“ZILLIQA /‘ZILIKƏ/ „

NEXT GEN HIGH-THROUGHPUT BLOCKCHAIN PLATFORM

XINSHU DONG, CEO

CHRISTEL QUEK, HEAD OF MARKETING

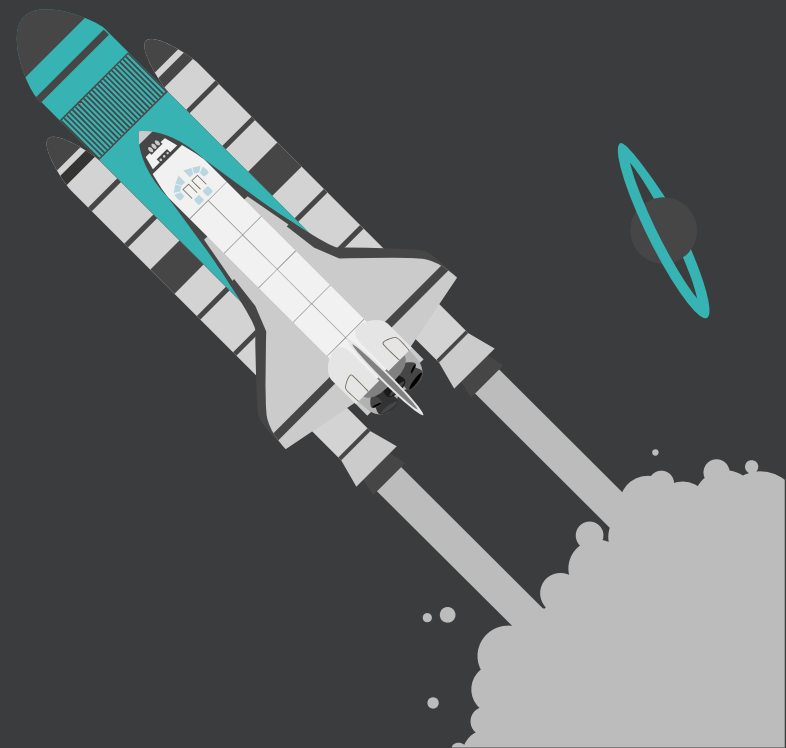
“SCALABILITY OF PUBLIC BLOCKCHAIN”

