Vassos Chrysostomou

What Hurts!!!!

Collaborative Consortium – Planning, Development and Delivery

Inspire It, Define It, See It, Be It, Test It, Own It

Presented by

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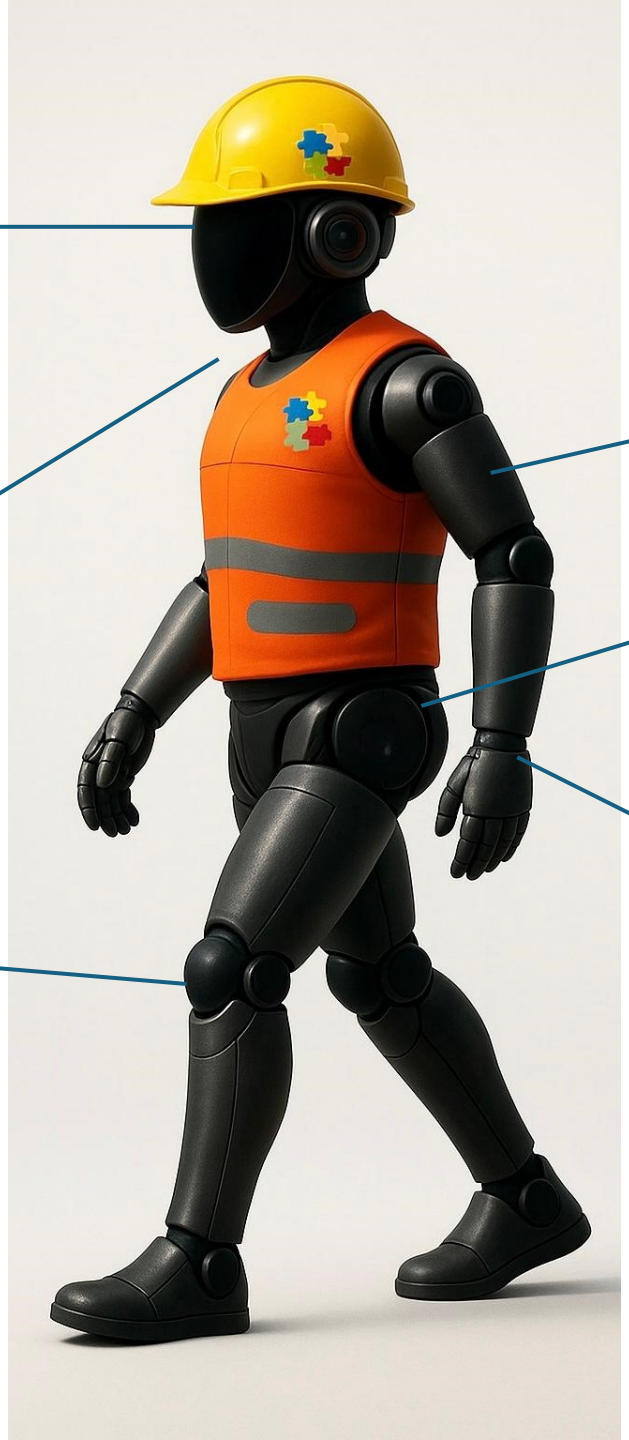
Reimagining Construction

IBE H-01 - Leo

AI Integration: Real-time decision-making & environmental adaptation

Voice & Gesture Commands: Intuitive human interaction

Mobility: Bipedal walking with stabilising algorithms; able to climb scaffolding and uneven terrain



Material: Carbon fibre and lightweight alloys

Protection Level: IP67-rated exterior

Dexterity: Multi-jointed arms and hands for material and tool handling.

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Technical Specification

- Height: 1.75 m | Weight: ~75 kg
- Battery Life: 4 – 6 hours
- High-performance: CPU (central processing unit), NPU (neural processing unit) and GPU (graphical processing unit)
- Connectivity: 5G, Wi-Fi 6, Bluetooth 5.2
- Sensors: LIDAR, thermal imaging, 360 vision, GPS, microphones, audio arrays and IMU (Inertial Measurement Unit)
- Payload Capacity: 25-30 kg
- Operating Temp: -40°C to +50°C

