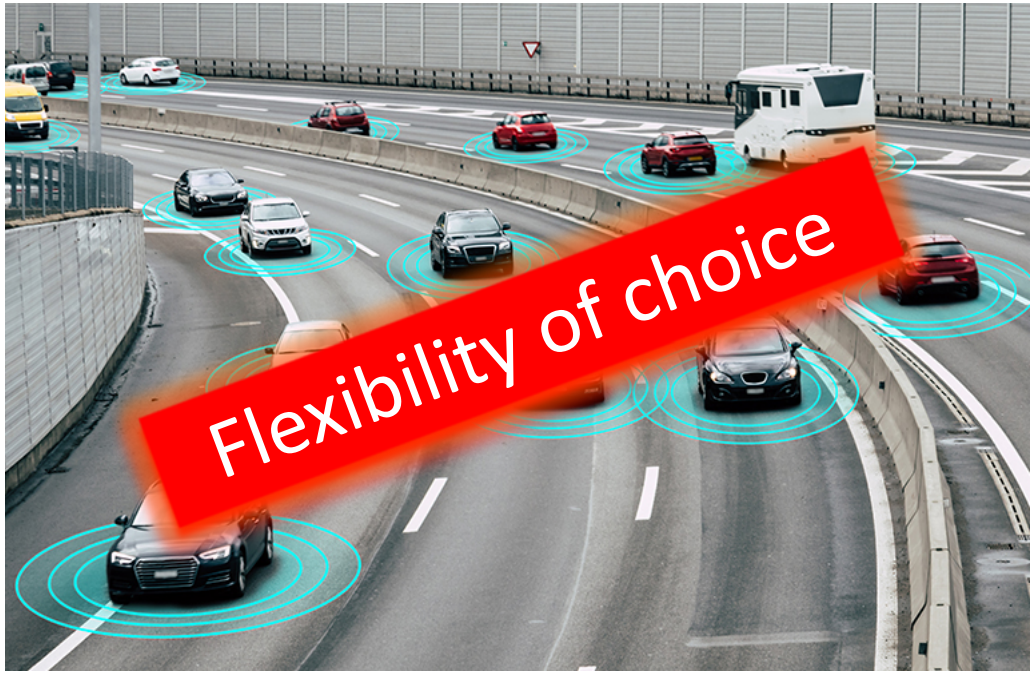
KING'S College LONDON

Accountable Just-in-Time Service Level Agreements with Smart Contracts

Tooba Faisal
Supervisor: Prof. Nishanth Sastry
King's College London

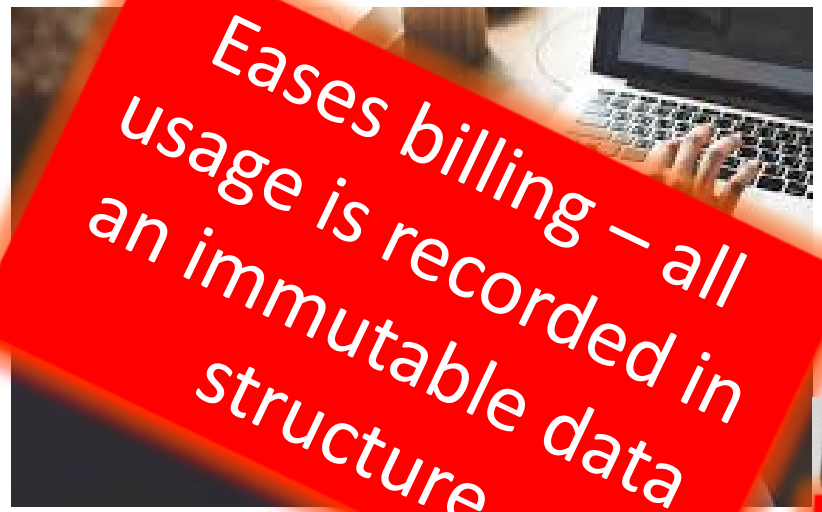


Accountability via SLAs

Just-in-Time Dynamic SLAs

How Smart contracts are helpful?

