms dynamically fine-tuning the very fabric of game environments.
- Real-time adaptation through reinforcement learning, crafting an ever-evolving player experience.

Bridging the Gap in the OpenWorm Ecosystem

- Transition from mere passive observation to immersive, active engagement.
- Empower users to mold the experiences and responses of *C. elegans*.
- Each player's interaction spawns a myriad of unique, invaluable insights.



The Global Laboratory



- GeneSys as a decentralized lab: unique, varied simulations across countless devices.
- Player-driven environmental shifts ensure diverse, nuanced data generation.
- This intricate dataset holds untapped potential for NASA and the global scientific domain.

GeneSys: The Beacon of a New Research Era

- A pioneer in merging the worlds of digital twins, space exploration, and terrestrial biology.
 - A steadfast contributor to the UN's Sustainable Development Goals: 3 (Good Health), 4 (Quality Education), 9 (Industry, Innovation, and Infrastructure), and 17 (Partnership for the Goals).
 - Envisioning a future where games drive research, innovation, and sustainable global progress.