BITCOIN
7 TX/S

ETHEREUM
10 TX/S

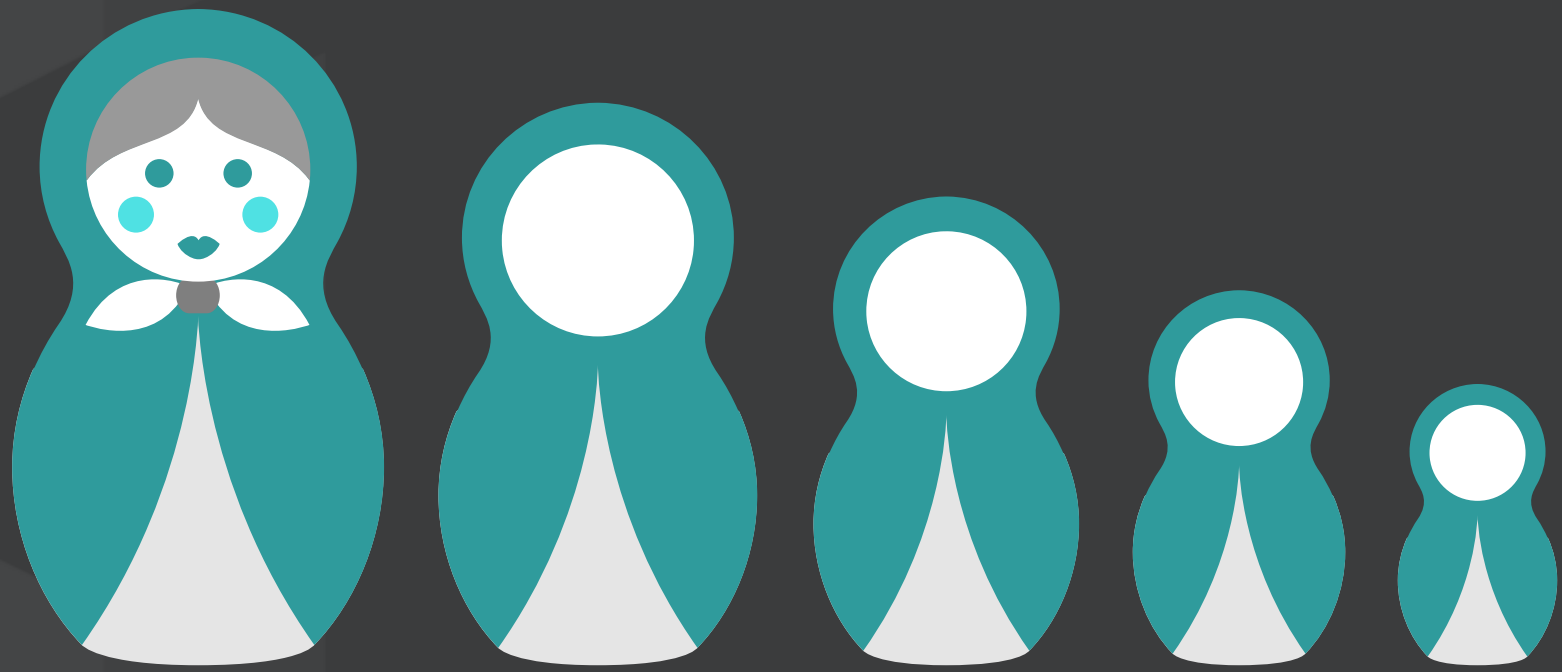
VISA
8000 TX/S

“ SOME OBVIOUS SOLUTIONS ”



“INCREASING BLOCK SIZE?”