One standard contract recorded once and executed multiple times



Eases billing – all usage is recorded in an immutable data structure

Minimizes contractual overhead

Automated payments – SLA is violated and affected party gets paid automatically

The Questions

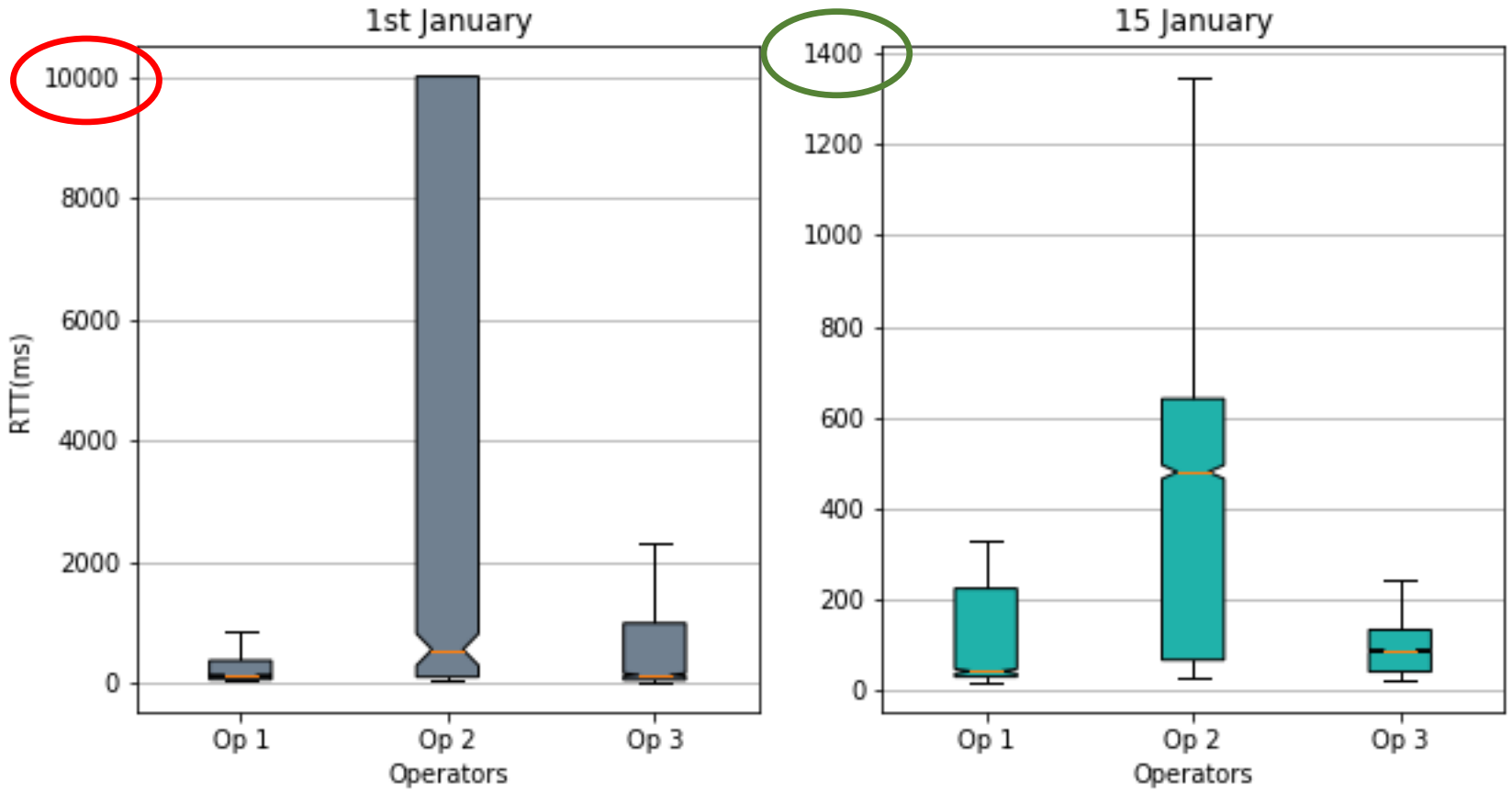
- Do we need flexibility of choice?
- Is it feasible to use smart contracts in a Just-in-Time fashion?