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IBE H-01 – Leo - 2030

Material Handling / Logistics	Lifts and transports materials, tools, and components
Inspection	Scans for structural alignment, quality control and potential hazards
As Build Engineer	Realtime as Build updating of Digital Twin
Assistance Role	Passes tools, holds panels, aligns materials precisely, provides digital information to site teams on demand
Safety /Security Monitor	Detects unauthorised access, unsafe behaviour, near misses or equipment failure
Site Communication	Can respond to verbal & gesture commands and interact with site teams
Runtime	Rechargeable modular battery packs ~ 22 hours active labour

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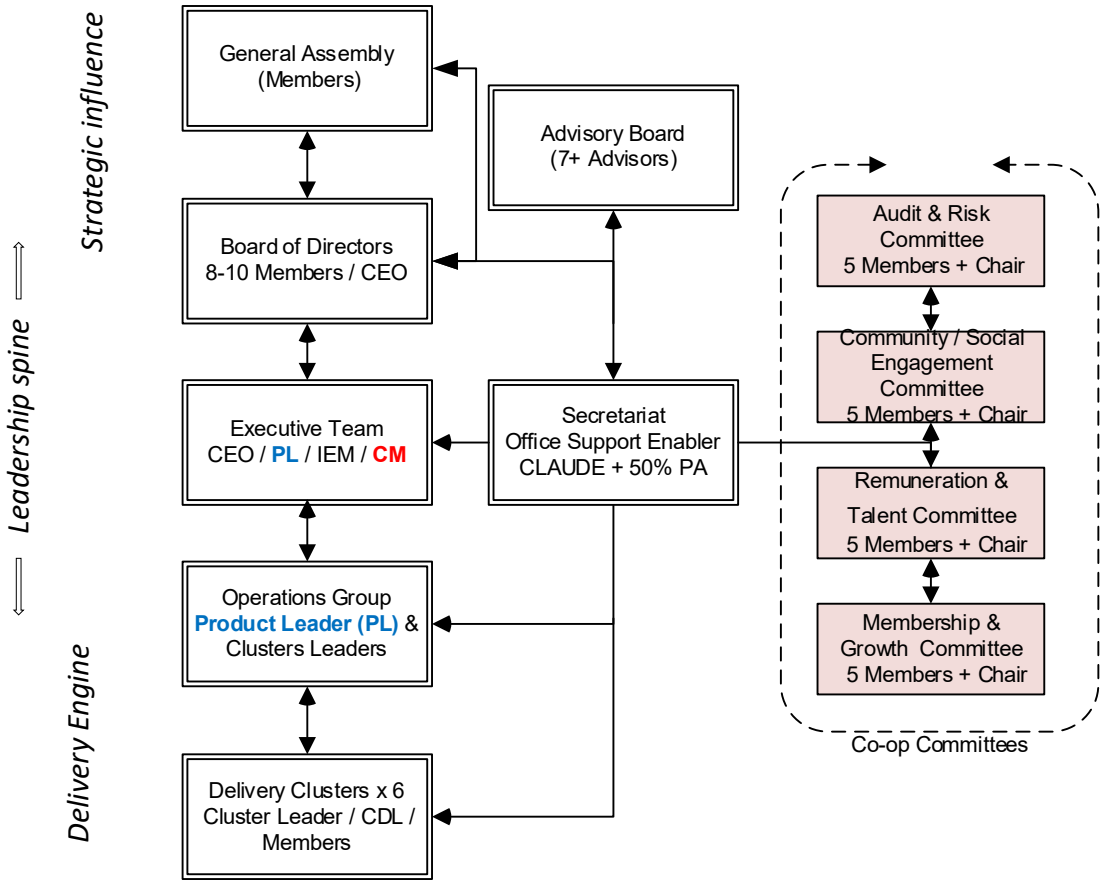
IBEH Cooperative Organisational Structure



NOTES

Each of the Founding Members (Gold or Platinum – that join before end of 2026) have a seat on the Board of Directors

Secretariat – Provided by IBE Partnership

Executive Team – Directly employed by IBEH Ltd

CM – Not required at launch

Co-op Committees – To be formed as needed

Accountability

Advisory Board - Market reality check
Board of Directors - Direction
Executive Team - Delivery
Operations Group - "what good looks like technically"
Clusters - Execution
Secretariat - Operational backbone

