

Hailing a Taxi on the Web of Needs

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In cooperation with



Austrosoft® WEISS Datenverarbeitung Ges.m.b.H.



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Forschungsgesellschaft

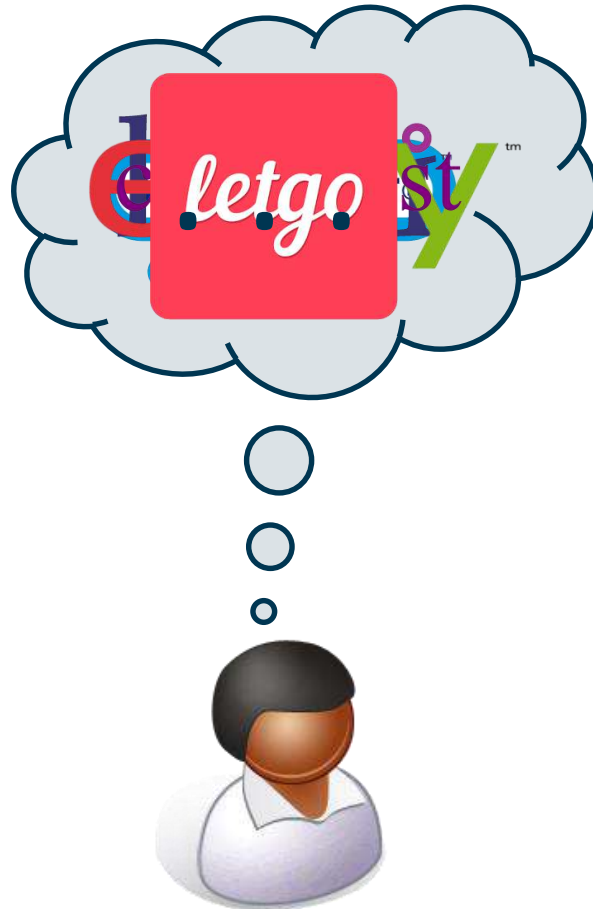
Web of Needs



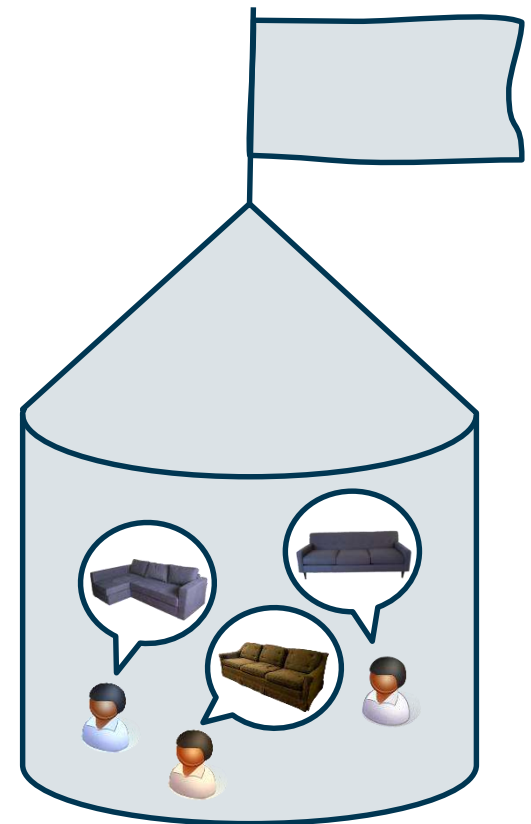
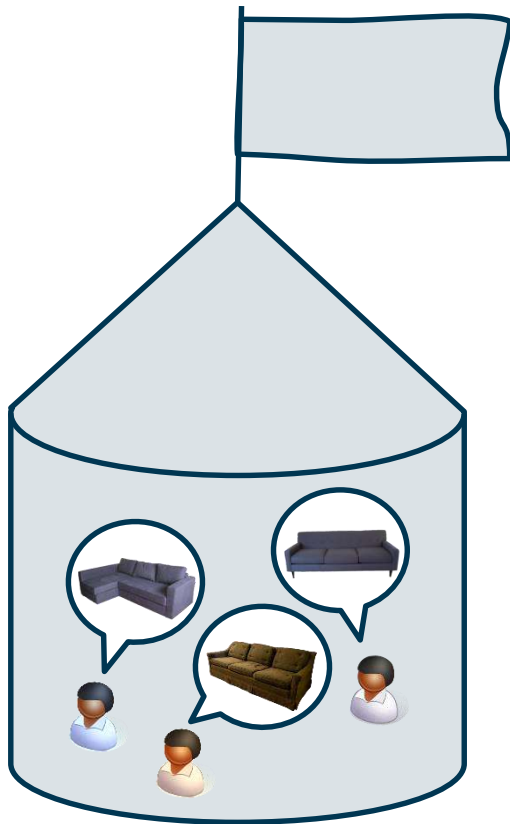
Sources: <https://flic.kr/p/4tfQhX>, <https://flic.kr/p/8vxt7b>, <https://flic.kr/p/7eQ33g>, <https://flic.kr/p/7S9c2j>