New year’s eve …

Meanwhile in King's College London …

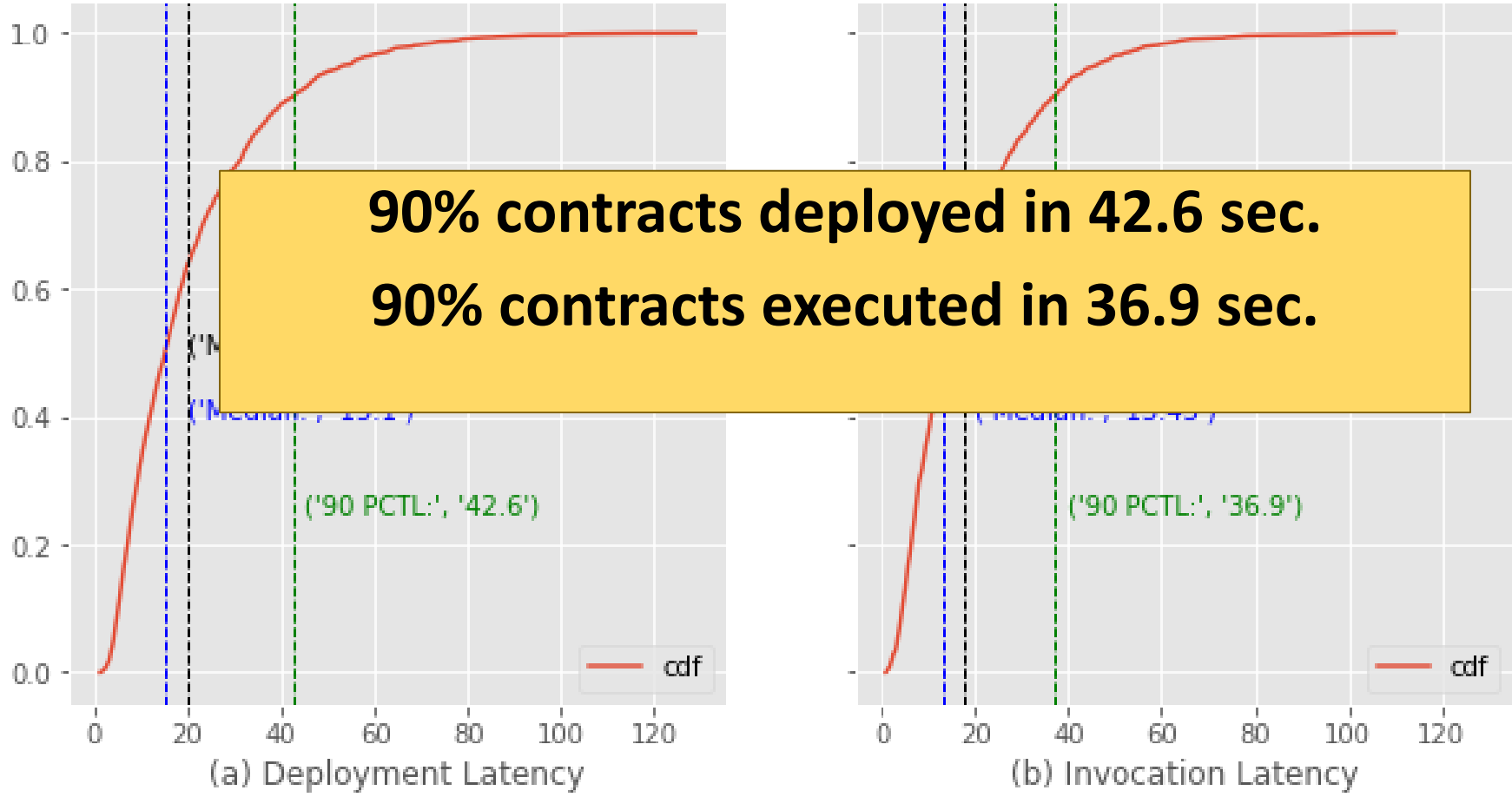
New Year's eve

15th Jan



Today's connection is best-effort connection, which is not suitable for mission-critical applications

Do Smart contracts provide feasible solution?



90% contracts deployed in 42.6 sec.

90% contracts executed in 36.9 sec.