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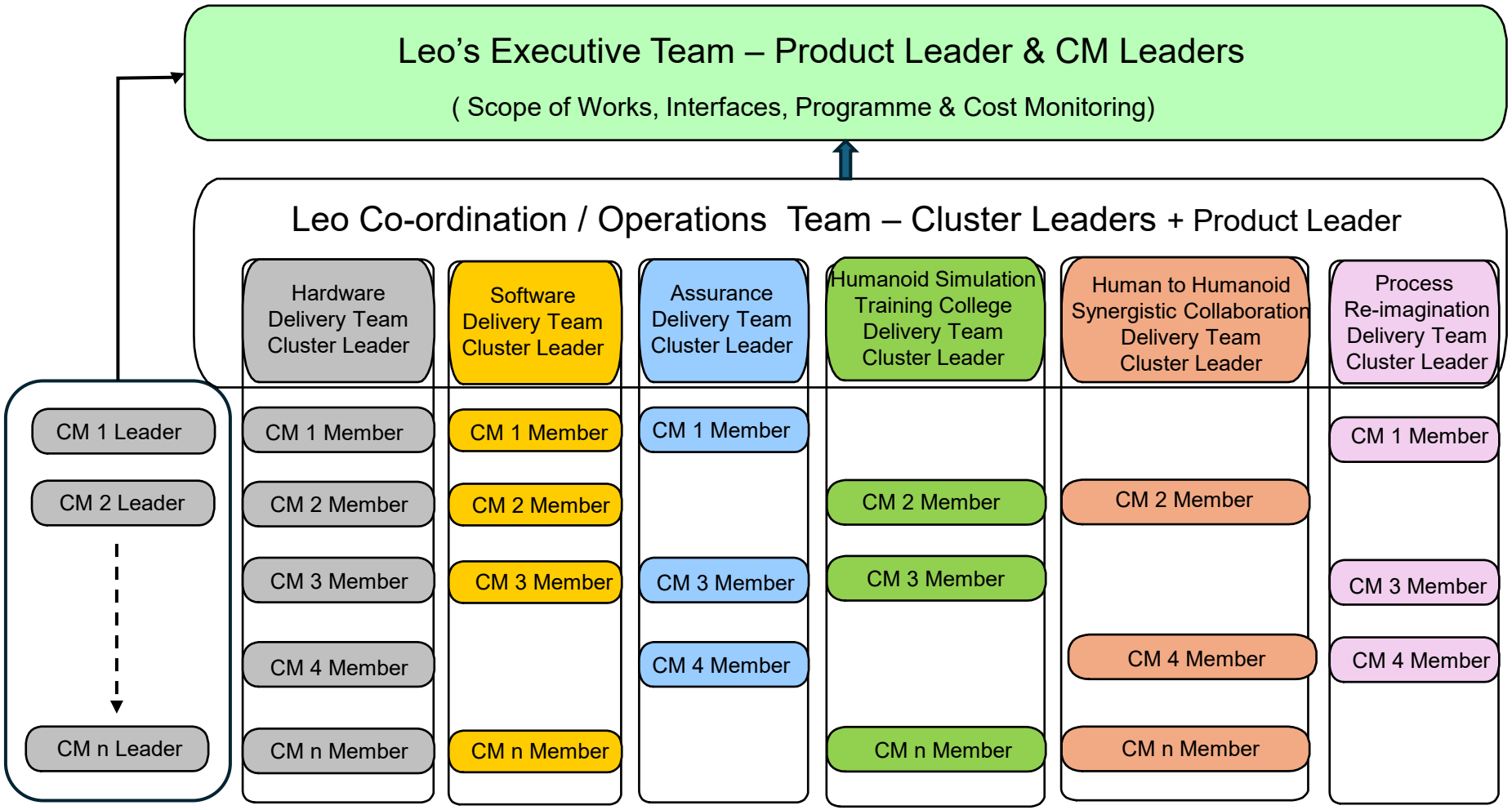
IBEH Operational / Management Structure



