

ThoughtWorks®

**TECHNOLOGY
RADAR** *SUMMIT*

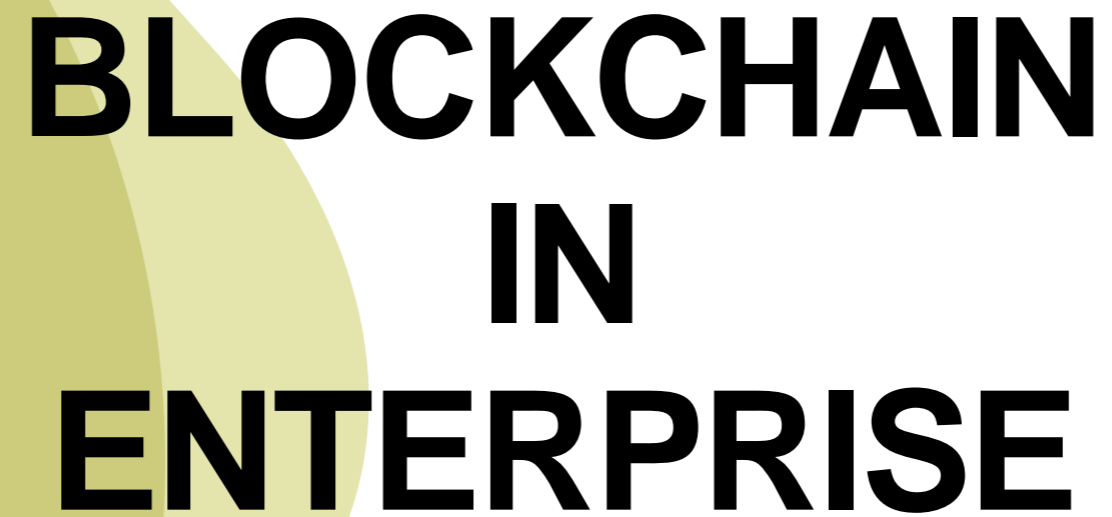
2017 技术雷达峰会

洞察构建未来的技术和趋势

5.13@Beijing

The logo for ThoughtWorks, featuring the company name in a bold, sans-serif font. The 'W' is stylized with a gap in the middle. The text is black and positioned at the top of the slide.




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The main title of the presentation, 'BLOCKCHAIN IN ENTERPRISE', is written in large, bold, black, uppercase letters. It is centered on the slide and partially overlaid by a decorative graphic of overlapping green circles on the left side.

**BLOCKCHAIN
IN
ENTERPRISE**

刘尚奇

AGENDA

-  **CHOOSE YOUR TECH**
-  **BUILD YOUR ARCHITECTURE**
-  **IMPROVE YOUR DEPLOYMENT**

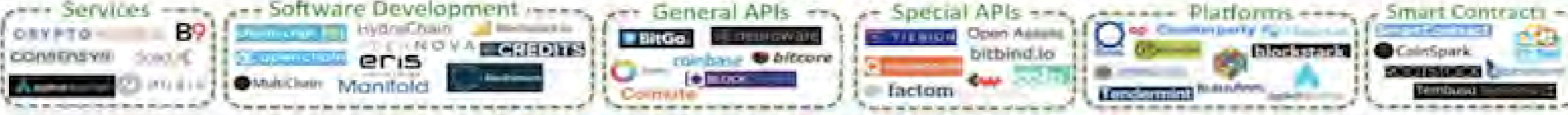
CHOOSE YOUR TECH

Choose your blockchain tech on your business

APPLICATIONS & SOLUTIONS



MIDDLEWARE & SERVICES



INFRASTRUCTURE & BASE PROTOCOLS



WHAT NEED TO CONSIDER WHEN CHOOSING BLOCKCHAIN TECH





Confusing a limited, foundation-level protocol with a complete business solution

——<Gartner: Top 10 Mistakes in Enterprise Blockchain Projects>



FIND YOUR BUSINESS PROBLEM FIRST

典型客户

需求面向的典型客户是什么样的？
他们的故事是怎样的？诉求背后的
内在和外在原因是什么？

客户体验地图

需求面向的典型场景是什么样的？
在这个场景中现在客户的体验是什
么样的？

业务流程地图

为了满足客户在这个场景中的体验，
我们的运营流程是怎样的？每个环
节上都发生了什么？产生了什么信
息？



FIND YOUR BUSINESS PROBLEM FIRST

商业接触点

在典型用户的整体体验中有哪些点和商业模式产生交互？

体验心情地图

在典型用户的整体体验中的可定义目标是什么？为了达到这个目标现在体验者做了哪些事，经历了哪些心情变化？哪些地方可以改进？

设计挑战

哪些改进是需要被设计的？它们的优先级是怎样的？



KEY BIZ INDICATOR



Tx Throughput



Tx Confirmation Time

HOW ABOUT BLOCKCHAIN RELATED?



~~Crypto Algorithms~~



~~P2P Communicating~~



~~Interoperability~~

HOW ABOUT BLOCKCHAIN RELATED?