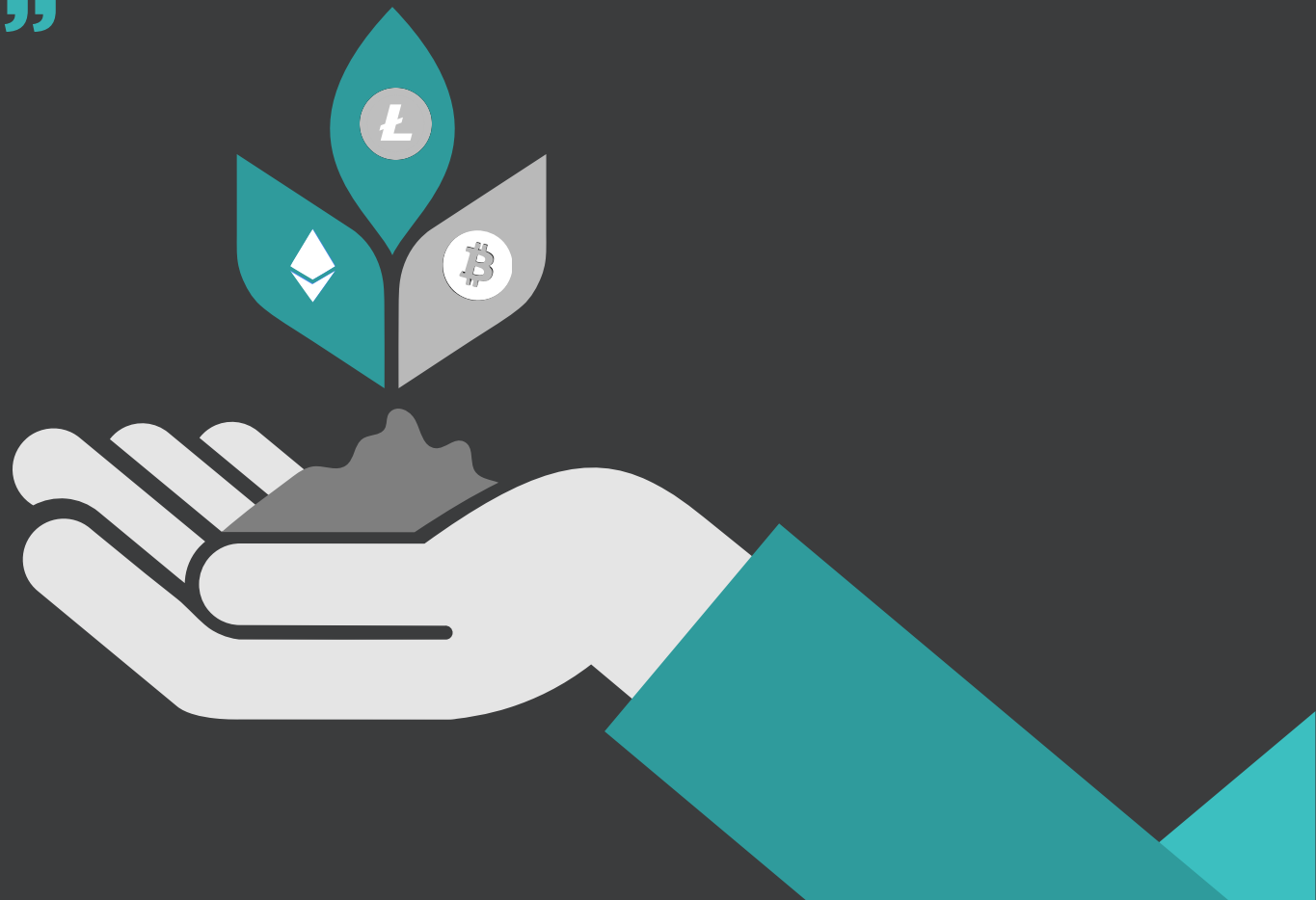
NOT A 100X SCALING FACTOR, DUE TO COMPUTATIONAL AND BANDWIDTH LIMITATIONS



“ HAVING MORE BLOCKCHAINS? ”

DIVIDED MINING POWER

51% ATTACK MADE EASIER



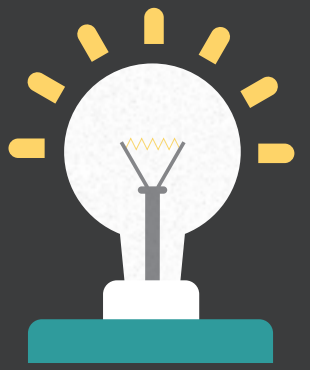
ZILLIQA
MADE IT!

“ DEEP TECH MEETS VENTURE CREATORS & FINANCIAL VETERANS ”

@ZILLIQA ZILLIQA.COM # INVITE.ZILLIQA.COM

“A SECURE SHARDING PROTOCOL FOR OPEN BLOCKCHAINS (2015)”