The centralized solution

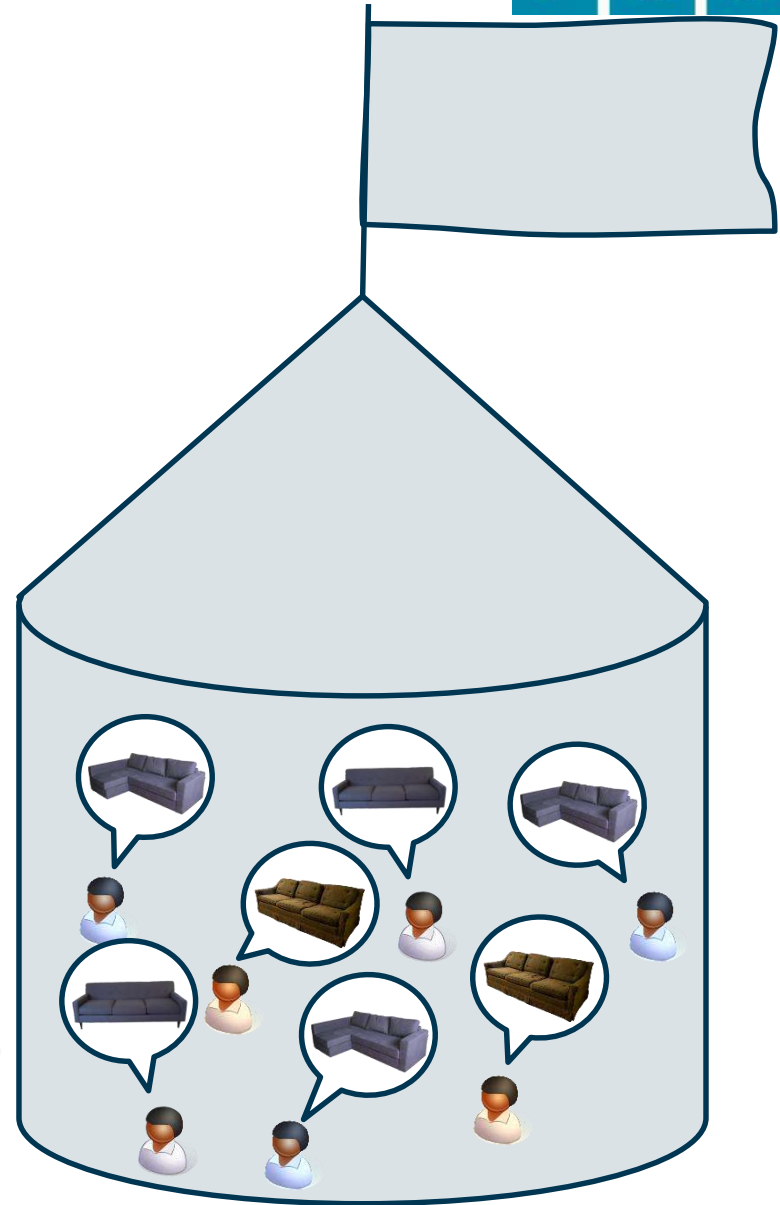




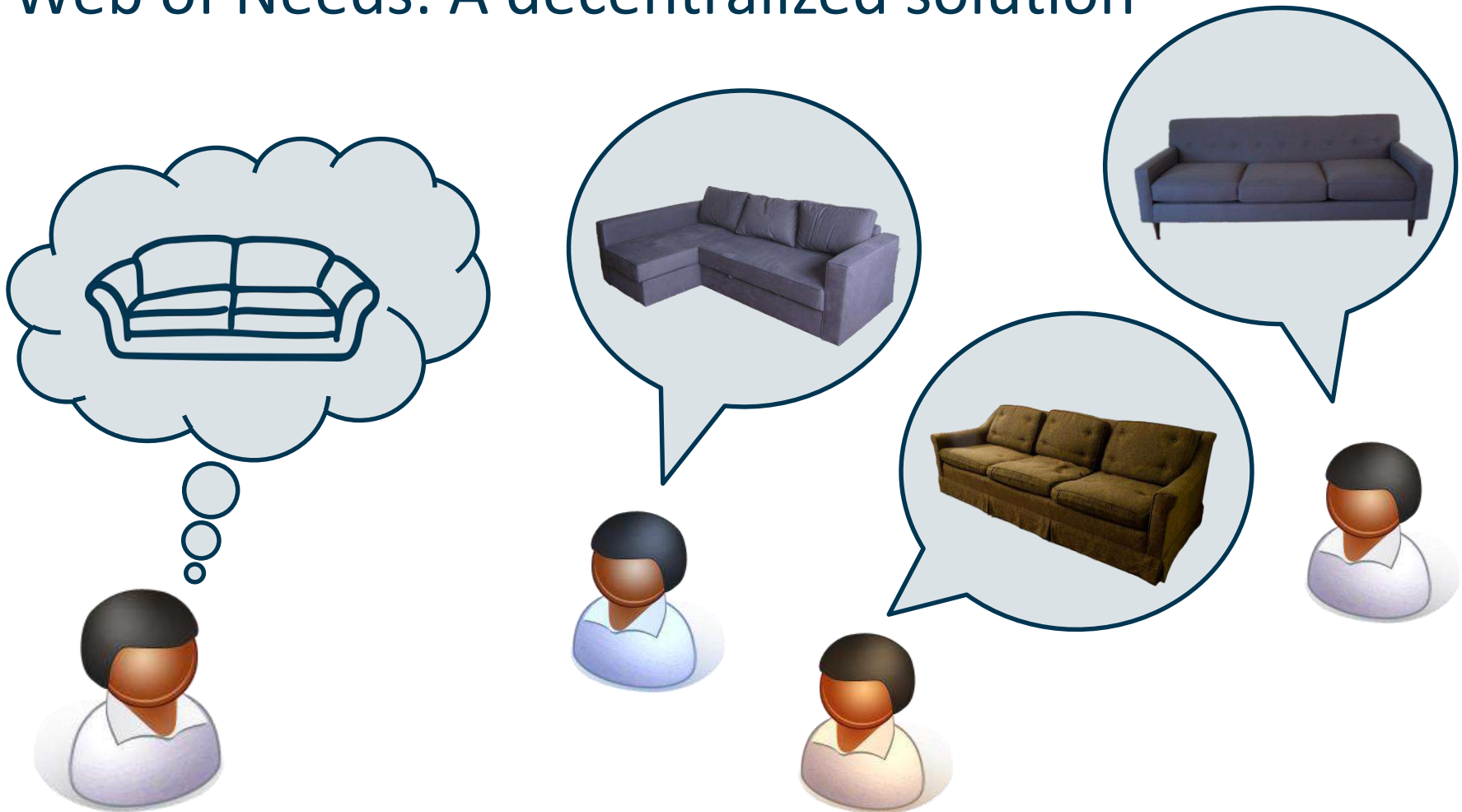
Multi-homing



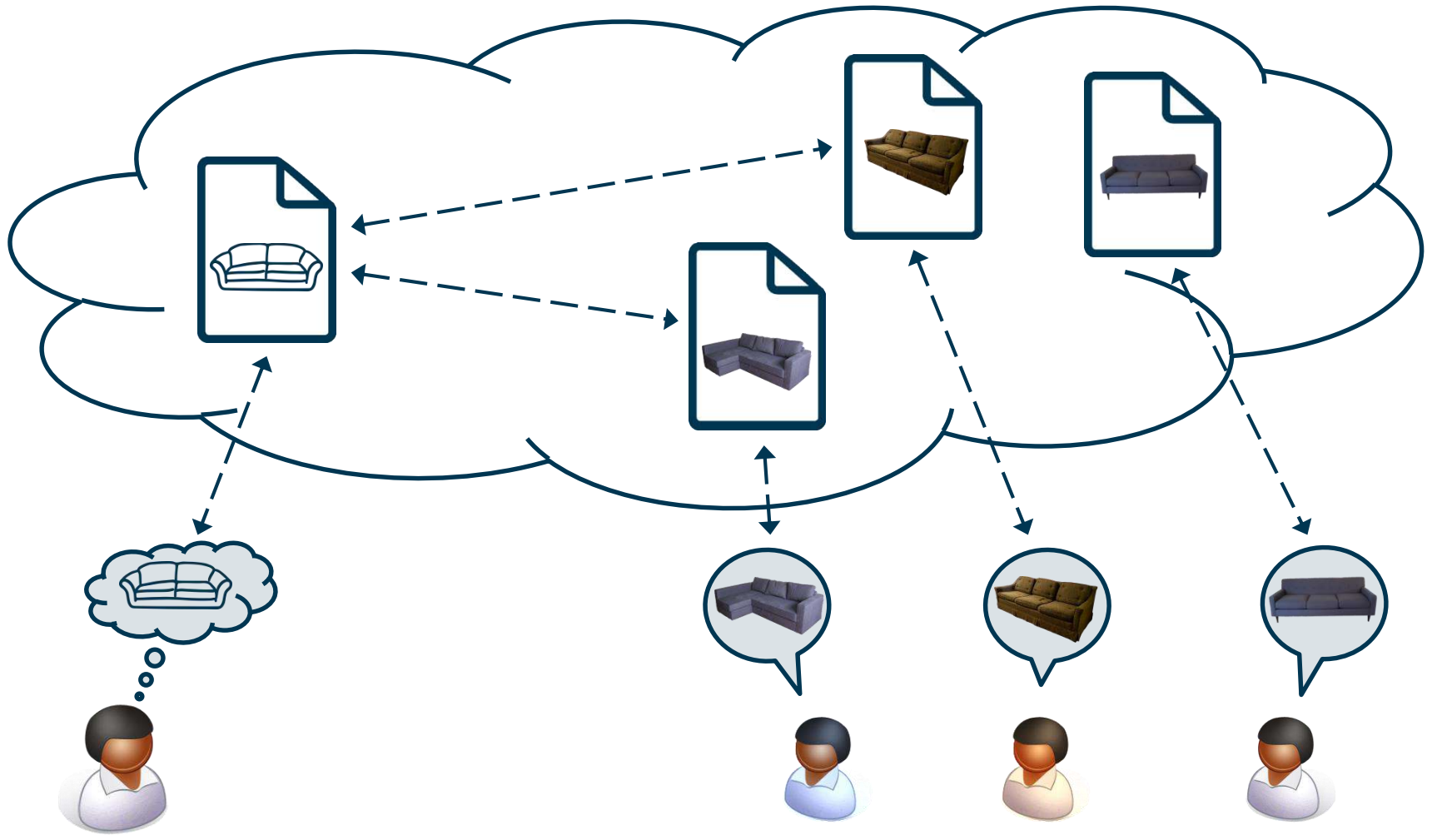
Winner-take-all



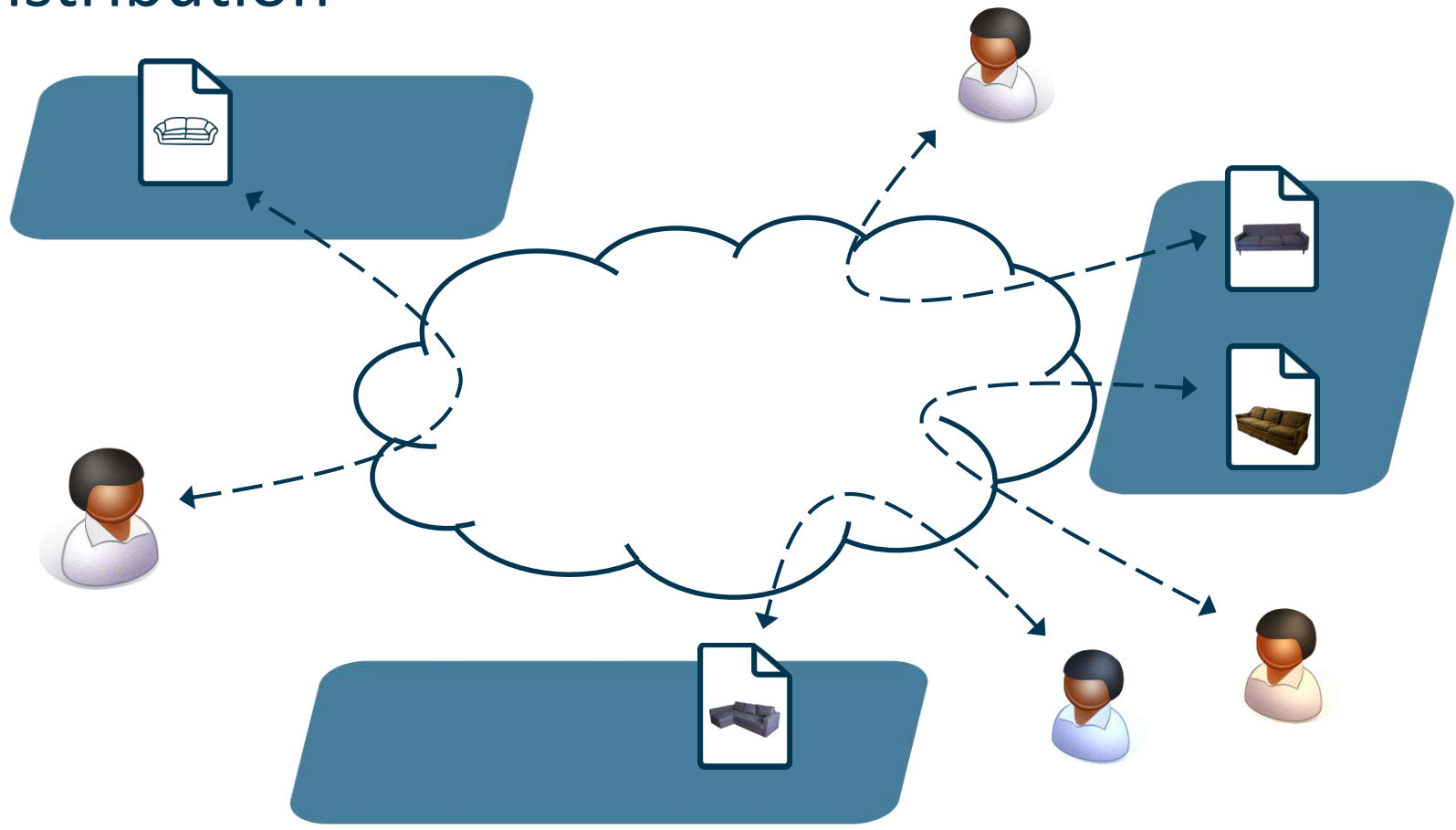