Consensus Algorithms



UTXO vs Account model



Smart Contract

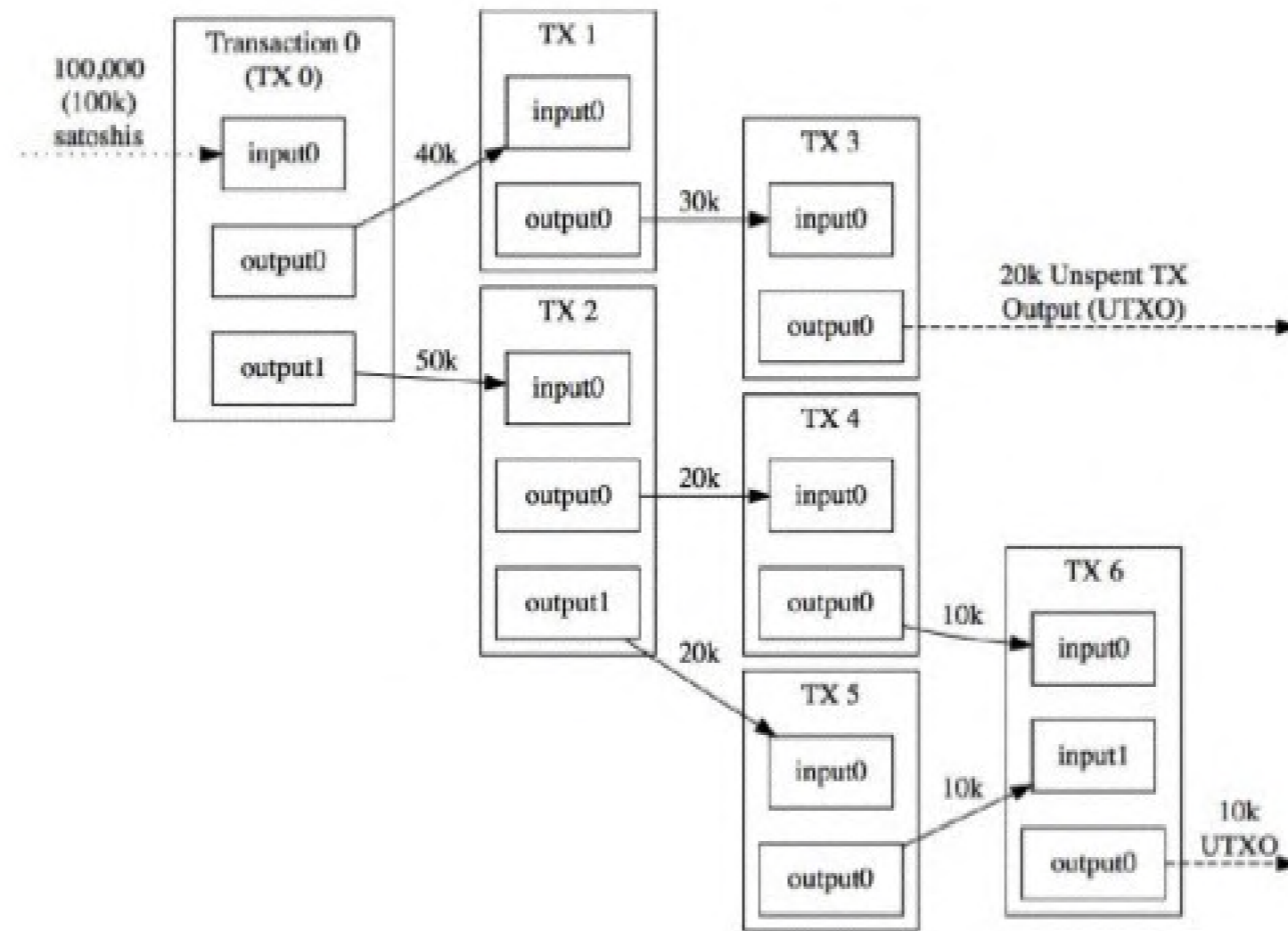
DISTRIBUTED CONSENSUS

A.K.A. What do we eat for lunch?

mechanism	decentralized control	low latency	flexible trust	asymptotic security
proof of work	✓			
proof of stake	✓	maybe		maybe
Byzantine agreement		✓	✓	✓
Tendermint	✓	✓		✓
SCP (this work)	✓	✓	✓	✓

