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Risk Governance of Critical Infrastructures

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Introduction

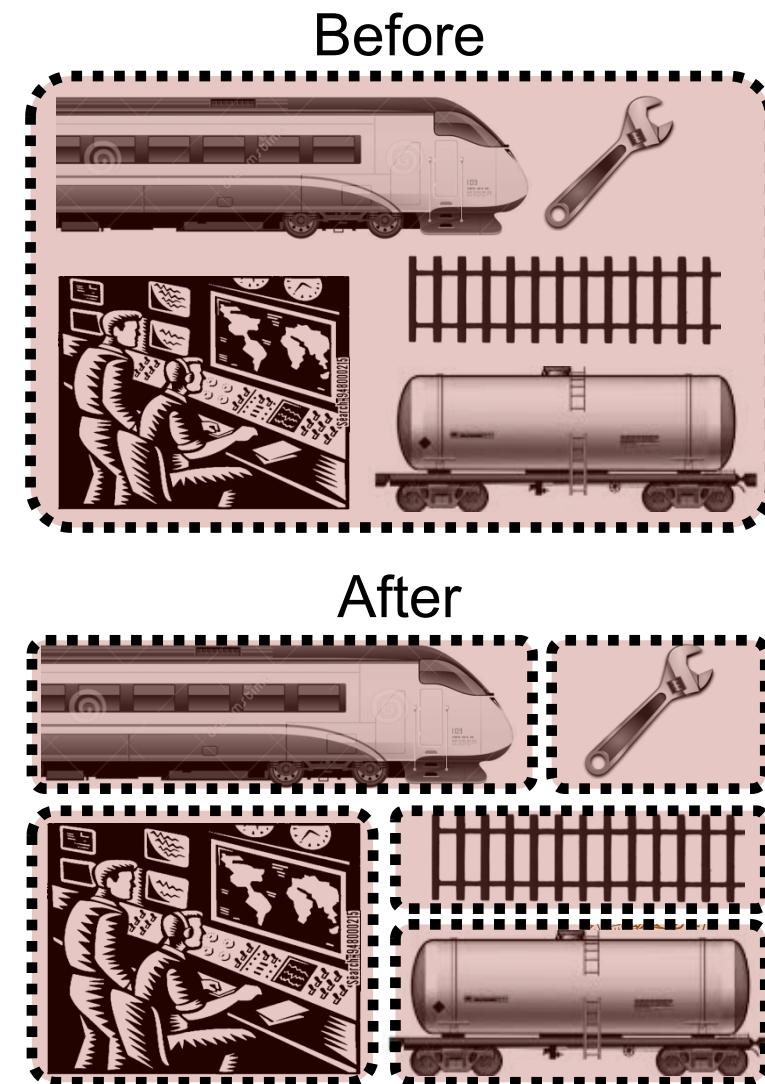
- Critical Infrastructures (CIs) have become more closely interconnected
- Increased efficiency
- But also potential for cascading (trans-boundary) failures



