

KICKSTARTING IN-ORBIT REPAIR

How finance and insurance companies can help lift an emerging industry off the ground.

Current economics and future regulations point to serviceability and repairability of spacecraft playing a key role in the space economy. But who will pay for the pathfinder repair missions needed to prove the technology?

\$500 million

Annual cost to insurers of in-orbit anomalies.

0 Number of spacecraft repaired.

INSPECTION AND REPAIR REDUCE UNCERTAINTY AND LOSS

THE CURRENT MODEL: HIGH UNCERTAINTY

Telemetry shows symptoms, not root causes.



TELEMETRY ONLY

HIGH UNCERTAINTY

BINARY OUTCOMES

LARGE LOSSES, LONG OUTAGES

Limited visibility into physical condition

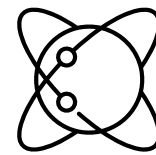
Root cause unknown

Total or partial loss claims

Inefficient capital allocation

THE FUTURE MODEL: REDUCED UNCERTAINTY

Inspection reveals. Repair recovers. Value is preserved.



IN-ORBIT INSPECTION

TARGETED REPAIR

LOWER LOSS SEVERITY

BETTER ECONOMIC OUTCOMES

Physical visibility and root cause identification

Restores function or extends lifetime

Avoids total loss and reduces downtime

Better insurance pricing, lower volatility, sustainable risk models

1 WHAT CAN BE ACHIEVED?

IN-ORBIT INSPECTION

Improves visibility into root cause and asset condition.

IN-ORBIT REPAIR

May reduce losses by extending operational lifespan and preserving asset value.

2 WHY IT MATTERS?

REDUCED UNCERTAINTY

Better information supports more informed operational and underwriting decisions.

LOWER LOSS SEVERITY

Recoverability may create alternatives to immediate write-offs and limit losses.

3 WHO WILL PAY FOR IT?

SHARED INCENTIVES

Operators, insurers, and investors can share in the upside when recovery is successful.

PRIVATE CAPITAL

Private capital already backs high-risk recoveries for a share of the outcome, such as in marine salvage or litigation funding.



New repair capabilities will create options beyond today's total-loss paradigm.



Collaborative financing models can enable repair at scale and build a more resilient space economy.



Possible 10x investment returns on the cost of the repair mission.