UTXO VS ACCOUNT MODEL

Transactions



SMART CONTRACT



BLOCKCHAIN IN TECH RADAR

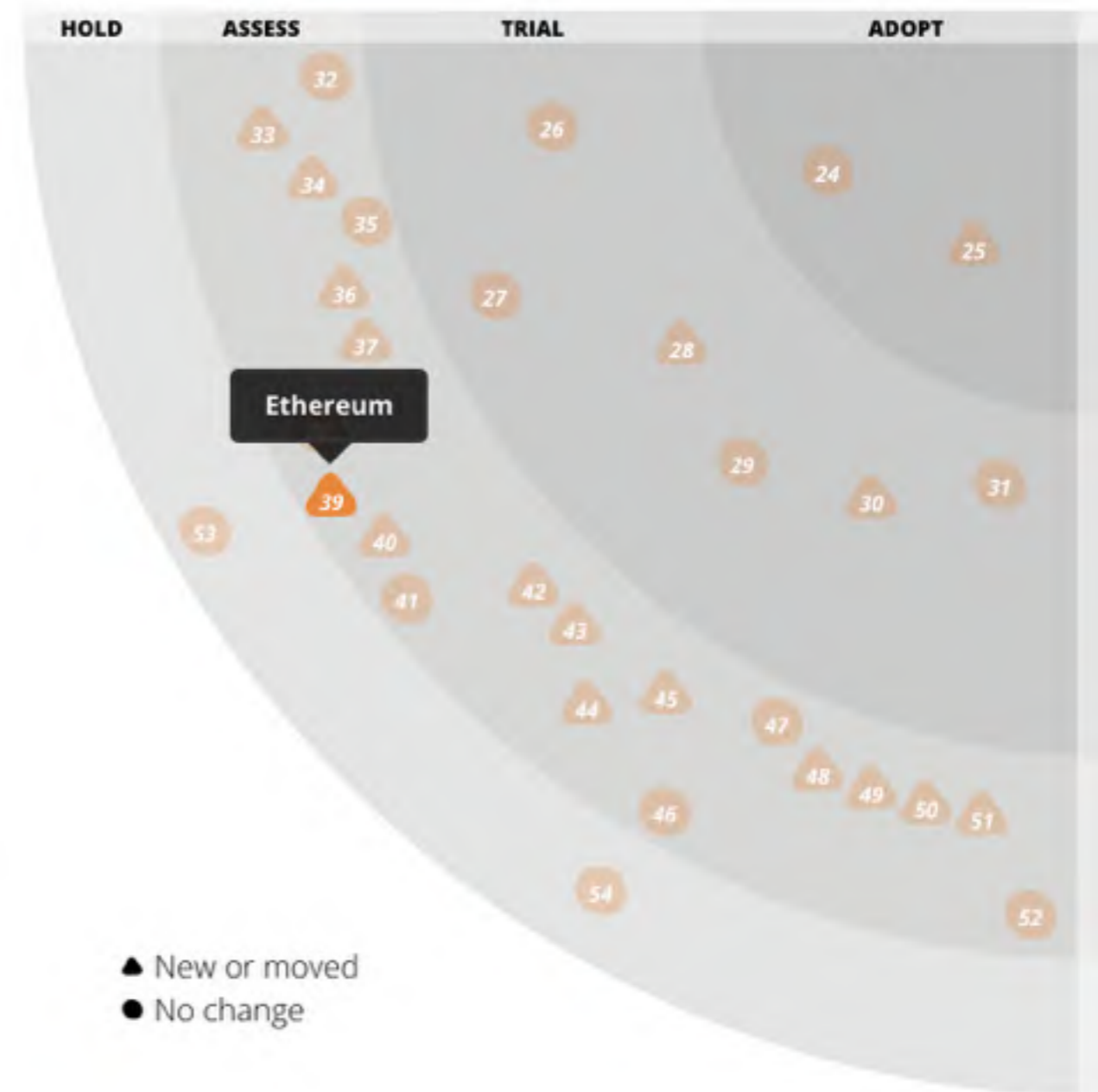
37. DataStax Enterprise Graph new

38. Electron

39. Ethereum

The hype seems to have peaked for blockchains and cryptocurrencies, as evidenced by the slowdown of previous firehose-scale announcements in this area, and we expect some of the more speculative efforts to die out over time. One of the blockchains, [Ethereum](#), while not universally popular among diehard blockchain aficionados, appears in increasing numbers in new initiatives. Ethereum is a public blockchain with a built-in programming language allowing developers to build "smart contracts", which are algorithmic movements of ether (the Ethereum cryptocurrency) in response to activity happening on the blockchain. R3CEV, the consortium building blockchain tech for banks, built its first proofs of concept on Ethereum. Ethereum has been used to build a distributed autonomous organization (DAO)—one of the first "algorithmic corporations"—although a recent heist of [\\$150 million in the ether](#) demonstrates that the blockchains and cryptocurrencies are still the Wild West of the technology world.

[History](#)



Unable to find something you expected to see? Your item may have been on a [previous radar](#) »

BLOCKCHAIN IN TECH RADAR

40. Hyperledger new

Hyperledger is a platform built around blockchain technologies. It consists of a blockchain implementation named Fabric and other associated tools. Disregarding the hype surrounding blockchain, our teams have found it easy to get started with these tools. The fact that it is an open source platform supported by the Linux Foundation also adds to our excitement about Hyperledger.

[History](#)

