

HACKATHON SUBMISSION

WT PROOF-OF-TRUST

Lisbon, July 5th 2019

PROBLEM STATEMENT

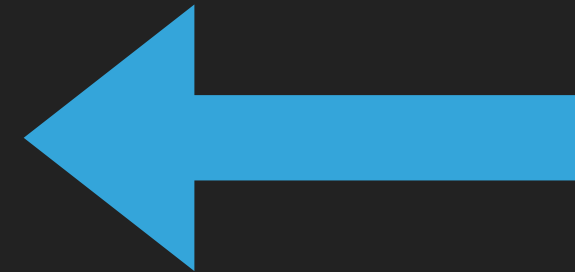
- ▶ Rogue participants are a problem of the travel industry.
- ▶ Dedicated teams in main OTAs tackle the supplier verification
- ▶ How to avoid **scams** it in a **decentralised** environment, while still allowing on-boarding without **gatekeepers**?



MULTIPLE POSSIBLE METRICS

1. Self-provided proofs:

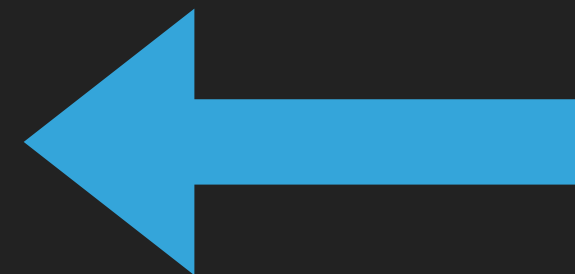
- ▶ DNS-Org.ID binding
- ▶ LIF Deposit



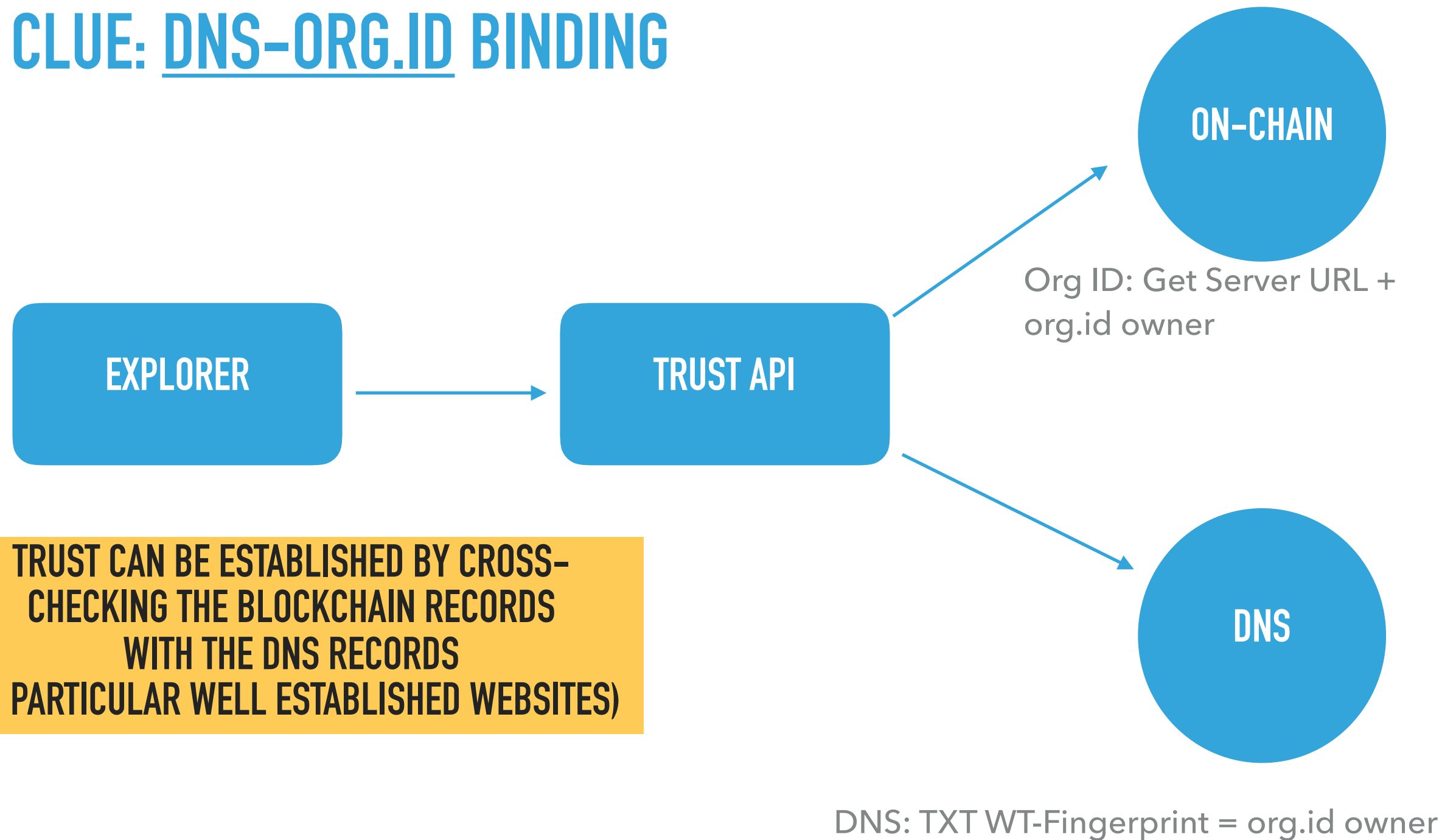
2. Trusted Third-Party reviewer (KYC-like)