LOI LUU, PRATEEK SAXENA



WE HAVE PUT THEORY INTO PRACTICE

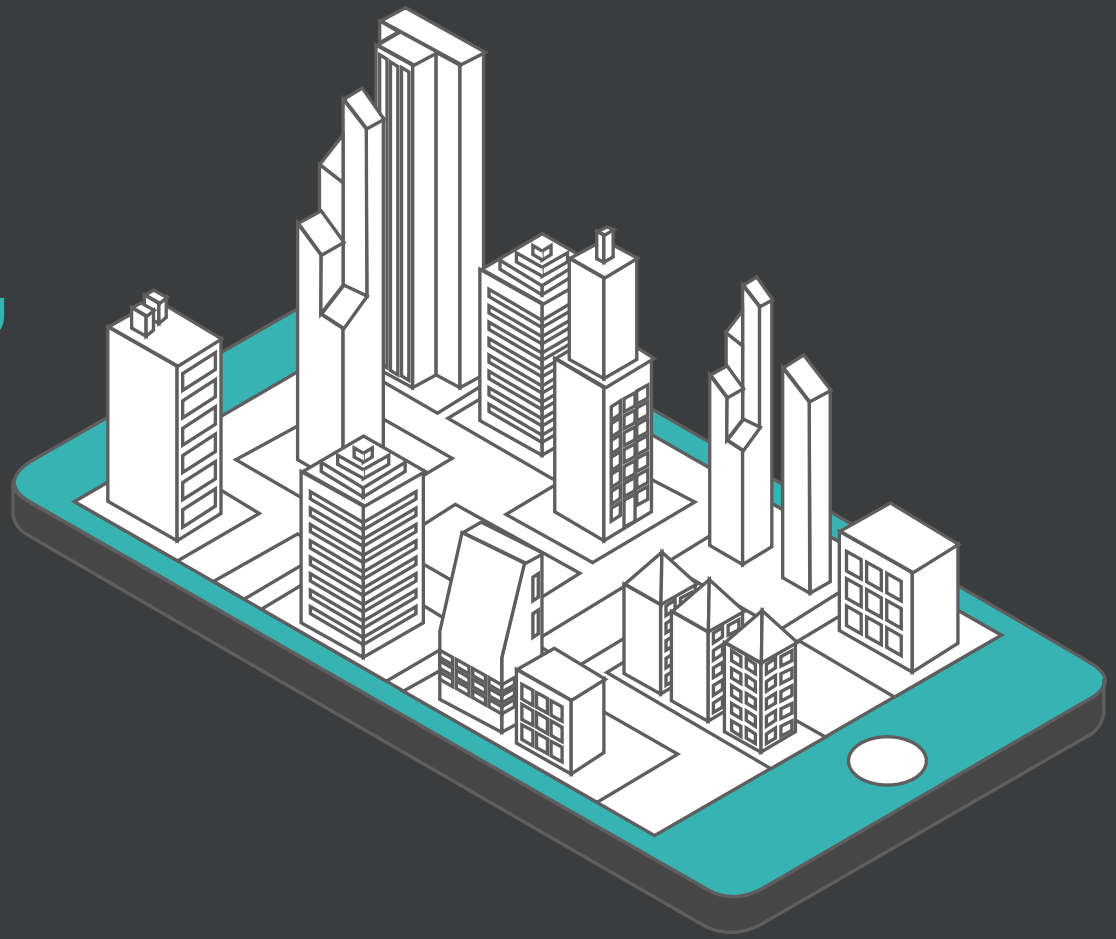
PRIOR DEPLOYMENT

"OTC TRADING: A TRIAL WITH A REGIONAL EXCHANGE & BANKS"

PRICE/PARTICIPANT DISCOVERY, SETTLEMENT, ANONYMITY

"DEPLOYING FOR AN E-COMMERCE APPLICATION IN SHIPPING"

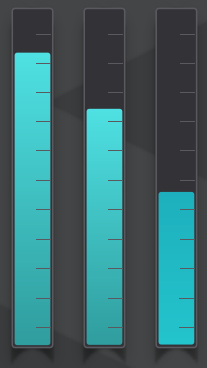
INEFFICIENCY, DISPUTES, DELAYS



“WHAT DOES ZILLIQA OFFER?”