Smart contracts properties

When deployed, every execution is recorded

Deployed once and can be executed several times

No need to run a distributed ledger to keep records, a trusted third party can manage these records centrally

Codes wri… Solidity

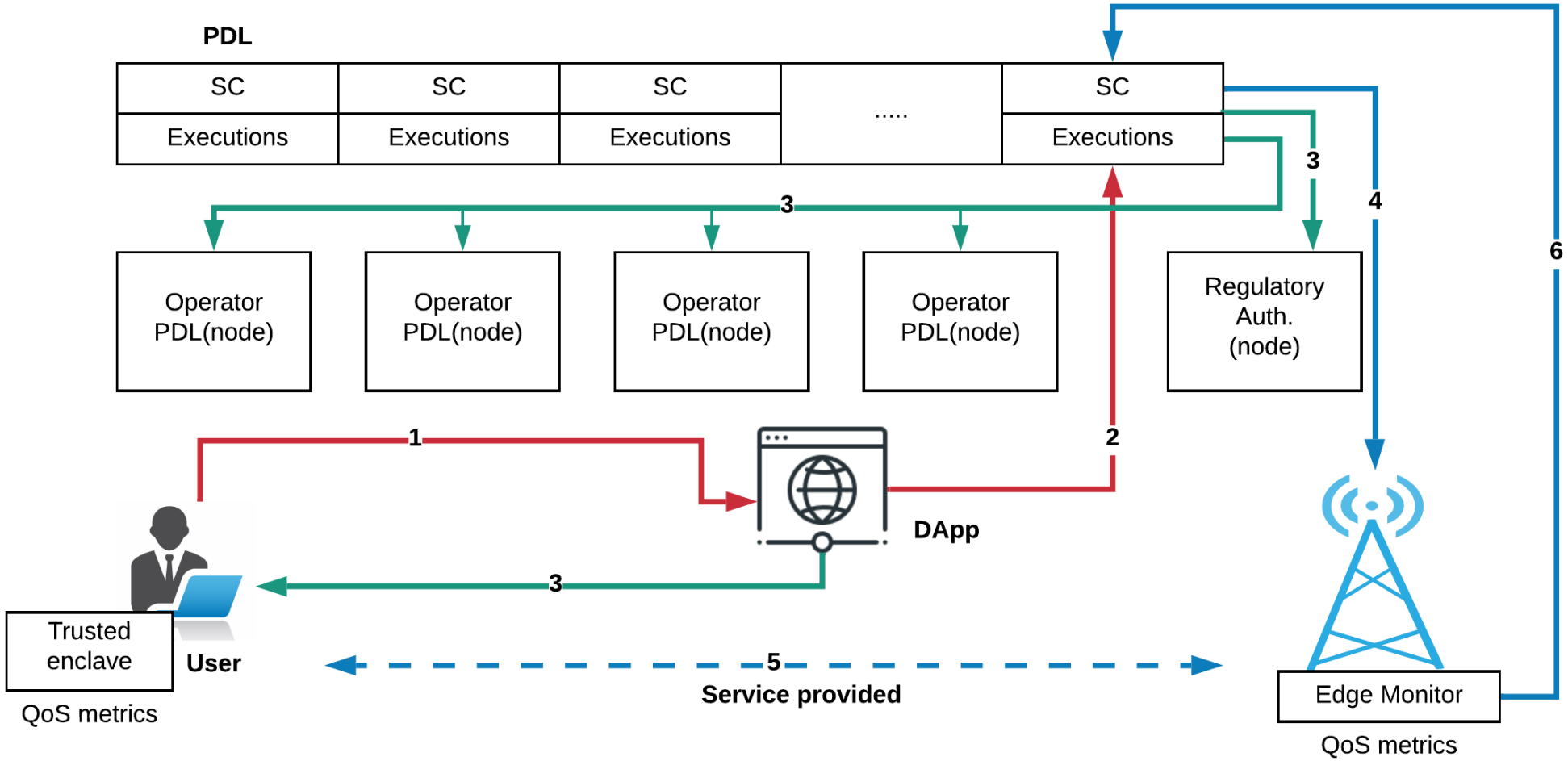
All of the this information can be customized for design

eth…am

HYPERLEDGER

And many more …

Our ETSI Work Item(WI) – PDL 004 Smart Contracts



Smart contract supports:

Accountable SLAs

Minimization of contractual overhead

Contract gets executed before the ink-gets-dry