3. Trusted customers review

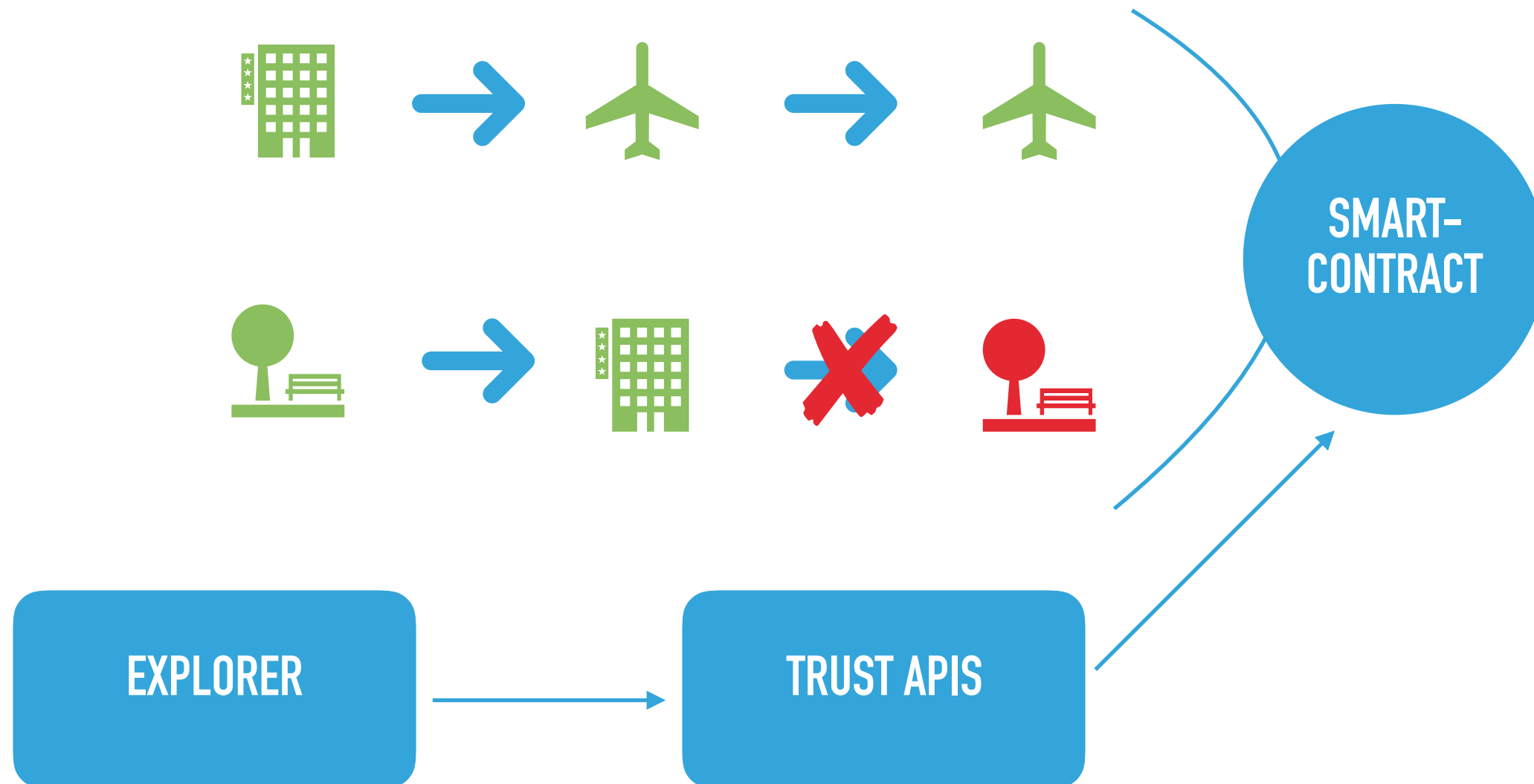
4. Peer-to-Peer trust network



1. CLUE: DNS-ORG.ID BINDING



2. CLUE: P2P TRUST NETWORK



TRUST CAN BE ESTABLISHED BY RELATIVE TRUST LINKS (POSITIVE OR NEGATIVES)

TRUST API: SIGNATURES

- ▶ DNS Clue only:

/clue/dns?organization={Org.ID}

{ 'trusted': true, 'dns_record': 'domain.name' }

- ▶ P2P Trust Clue only:

/clue/p2ptrust?receiver={Org.ID}&sender={self.coinbase}

{ 'trusted': true, 'trusted_since_block': 'block_number' }

- ▶ Combined:

/clues?receiver={Org.ID}&sender={self.coinbase}

{clues: ['dns': .. , 'p2ptrust': ...]}

P2P TRUST: GRAPH DB MODELING

► Objectives:

- Represent relationships between the organisations
- Calculate indirect trust score between 2 parties