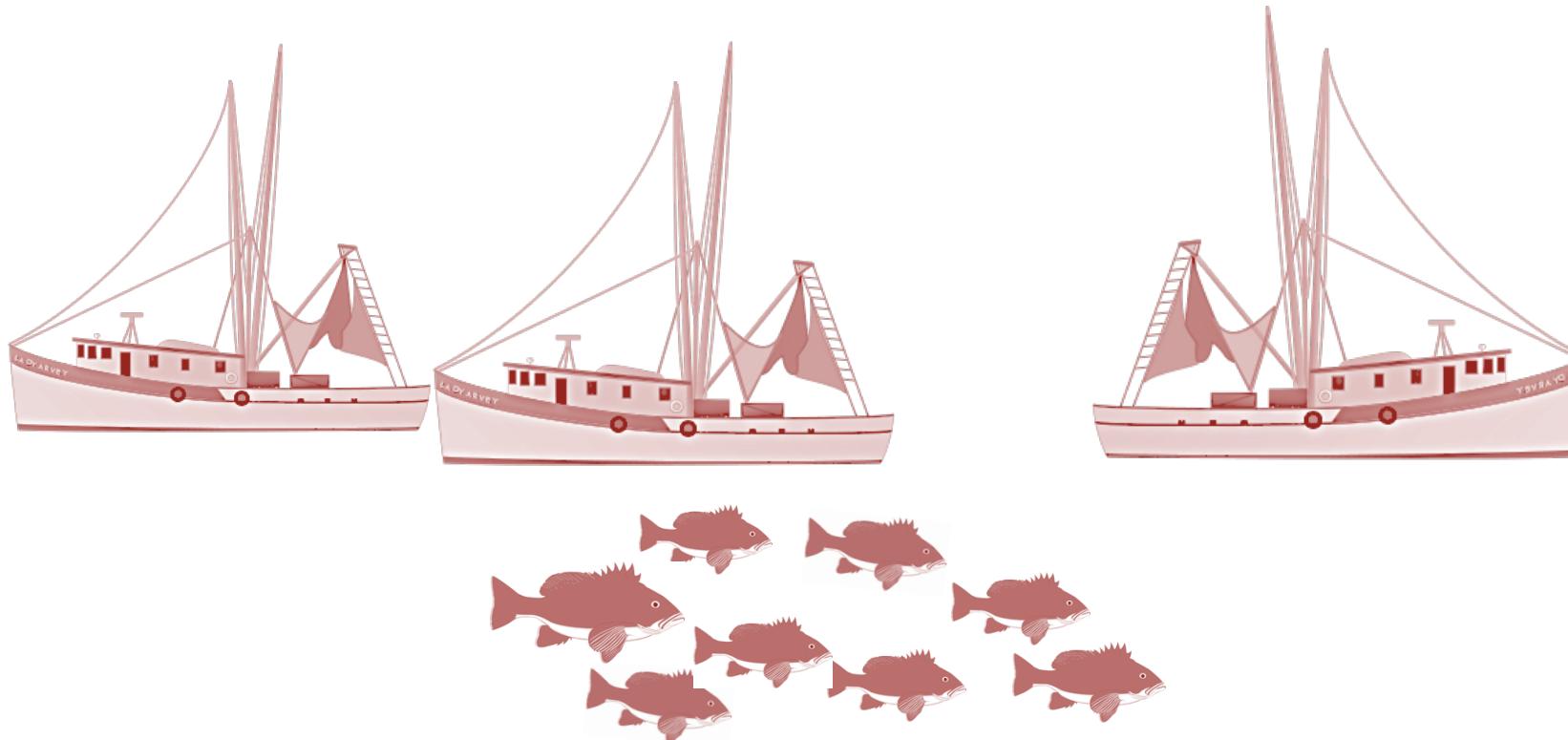
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Challenges facing risk governance

- Many CIs have also faced an increased institutional fragmentation
- Swedish railways
- Implies new challenges with respect to how to deal with risk
 - Dispersed responsibility
 - » Who does what?
 - Diverse perspectives on risk
 - » What is risk? How to deal with it?
 - Tragedy of the commons dilemma
 - » Everyone dependent on the same limited resource