100X AND MORE HIGHER THROUGHPUT, BUILT TO SCALE

DATA-FLOW & SHARDING-FRIENDLY SMART CONTRACTS



MINER FRIENDLY: LOW VARIANCE, COMPATIBLE TO ETHASH

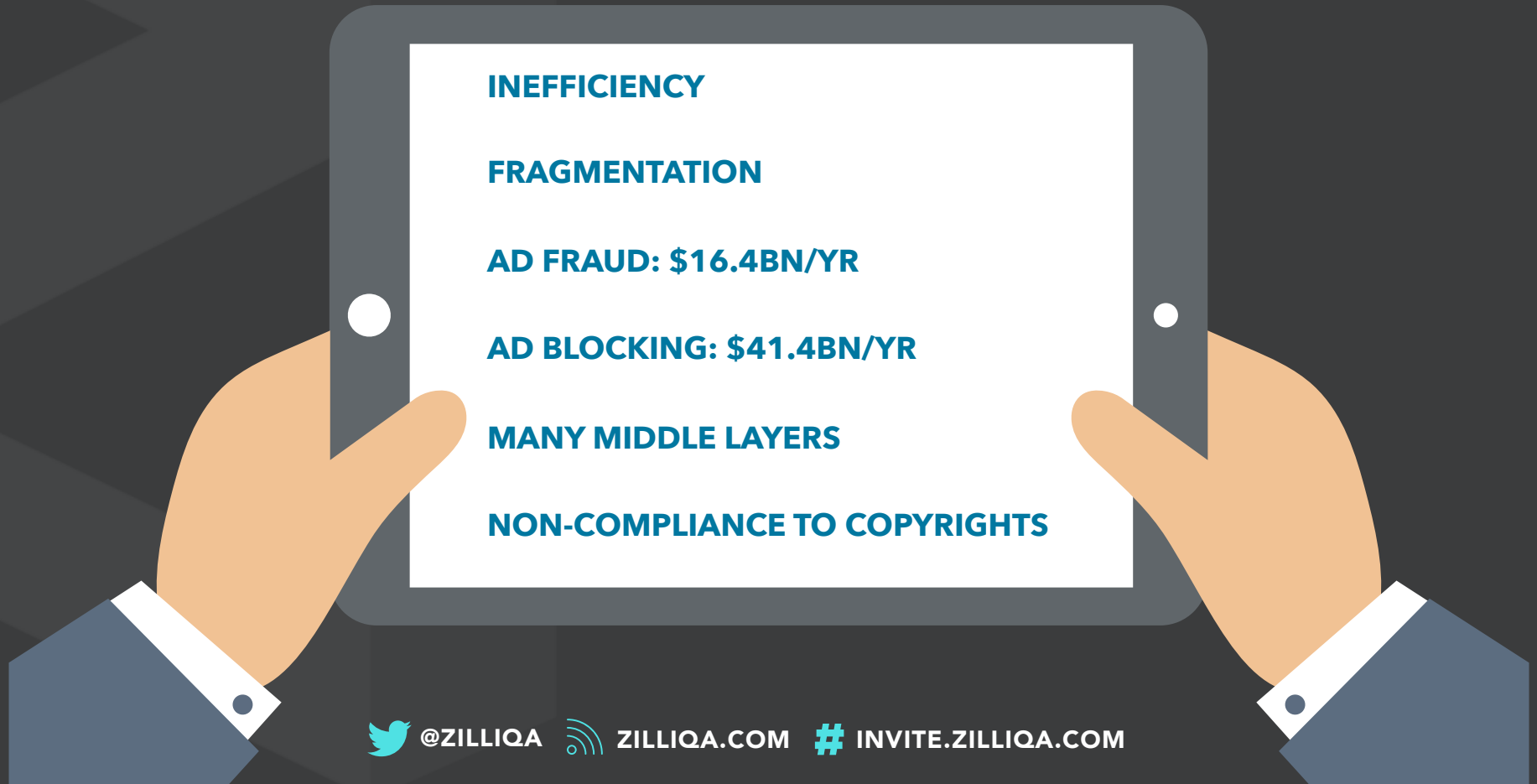
BETTER ENERGY EFFICIENCY

“dAPPS ENABLED BY ZILLIQA„

@ZILLIQA ZILLIQA.COM #INVITE.ZILLIQA.COM

“DIGITAL ADVERTISING

MULTIPLE CHALLENGES, INCLUDING: ”



BLOCKCHAIN-BASED

ADVERTISING SUPPLY CHAIN

PUBLISHERS SUPPLY
SMART CONTRACTS

INVENTORY AVAILABLE
INVENTORY DESCRIPTORS

MARKETERS DEMAND SMART CONTRACTS

IMPRESSION VOLUME
DELIVER DEADLINE
TARGETED GROUPS OF USERS
GEOGRAPHIC RESTRICTIONS

SMART CONTRACTS
ARE **MATCHED** AND **AUDITED**

IMPRESSIONS
SATISFACTION OF DEMANDS
PAYMENTS

“BLOCKCHAIN-BASED
ADVERTISING SUPPLY CHAIN BENEFITS”