41. IndiaStack

42. Kafka Streams new

43. Keycloak new

44. Mesosphere DCOS

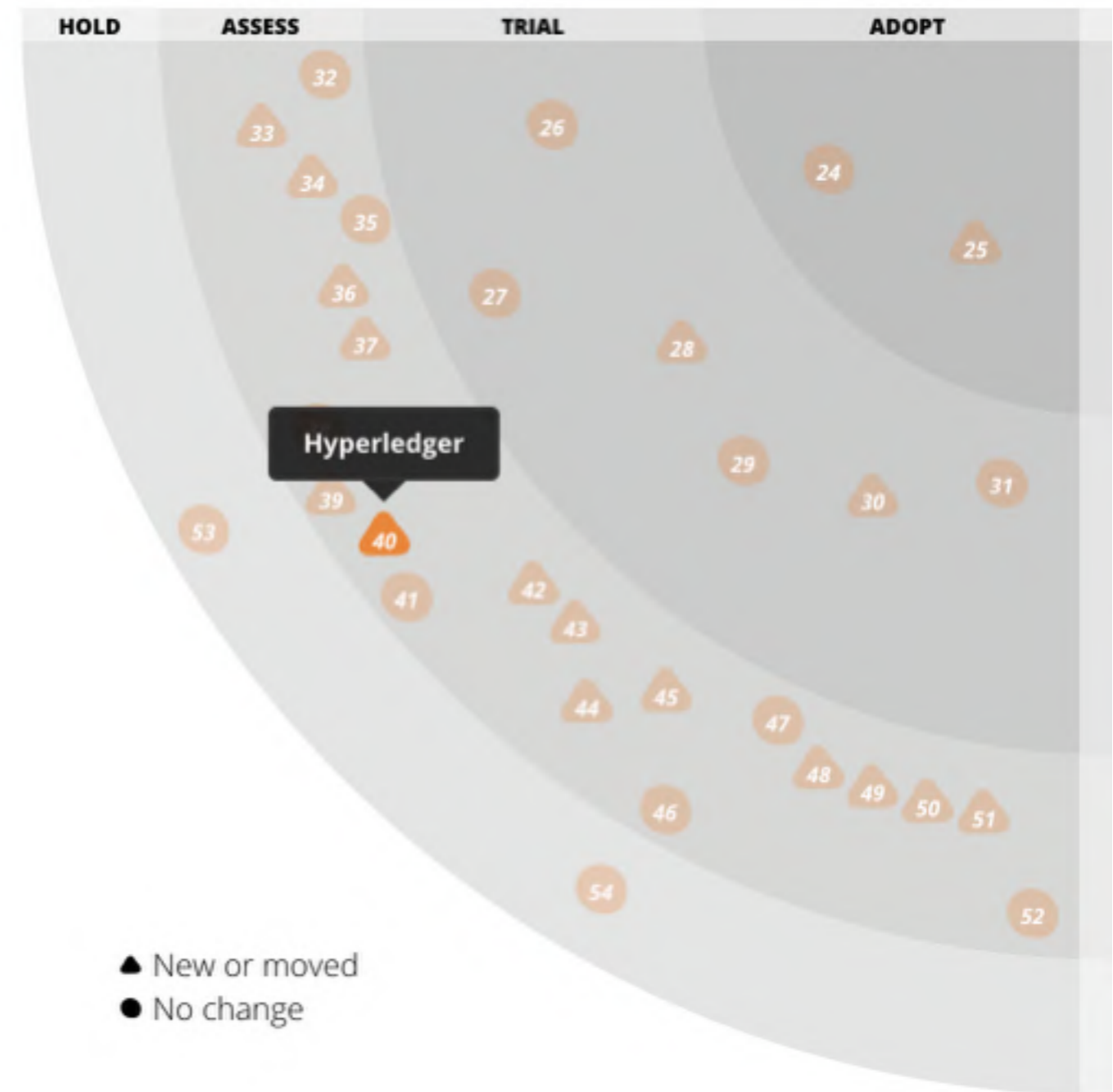
45. Mosquitto new

46. Nuance Mix

47. OpenVR

48. PlatformIO new

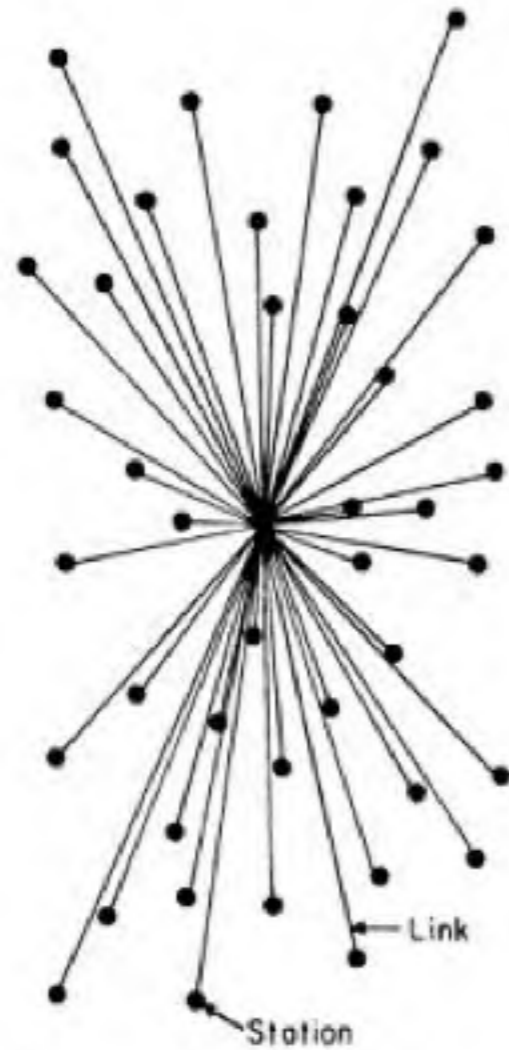