Web of Needs: A decentralized solution



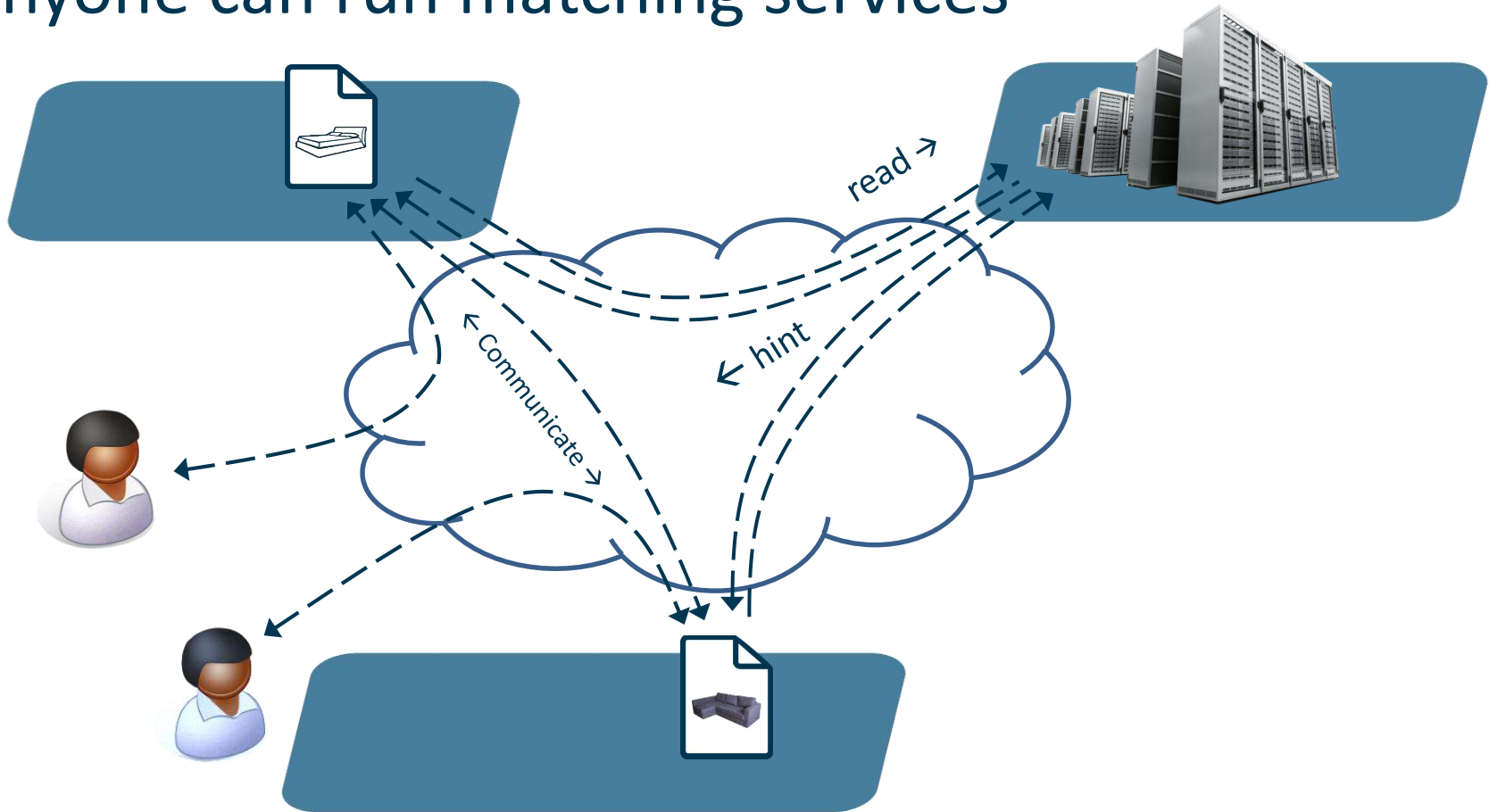
Sources: <https://flic.kr/p/4tfQhX>, <https://flic.kr/p/8vxt7b>, <https://flic.kr/p/7eQ33g>, <https://flic.kr/p/7S9c2j>