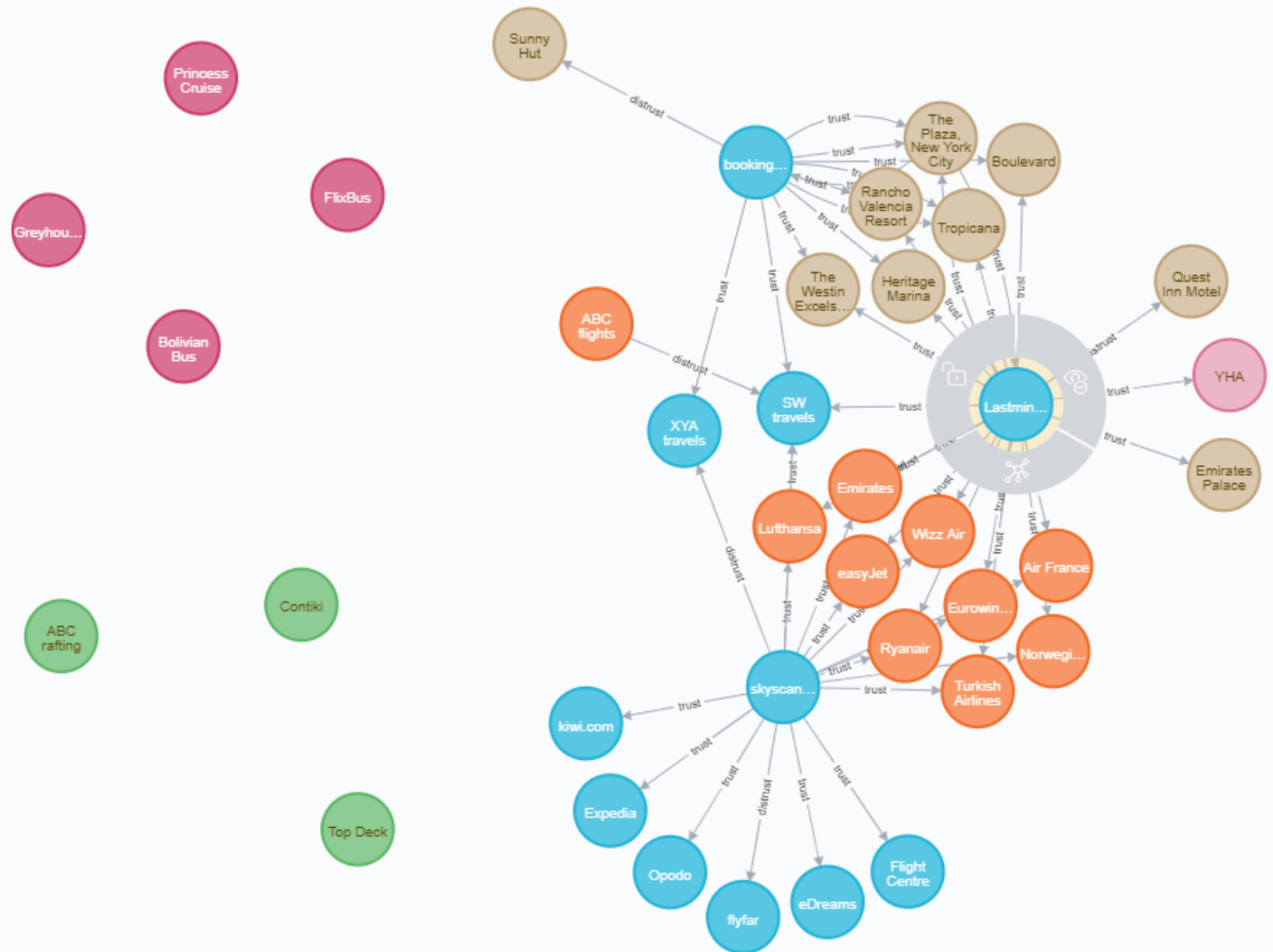
► Advantages:

1. Easy to understand and can explain visually how the trust scores are derived
2. Quickly identify organisations that are isolated and do not have a lot of connections
3. Rank organisations by the level of trust
4. Easily filter the views based on trust score, organisation type as well as other properties
5. Can use adaptors / ETLs to migrate data from existing databases
6. Can use in-built or external algorithm to calculate centrality when relationships change or new organisations are added

