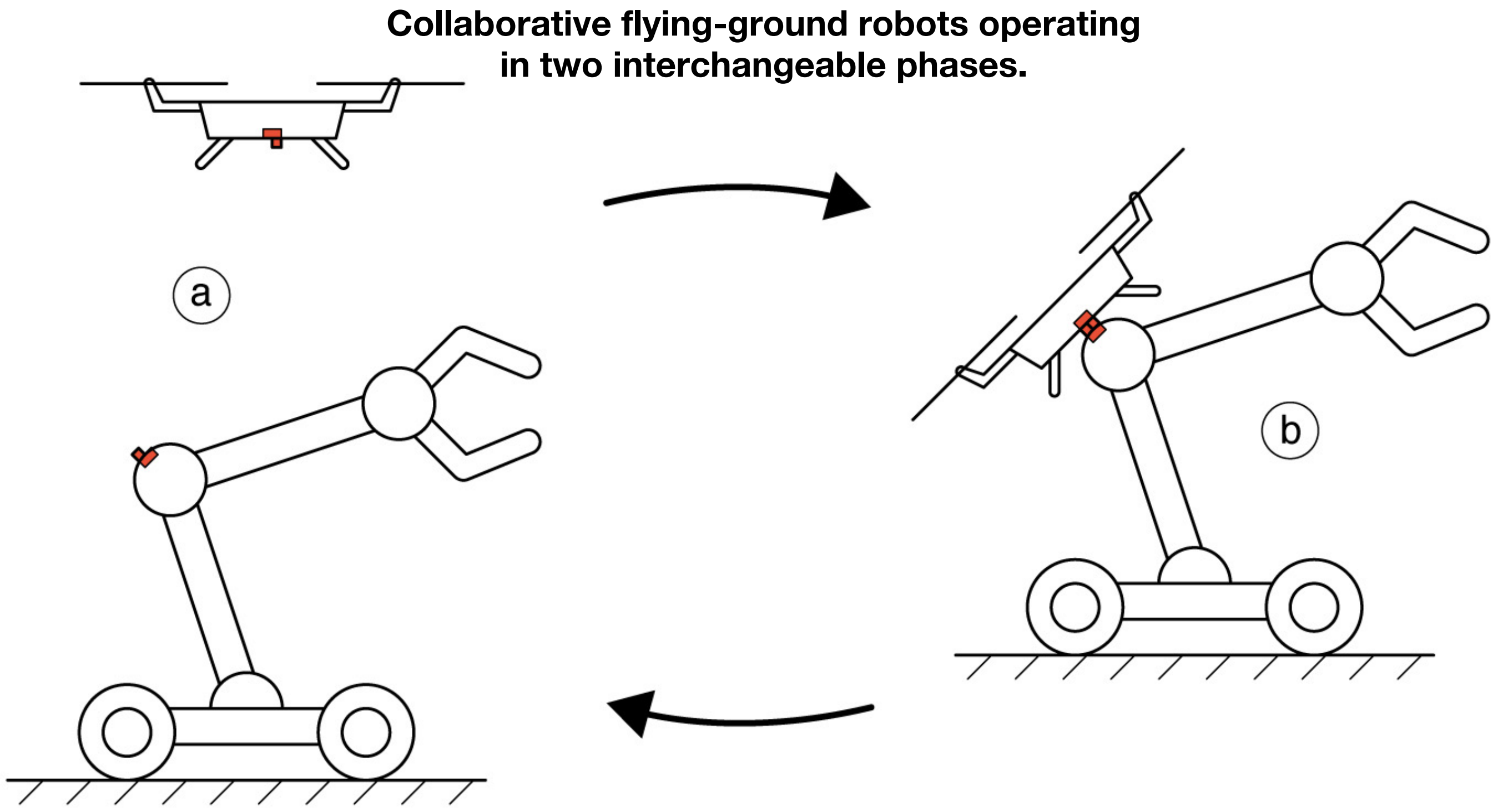
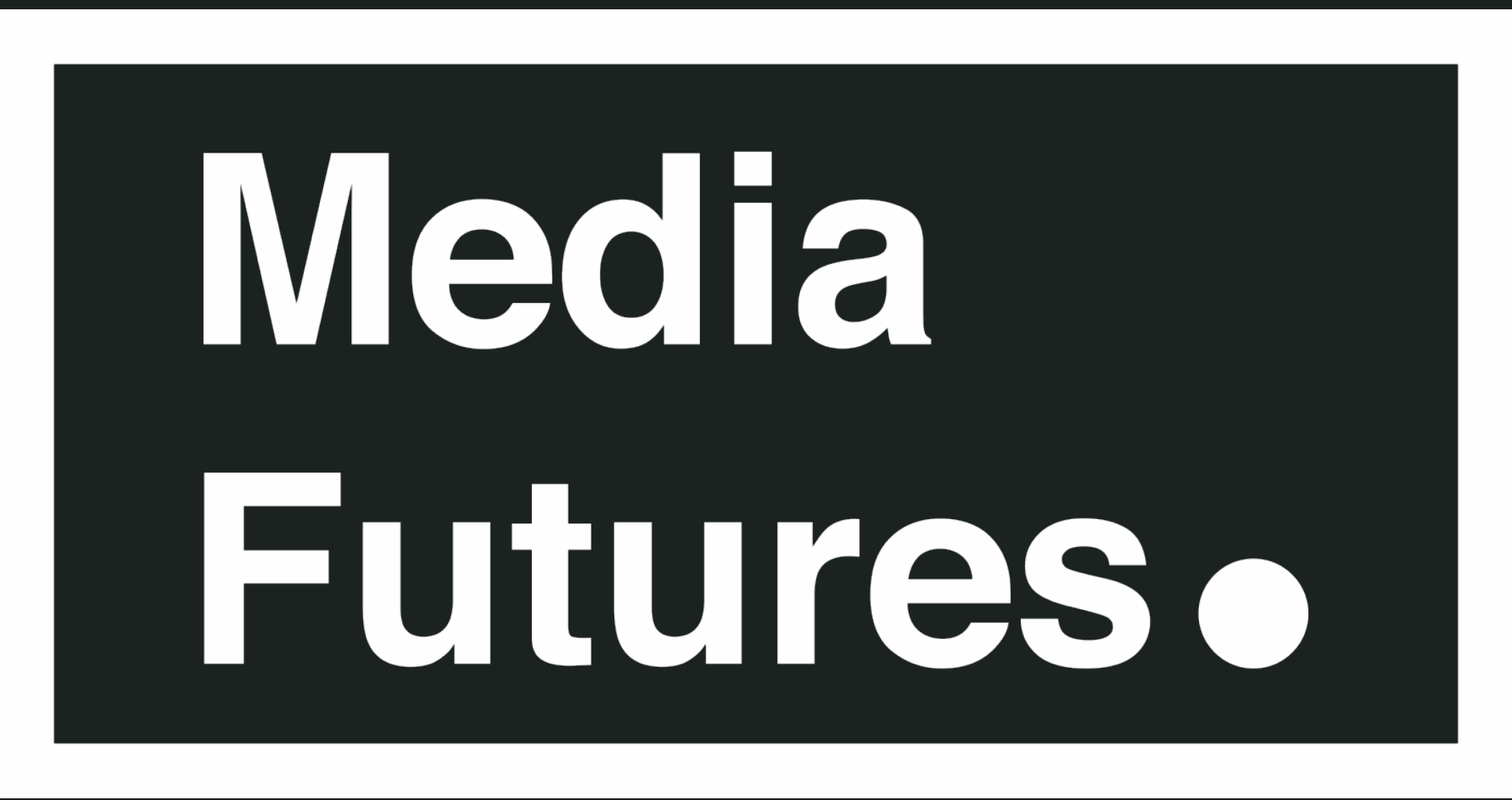
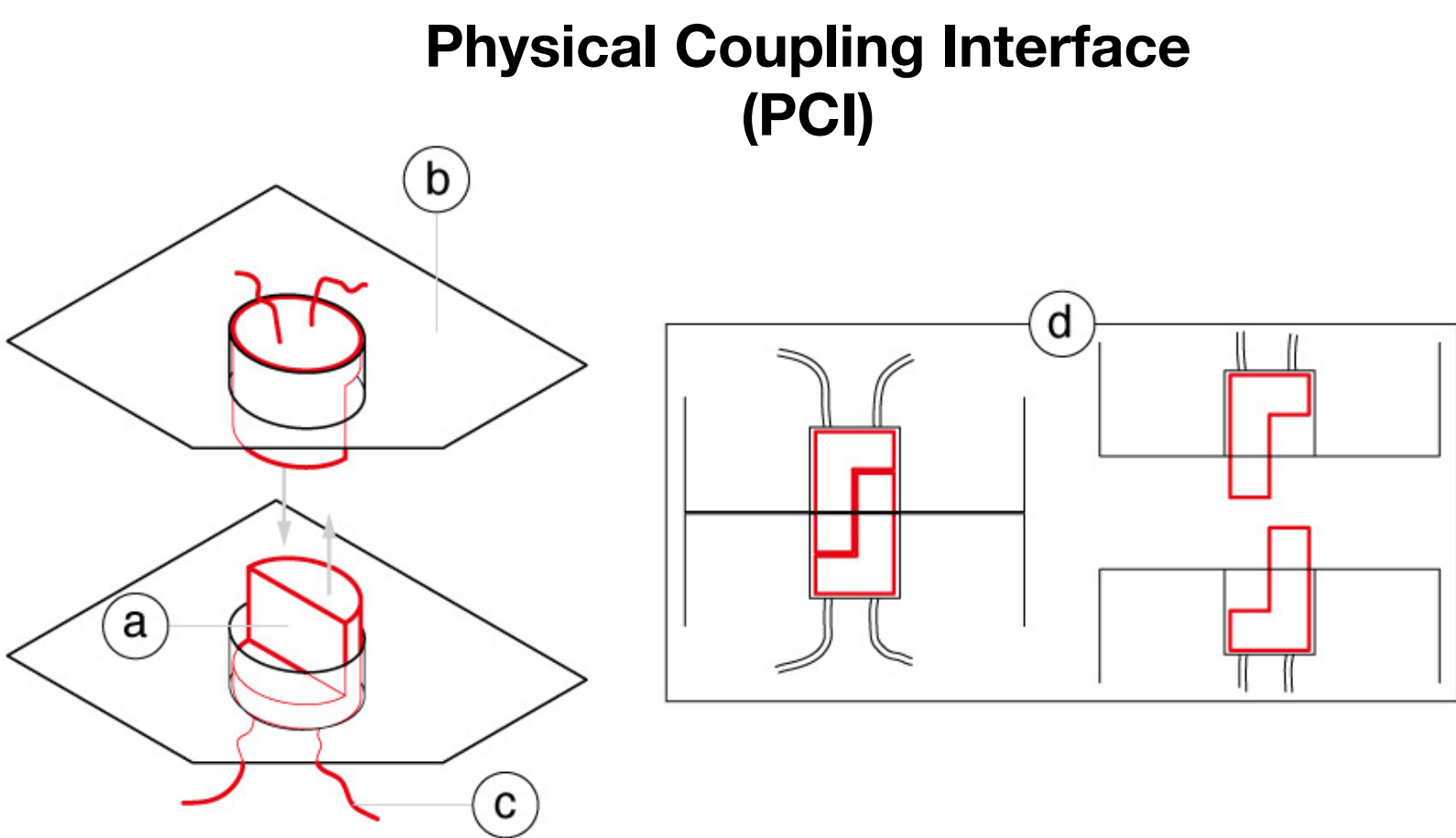


# A Collaborative System of Flying and Ground Robots with Universal Physical Coupling Interface (PCI), and the Potential Interactive Applications

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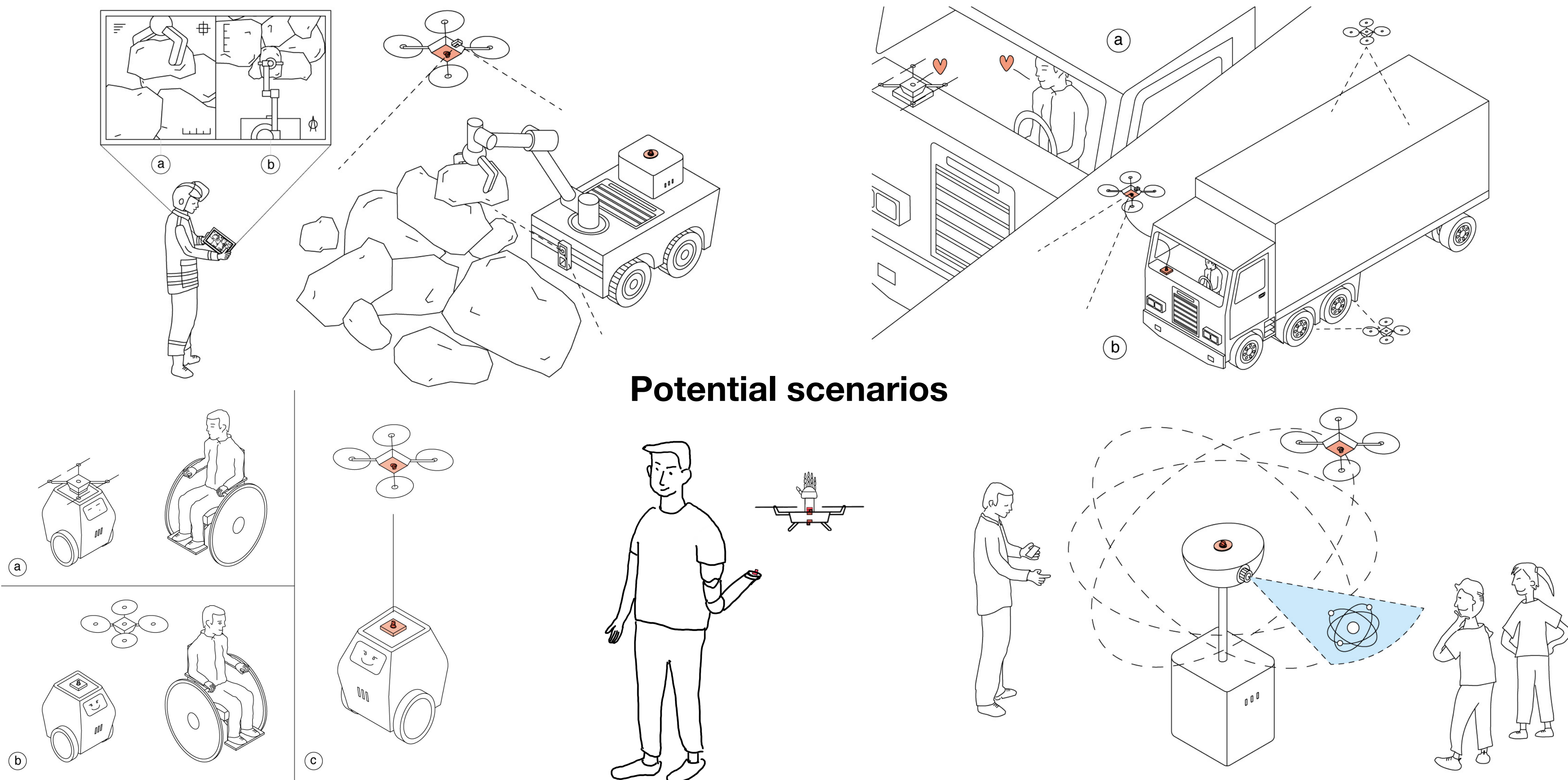
Flying and ground robots complement each other in terms of their advantages and disadvantages. We propose a collaborative system combining flying and ground robots, using a universal physical coupling interface (PCI) that allows for momentary connections and disconnections between multiple robots. The proposed system may better utilize the complementary advantages of both flying and ground robots. We also describe various potential scenarios where such a system could be of benefit to interact with humans - namely, remote field works and rescue missions, transportation, healthcare, and education. Finally, we discuss the opportunities and challenges of such systems and consider deeper questions which should be studied in future work.



Advantages and disadvantages of ground robots, flying robots, and targeted systems.

	Ground Robots	Flying Robots	Targeted Systems
Workspace	▲	●	●
Power Supply	●	▲	●
Extension Capability	●	▲	●
Agility	▲	●	●

●=advantage ▲=disadvantage



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