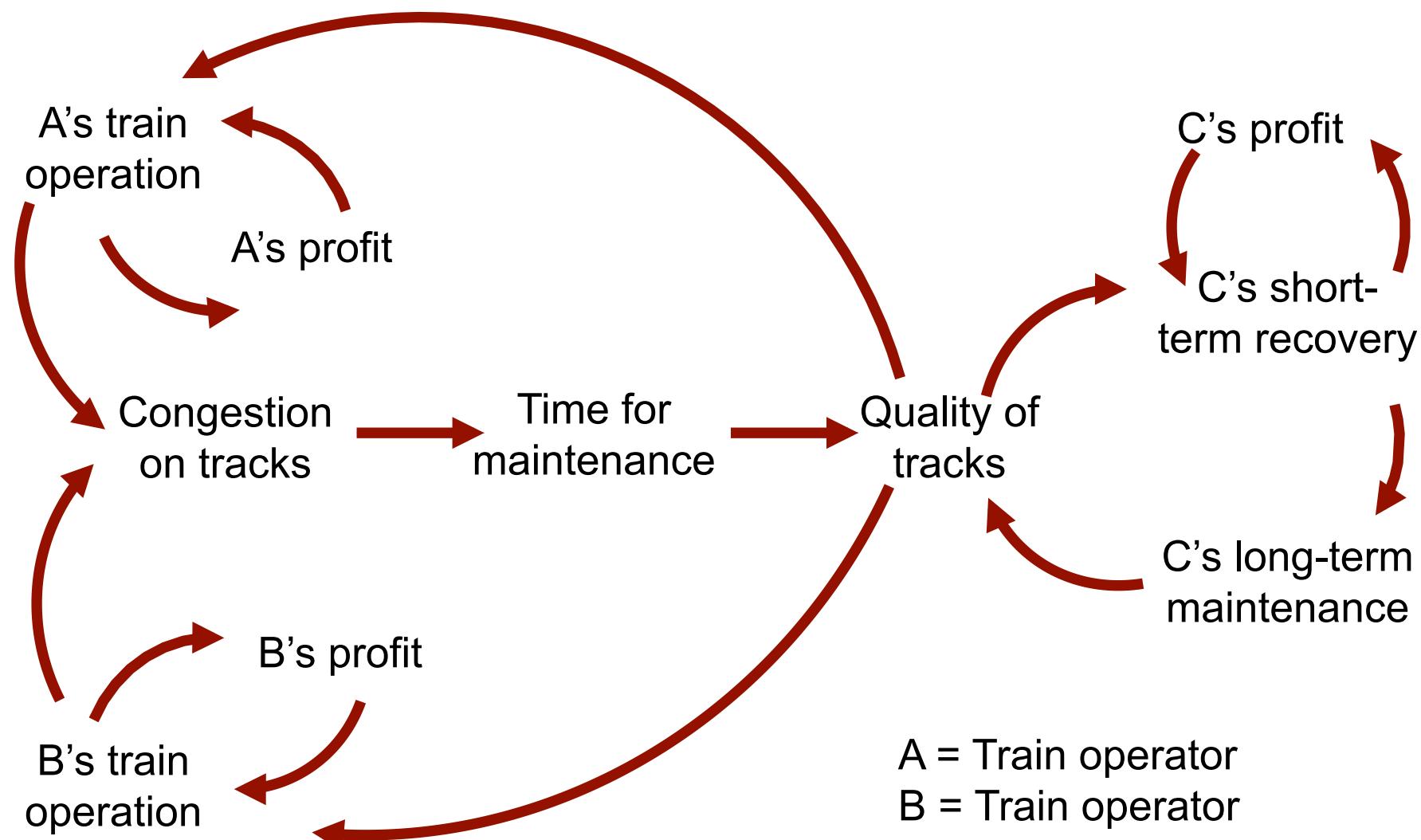


Tragedy of the commons



A dilemma arising from a situation in which multiple stakeholders, acting independently and rationally consulting their own self-interest, will ultimately deplete a shared limited resource, even when it is clear that it is not in anyone's long-term interest for this to happen

Tragedy of the commons



A = Train operator
B = Train operator
C = Maintenance contractor

Findings

- Essential to adequately govern the “common resource” (infrastructure) to avoid a tragedy of the commons dilemma
- High willingness from Transport Administration to satisfy operators’ demands on high intensity of train operation
- Important to also ensure
 - Allocation of sufficient time slots for maintenance
 - Incentives to conduct long-term maintenance rather than short-term recovery



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Remaining questions

- Risk governance of CIs is shaped by contracts
 - » How do we influence incentives in a feasible way?
- Goal conflicts and trade-offs are inevitable
 - » How do we strike the balance between short-term and long-term goals?
 - » How do we satisfy both local and global demands?



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