Distribution



Anyone can run matching services

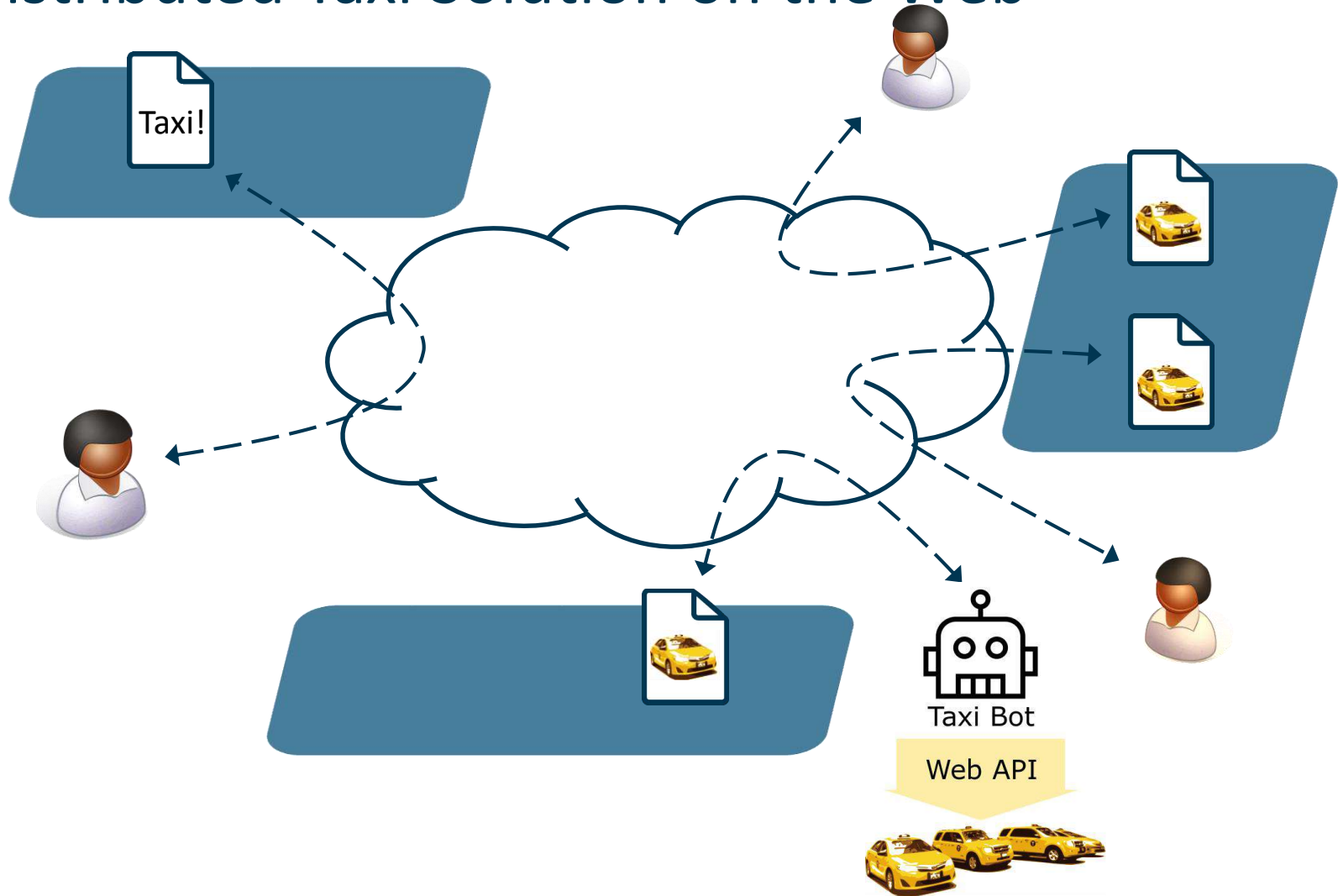


Distributed Taxi Solution on the Web

Web API



Distributed Taxi Solution on the Web



Information requirements (SHACL)