WT PROOF-OF-TRUST

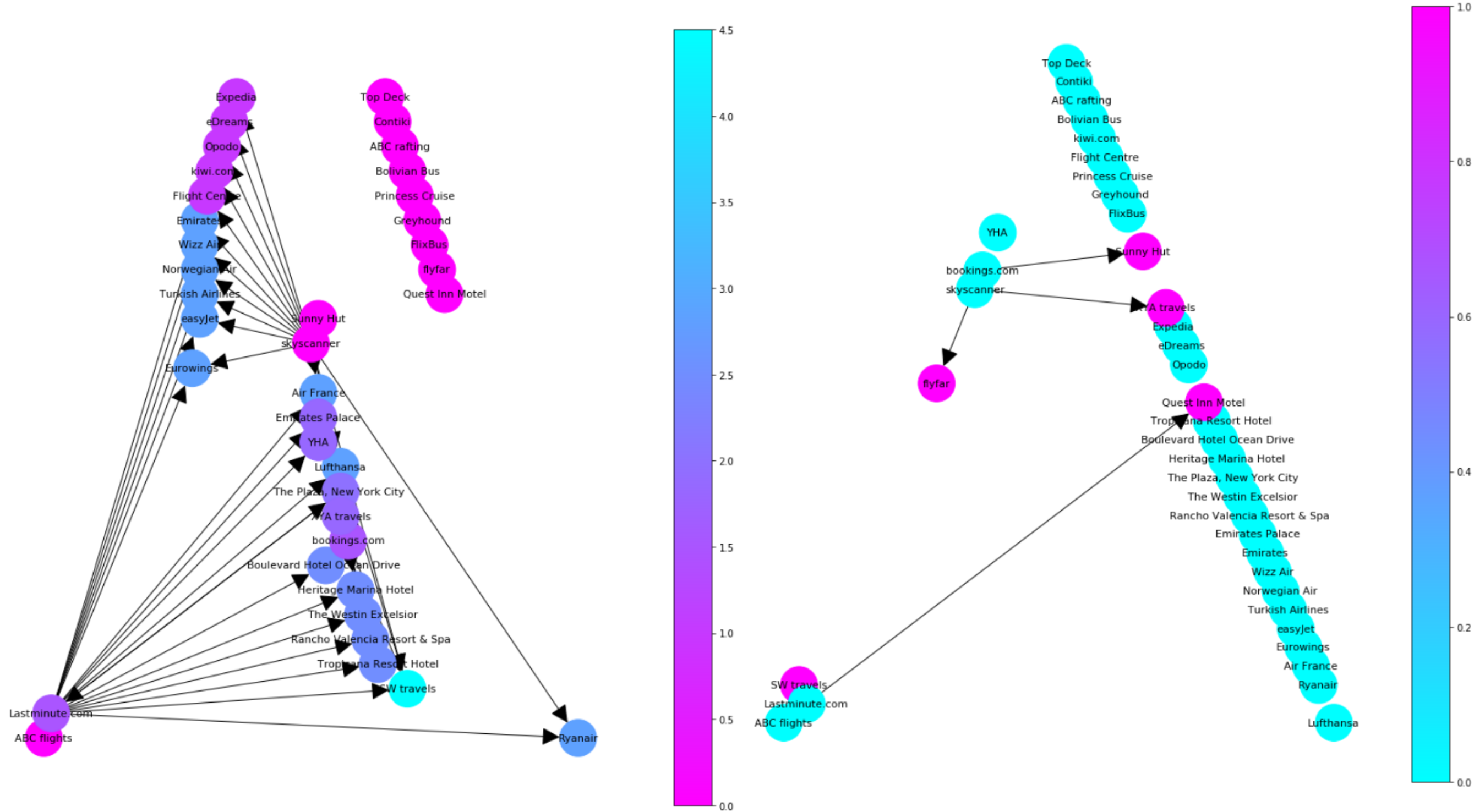
*(52) airline(10) OTA(11) accomodation(10) hotel(9) bus(3) transport(4) cruise(1) tour operator(3) hostel(1)

*(51) distrust(5) trust(46)