49. Tango new



BUILD YOUR ARCHITECTURE

Build your DApp on top of independent services

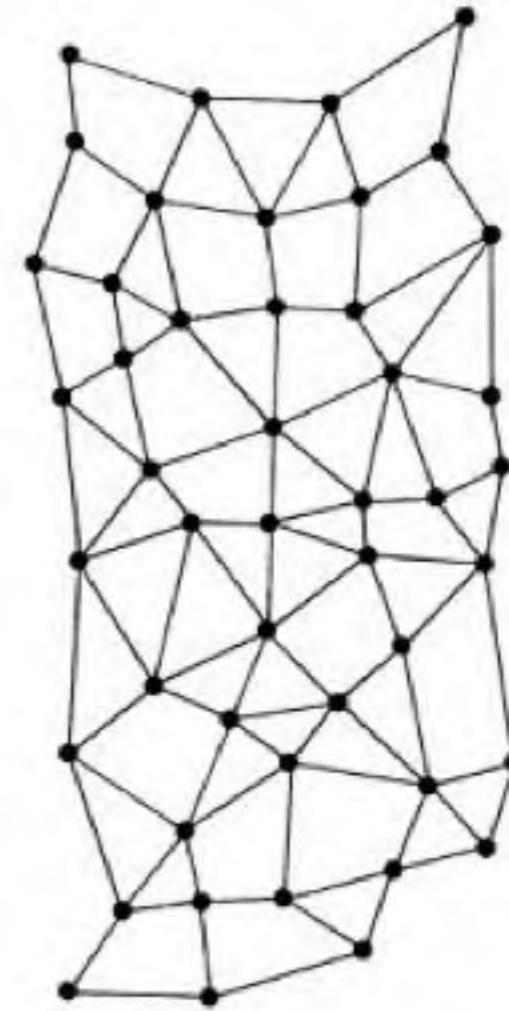
DECENTRALISED APPLICATION?



CENTRALIZED
(A)

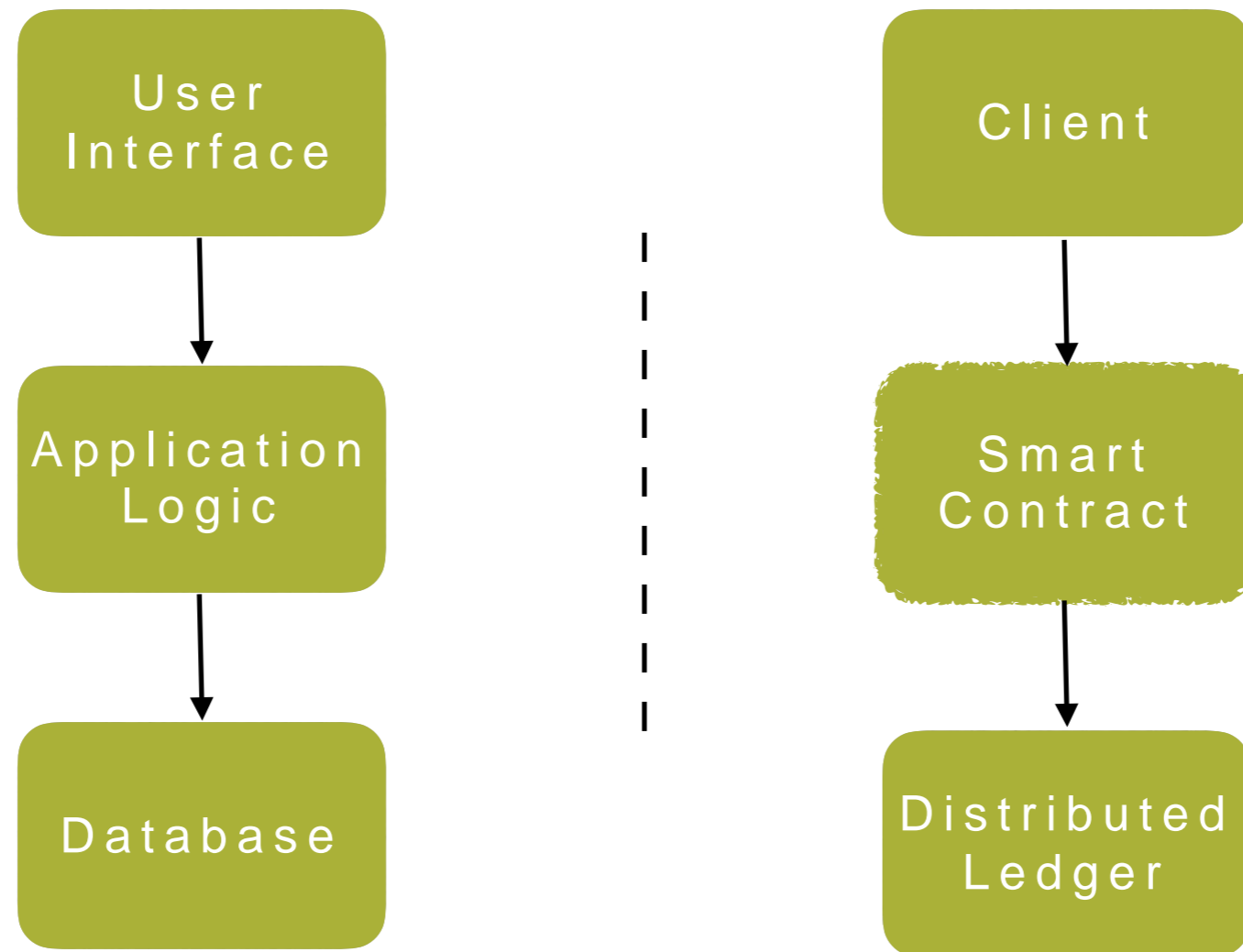


DECENTRALIZED
(B)