Pick-up location and time window

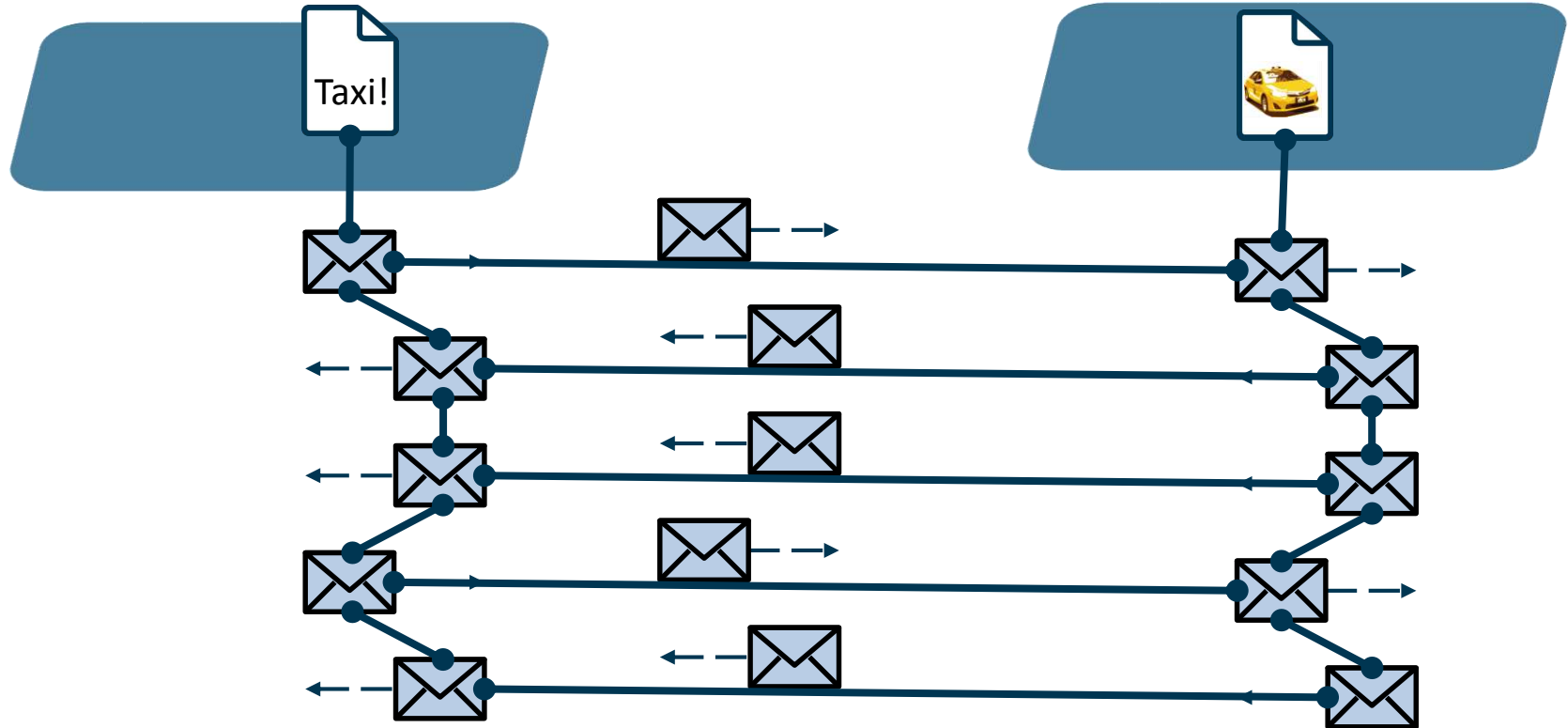


Destination and time window

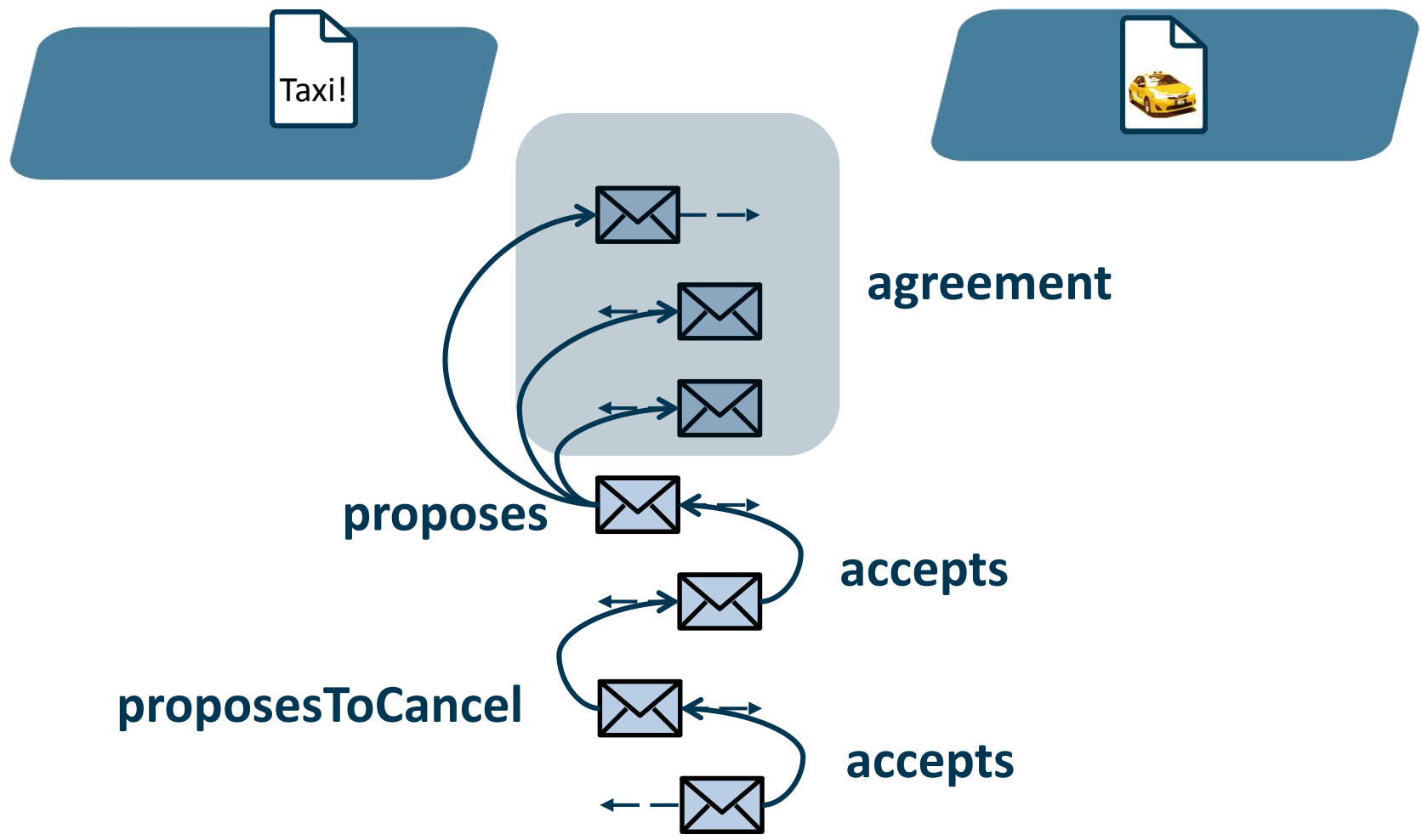


- pick-up
 - location
 - time window
- Destination
 - Location