TRANSPARENT ADVERTISING NETWORK

OPEN MARKET ANALYSIS

RESPONSIBLE CONTENT DELIVERY

ACCOUNTABILITY

ENSURE **TIMELINESS** OF ADS CONTENT DELIVERY

“REQUIREMENTS FOR BLOCKCHAIN”

REAL TIME
PARALLEL BIDDING

HIGH VOLUME
TRANSACTIONS

CORRECTNESS &
FAIRNESS

VOLUME MISMATCH
BILLIONS OF ADS/DAY VS.
1 MILLION TXS/DAY ON ETHEREUM

SMART CONTRACTS TOO COMPLEX TO REASON ABOUT

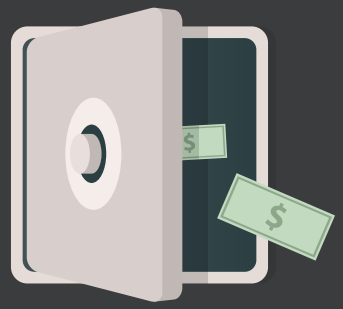
SCALABLE THROUGHPUT
WITH NETWORK SHARDING

EFFICIENT PROCESSING
WITH COMPUTATIONAL SHARDING

DATA-FLOW SMART CONTRACTS
SIMPLE ABSTRACTIONS
AMENABLE TO VERIFICATION

“ OTHER dAPPS ”