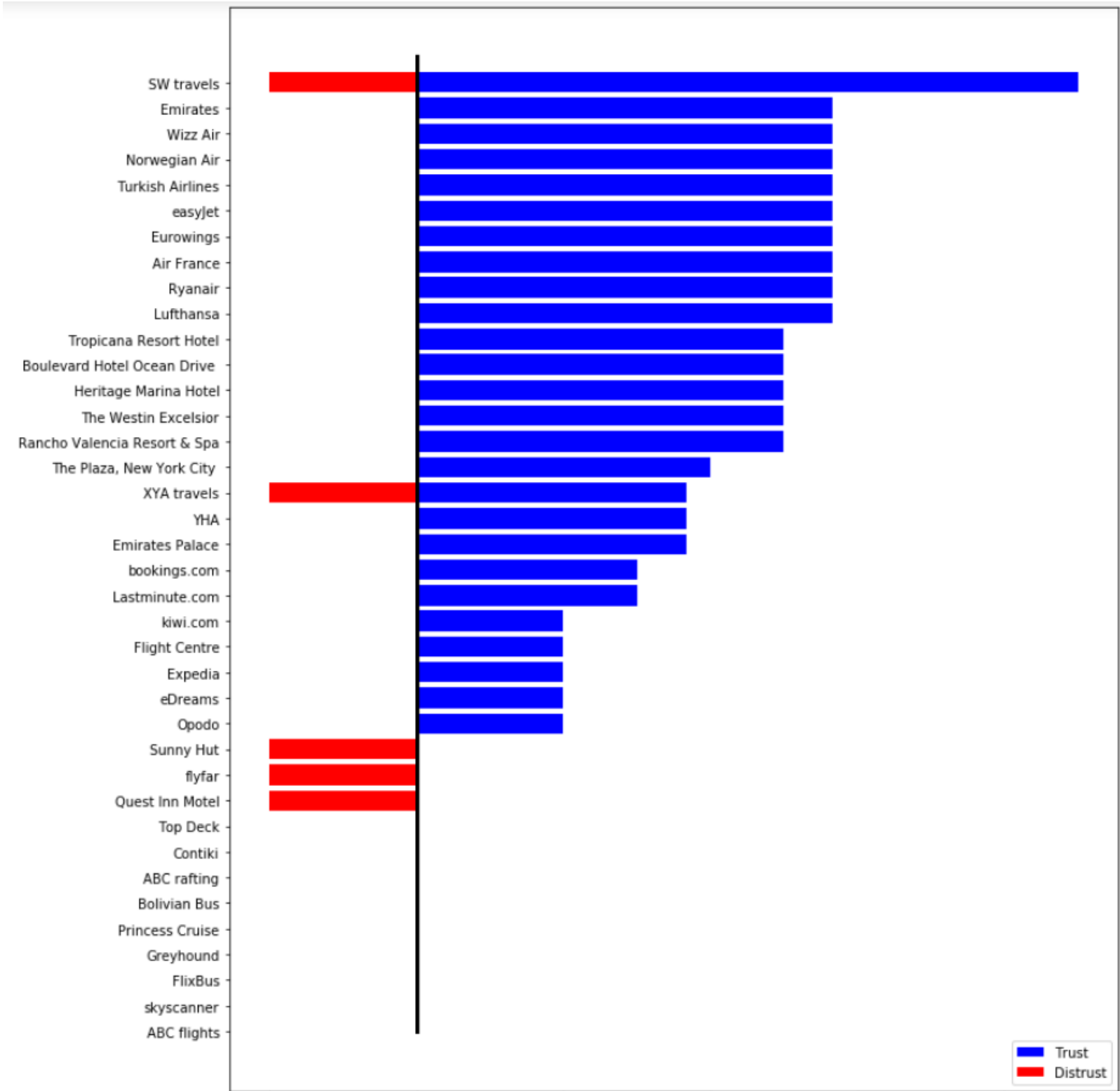


OTA <id>: 19 dns: 111.222.352 est_date: 1/01/2010 location org_type: UK name: Lastminute.com org_ID: 1331 trust_score: 0.8999999761581421 updated_date: 6/06/2019

TRUST VS DISTRUST GRAPHS



REPRESENTATION OF TRUST SCORES



DOCUMENTATION

- ▶ **API:** <https://github.com/AxelAtPeakwork/wt-hackathon-trustcluevalidators>
- ▶ **P2P Trust SC:** <https://ropsten.etherscan.io/address/0x059745f23cc4d942bc1c890e7589f7d3a8a3406d#writeContract>

A high-angle, black and white photograph of a curved concrete bridge deck. The bridge curves from the top left towards the bottom right. A person is walking on the bridge deck, providing a sense of scale. The bridge is surrounded by a massive, textured concrete wall that curves along with it. The sky is a solid, dark grey.

DEMO TIME