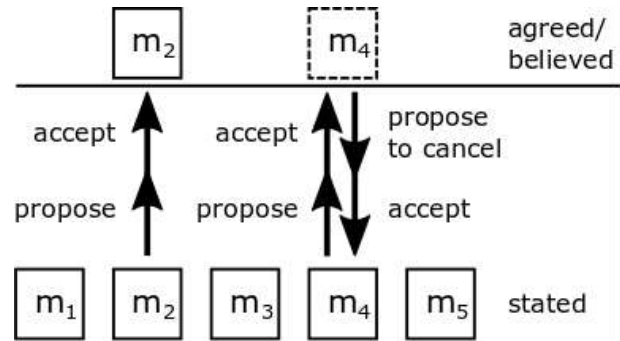
Blockchain Message chain



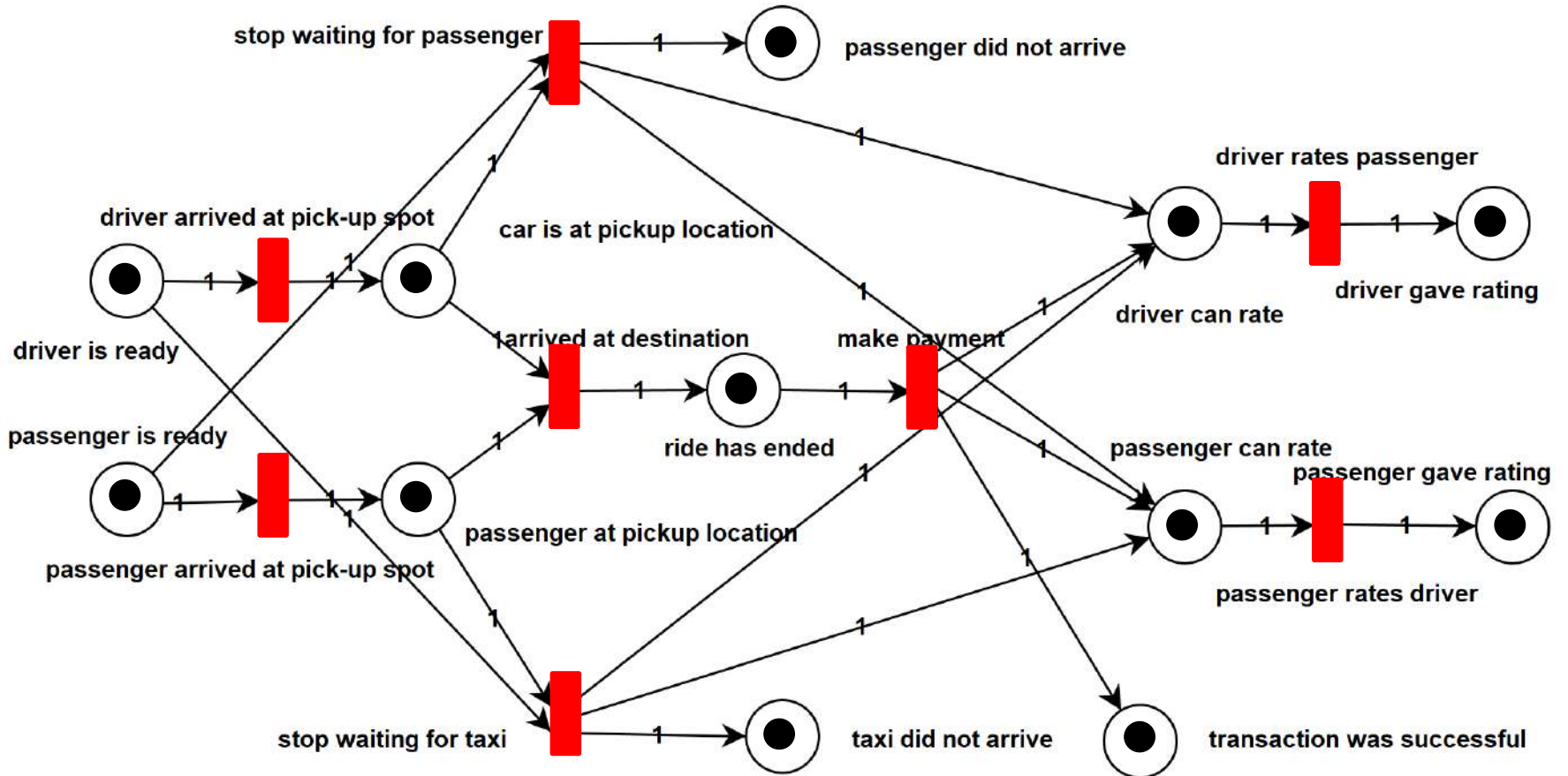
Agreements



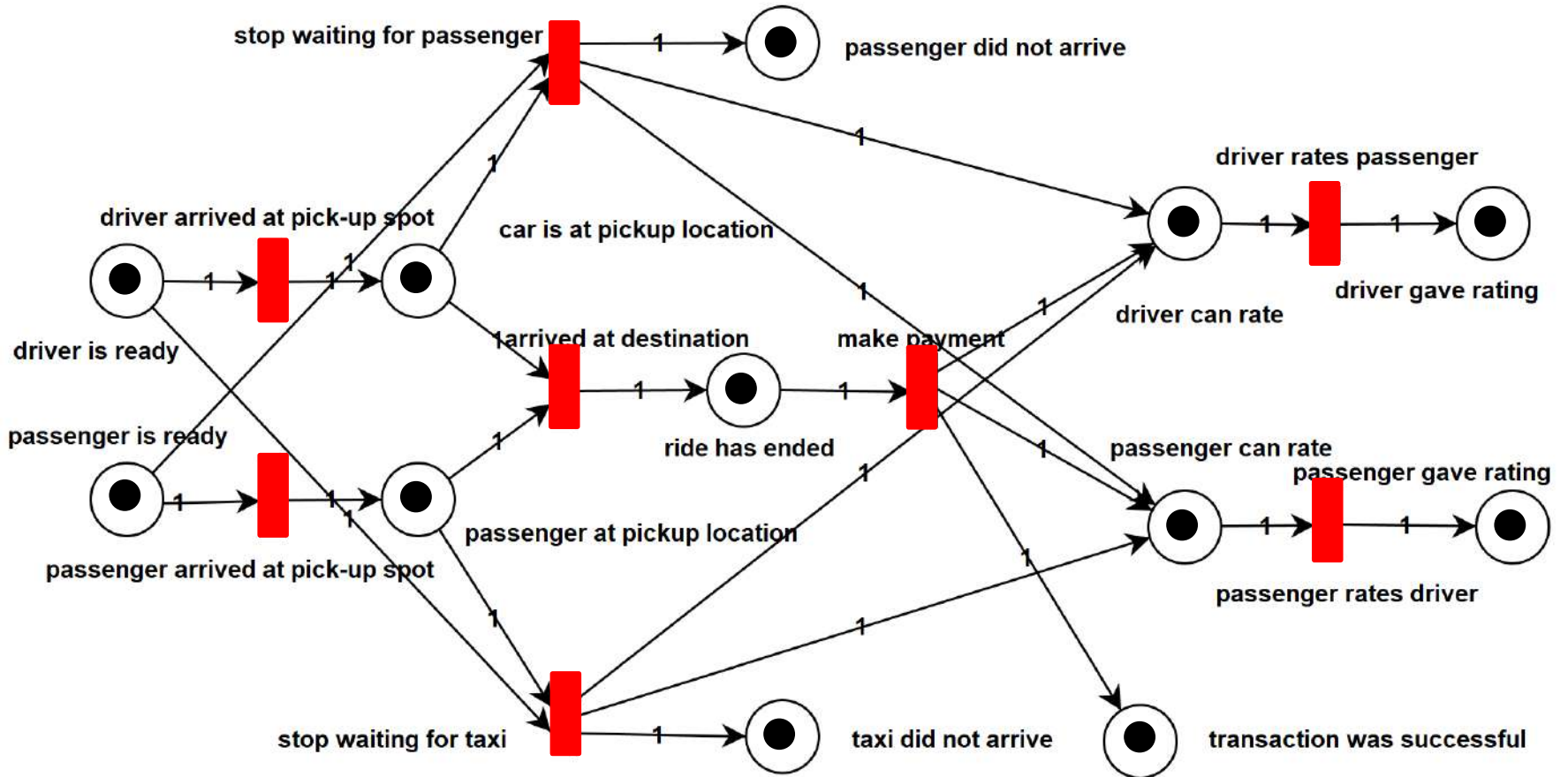
Levels of validity



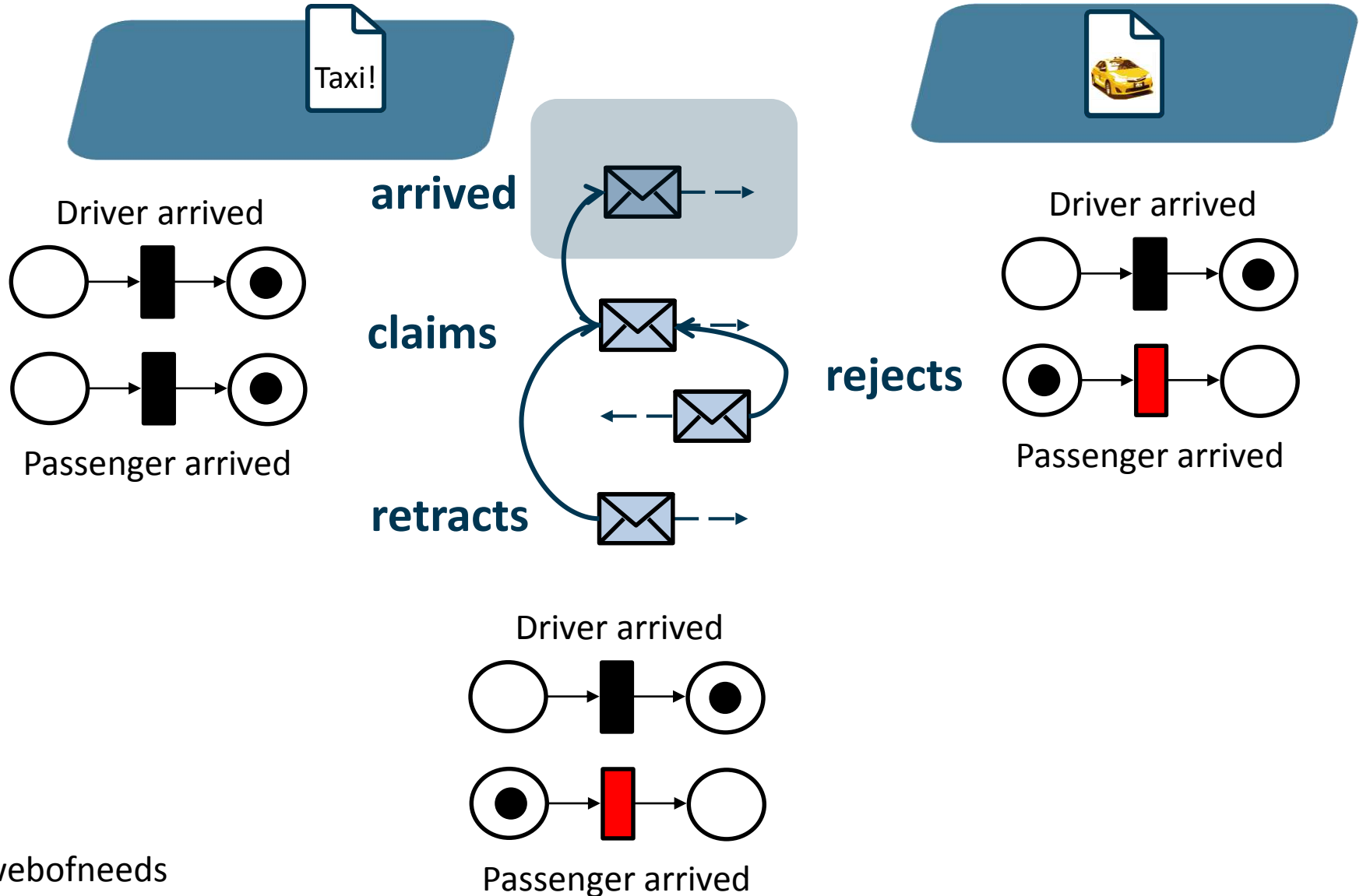