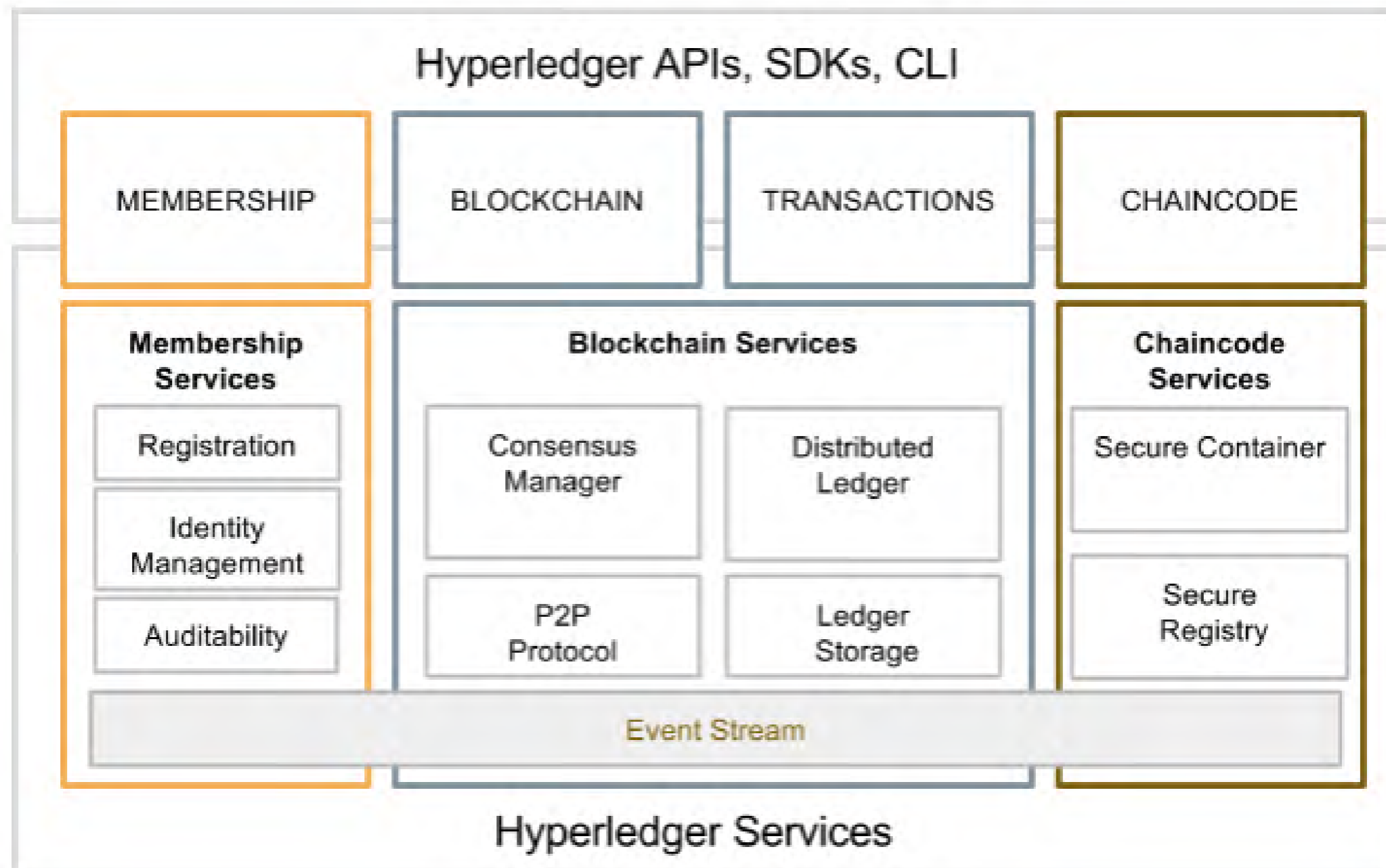


DISTRIBUTED
(C)