SHARED ECONOMY



PAYMENT NETWORKS

PARALLEL AUCTIONS

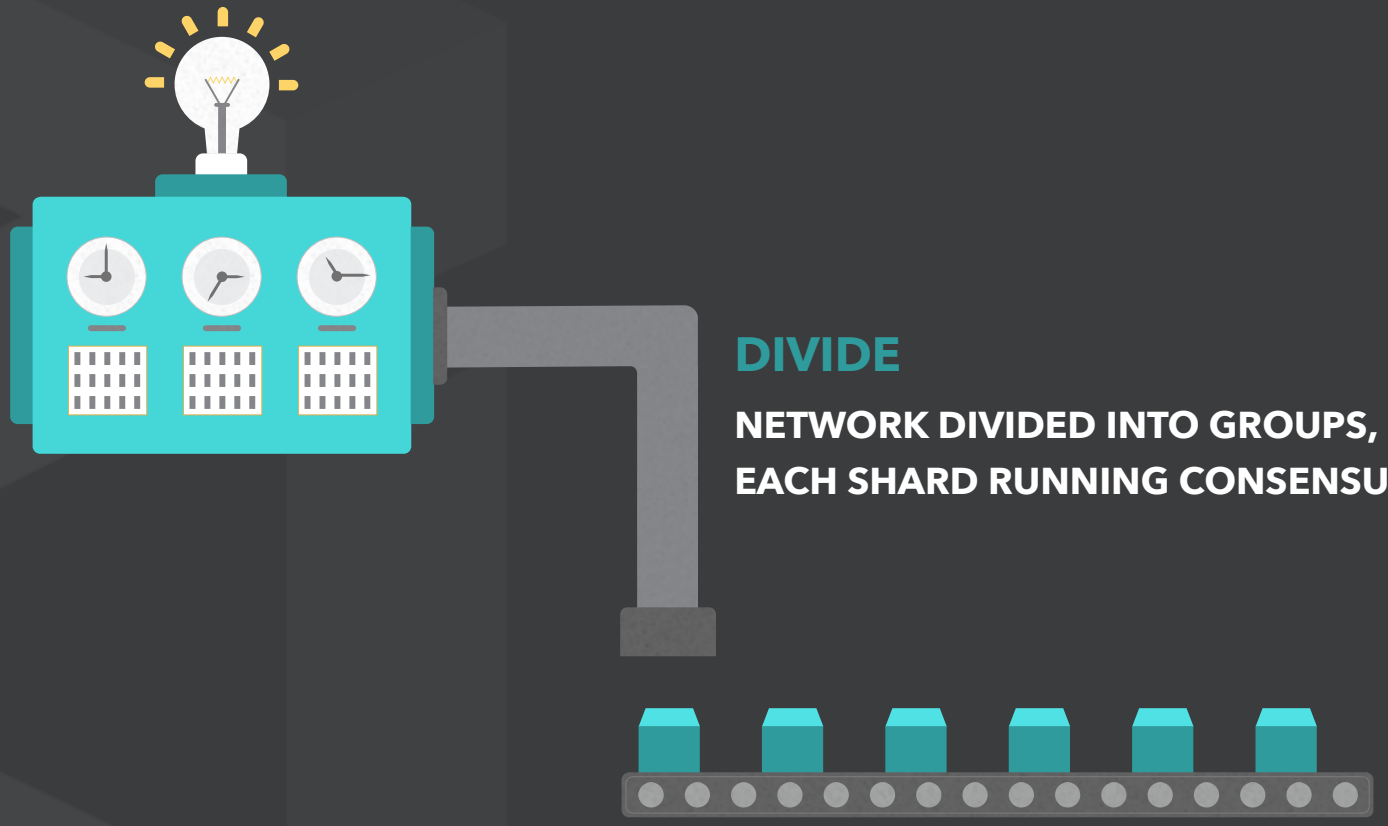
SCIENTIFIC COMPUTING

HIGH ASSURANCE COMPLETION

“TECH OVERVIEW”

“NETWORK SHARDING”

DIVIDE AND CONQUER IN PARALLEL



DIVIDE

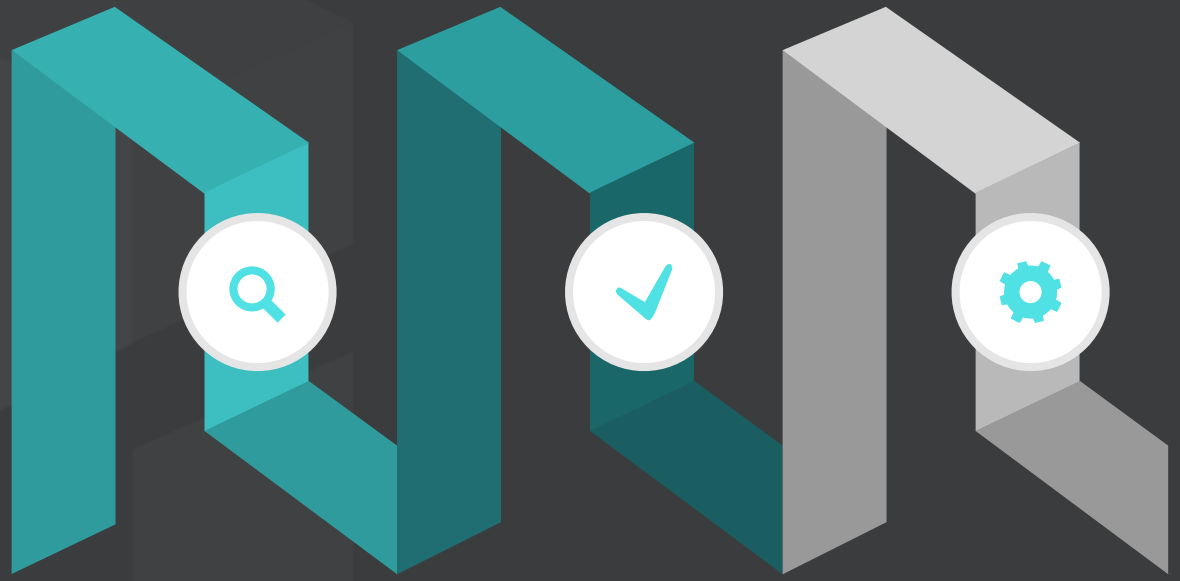
NETWORK DIVIDED INTO GROUPS, CALLED *SHARDS*
EACH SHARD RUNNING CONSENSUS PROTOCOL

CONQUER

A DEDICATED GROUP COMBINES OUTPUTS FROM EACH SHARD AND REACHES CONSENSUS ON IT.