Workflow with Petri nets



Workflow with Petri nets



Agreements/Validity determine Workflow state



Demo: matchat.org

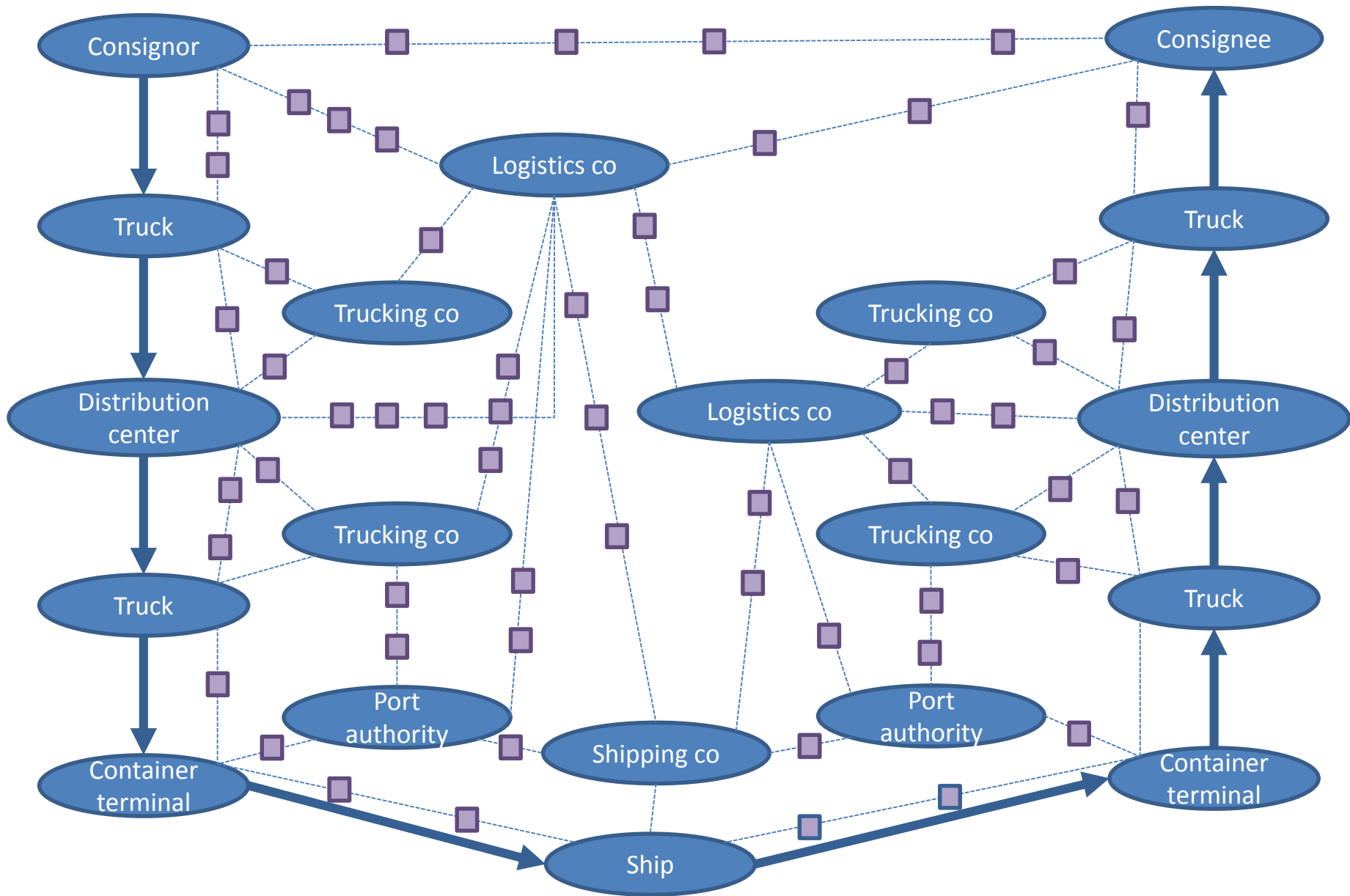
Demo:

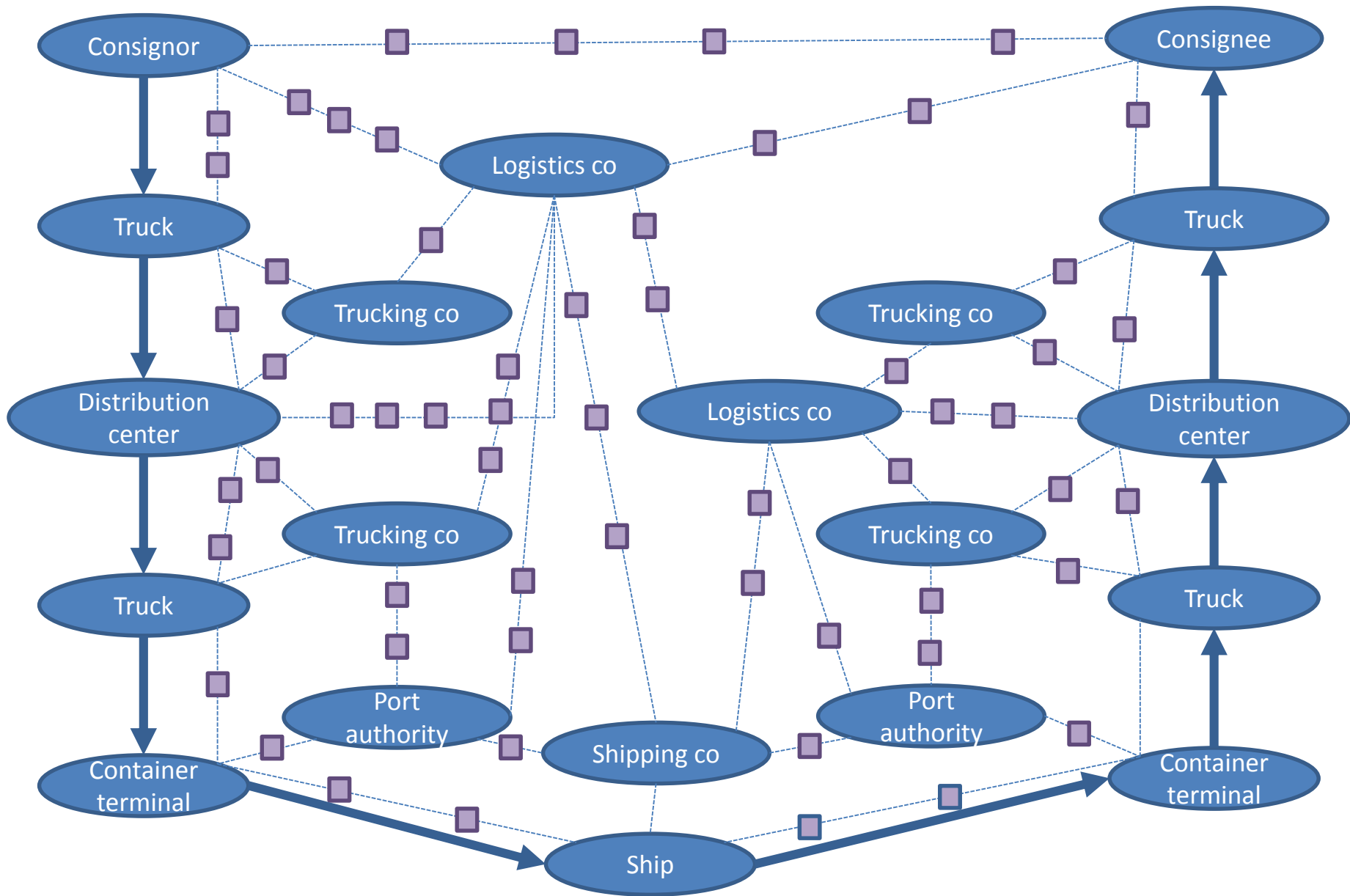
matchat.org

Demo:

matchat.org

Demo: matchat.org





Demo: <https://www.matchat.org/>

Code: <https://github.com/researchstudio-sat/webofneeds>

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