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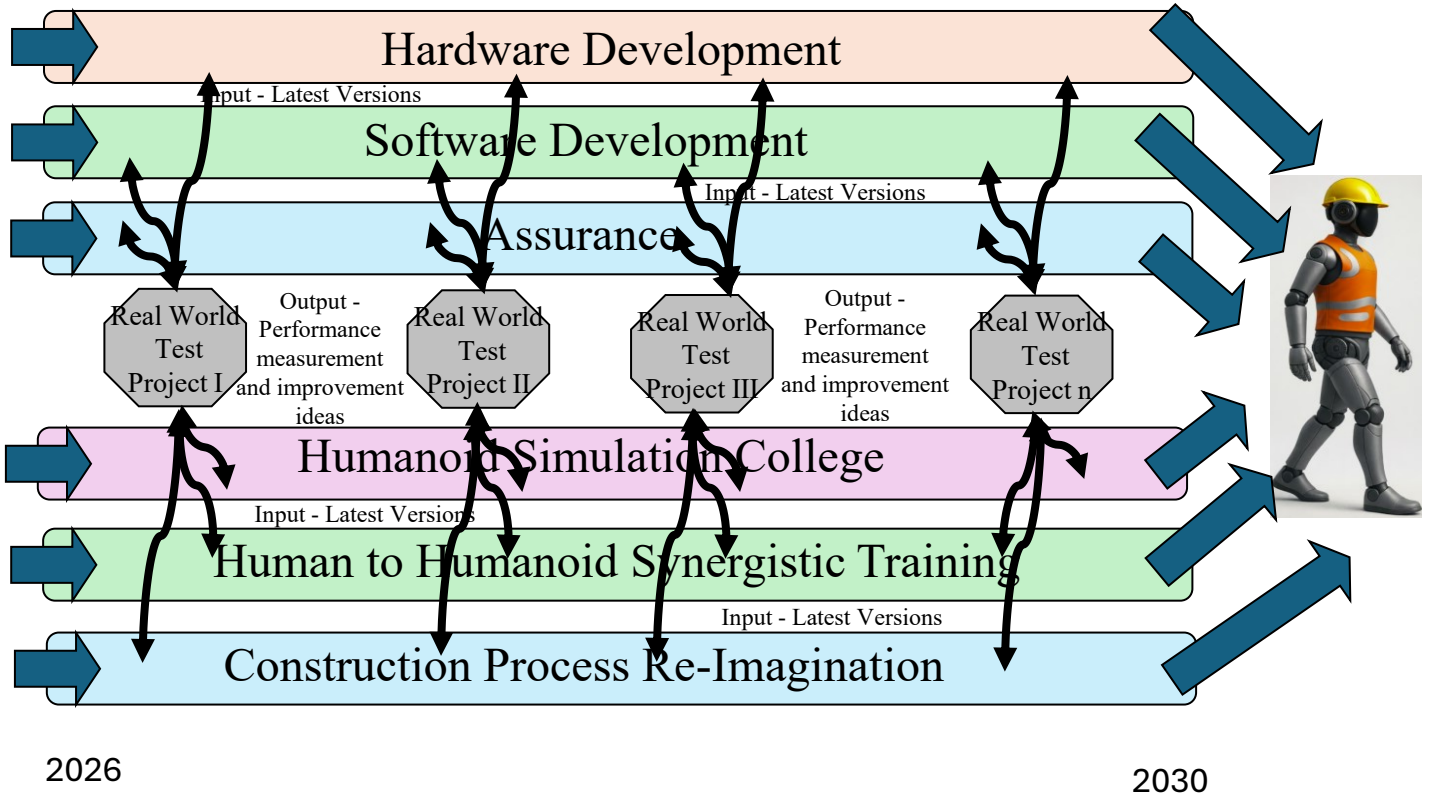
IBEH Operational / Management Structure

Continuous Improvement / Concurrent Development



Training Leo

Data-gathering

- **Northampton and Molton College**
  - **Learning the “basics, how to….”**

- **Real-world tasks / data**
  - **How do you do it… everyone has its own handwriting**
  - **Knowledge and experience**

- **Hands free Headcams**

YOUR INPUT

Defines how quickly and accurately, Leo develops and learns

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Training Leo

Skills Training – 4 Stages

1. **Humanoid Simulation College**
   - **Digital Leo learns from 10000hrs plus of practise**

2. **Controlled Lab Environments**
   - **Transfer into the Hardware and 1000s of hrs. of practice**

3. **Controlled Real World - Constructionarium**
   - **You test Leo's learned tasks – Break / Fix /Improve**

4. **Test Project Sites - Your sites, Your operational realities**

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Call to Action

Seeking strategic partners, community, and collaborators

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Join us in shaping the future of construction!

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