“SAFE & EFFICIENT CONSENSUS”

KEY INGREDIENTS



01 PRACTICAL BYZANTINE FAULT TOLERANCE

Immediate finality of blocks
High message complexity

02 COLLECTIVE SIGNING

Highly efficient signature scheme for multiple parties
Same signature size for 1 or N parties

03 ZILLIQA’S CONSENSUS PROTOCOL

PBFT + Collective Signing with Security & performance enhancements

“SHARDING-FRIENDLY SMART CONTRACTS”

WORK WITH COMPUTATIONAL SHARDING FOR BUDGETED SECURITY

NON-TURING COMPLETE SHARDING-FRIENDLY SMART CONTRACTS

MORE AMENABLE TO VERIFICATION OF CORRECTNESS AND SECURITY

“PROFITABLE MINING & LOW-COST USAGE”

HIGHER ENERGY EFFICIENCY

PoW only used for sybil defence; not consensus

LOWER TX FEE

Users no longer need to compete for the few Tx/s

EACH SHARD WILL BE AWARDED

More even payout with lower variance

“NEXT STEPS”

WHERE ARE WE NOW?

WORKING PROTOTYPE TESTED ON AWS EC2

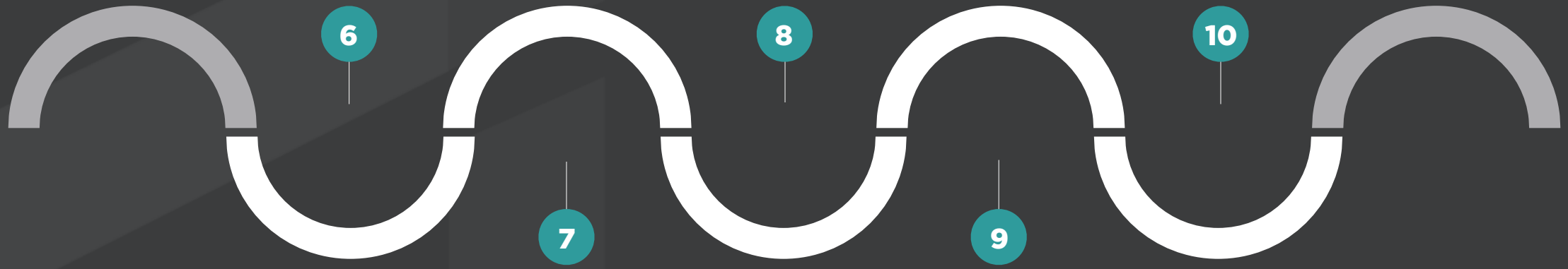
1,389 TX/S FOR 2,400 NODES

MORE FEATURES UNDERWAY

INTENSIVE TESTING & OPTIMISATION

SMART CONTRACT SPECS UNDER DEVELOPMENT

“ NEAR TERM ROADMAP ”



6

RELEASING PUBLIC TESTNET V1.0
DECEMBER, 2017

7

RELEASING PUBLIC TESTNET 1.5
FEBRUARY, 2018

8

RELEASING PUBLIC TESTNET V2.0
MARCH, 2018

9

LAUNCHING THE FIRST VERSION OF ZILLIQA PUBLIC MAIN-NET
Q2, 2018

10

RELEASING DAPPS
Q3, 2018

CONTINUAL RESEARCH & DEVELOPMENT

EXPLORE WAYS TO SUPPORT DAPPS FROM OTHER CHAINS

RESEARCH COLLABORATION WITH COMMUNITIES

“FUTURE PLANS”

“ZILLIQA /ˈZILIKə/„

NEXT GEN HIGH-THROUGHPUT BLOCKCHAIN PLATFORM

WE’RE NOW ON SLACK!

INVITE.ZILLIQA.COM

@ZILLIQA ZILLIQA.COM ENQUIRY@ZILLIQA.COM