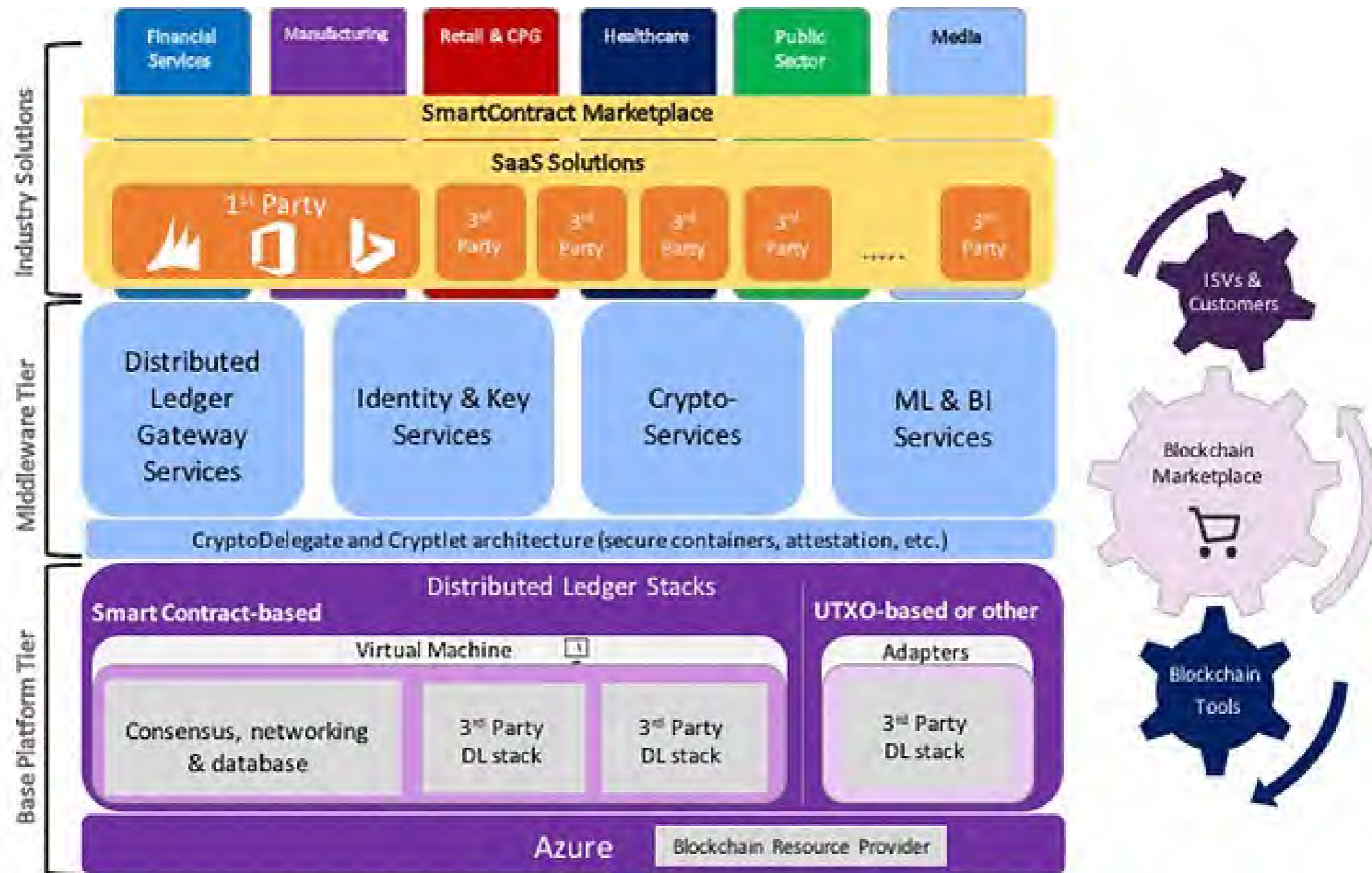
DAPP IS JUST APP



MODULAR ARCHITECTURE



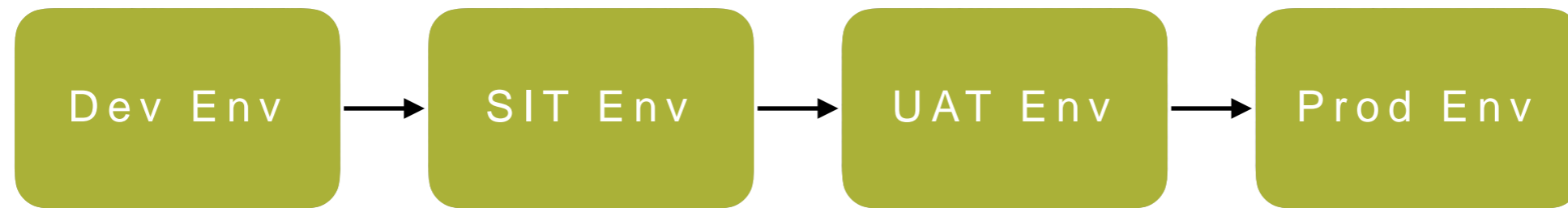
SERVICE BASED ARCHITECTURE



IMPROVE YOUR DEPLOYMENT

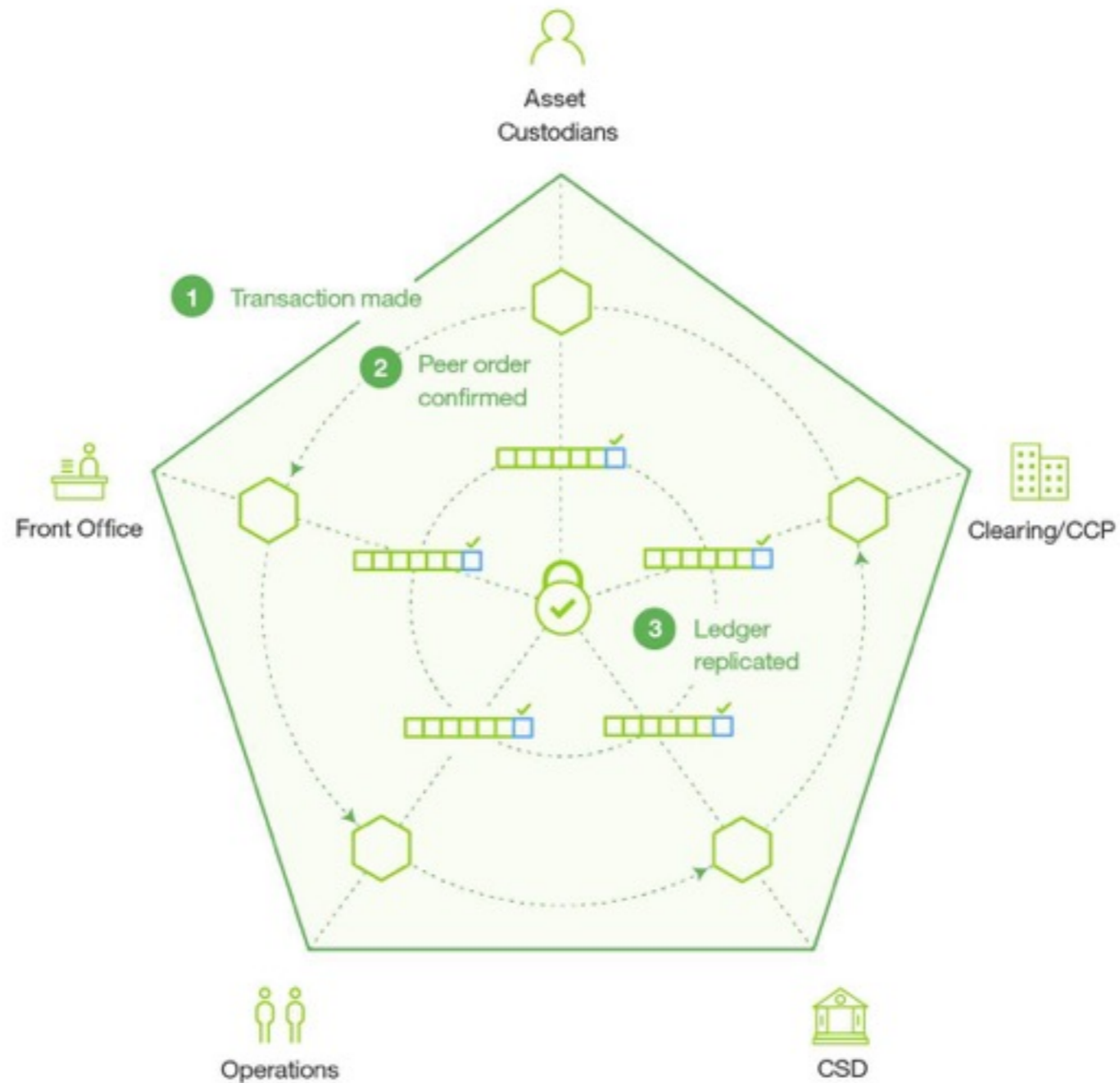
Dockerize your DApp

ENV MANAGEMENT

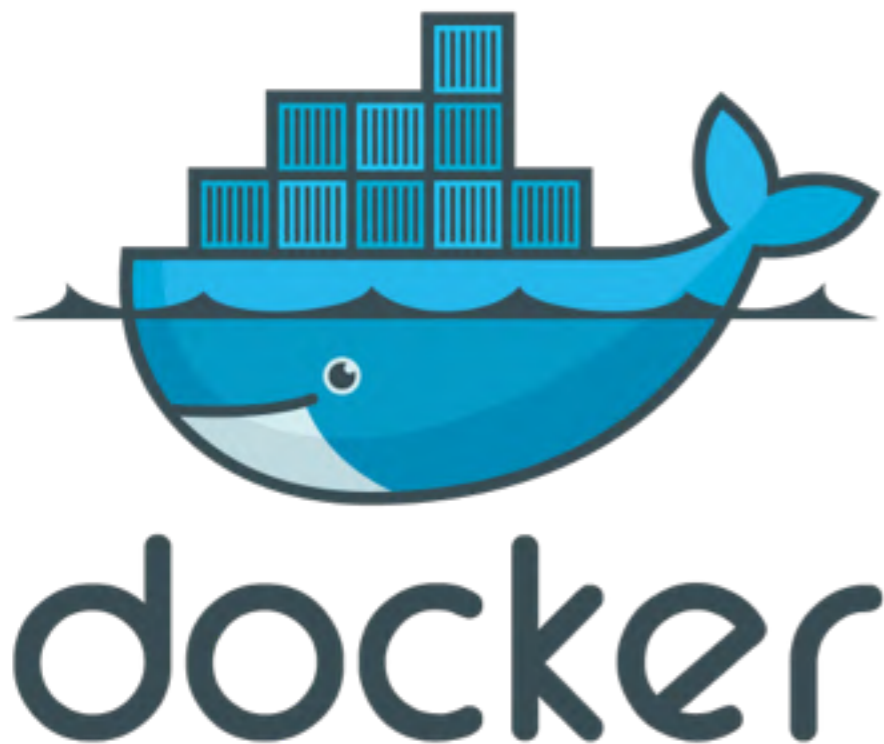


Test your dapp before publish it!

DECENTRALISED DEPLOYMENT



DOCKERIZE YOUR DAPP






```
1  mongo:
2    image: mongo
3    ports:
4      - "27017:27017"
5  application:
6    build: .
7    command: node --debug=5858 app.js --color=always
8    env_file:
9      - .env
10   ports:
11     - "3001:3001"
12     - "5858:5858"
13   links:
14     - mongo
15     - blockchain
16  blockchain:
17    image: lgallinaro/private-docker-ethereum
18    command: geth --datadir=/root/tmp --networkid=1234 --port 30304 --rpc --ipcapi='admin,db,eth,debug,
19    volumes:
20     - ~/.ethash:/root/.ethash:rw
21     - ./config/genesis/dev_genesis.json:/root/dev_genesis.json:ro
22     - ./config/keystore:/root/tmp/keystore:rw
23   ports:
24     - "30304:30304"
25     - "8545:8545"
```

<https://www.thoughtworks.com/insights/blog/blockchain-practice-tamper-proof-read-receipts>

TAKE AWAY

TAKE AWAY

-  *1 Choose your Blockchain tech on your business*
-  *2 Build your DApp on top of independent services*
-  *3 Dockerize your DApp*

THANKS

有问题请联系

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