# LOKOTECH
## Group

Company Presentation

October 18$^{th}$ 2023

# Disclaimer

# Today's Speakers

Yngve B. Johansen
Chairman of the board

Ola Stene-Johansen
CEO, Board Member
and Co-founder

Benjamin Miklozek
CFO, Board Member
and Co-founder

# Introduction

# Our Mission

✓ Be recognized as a unique fabless

   semiconductor company

   - A new addition to the Norwegian semiconductor industry

✓ Commercialize an industry disruptive chip

   for blockchain operation and AI

   - The best Scrypt* chip in the world – a super effective processor
   - Strong synergies for use within AI
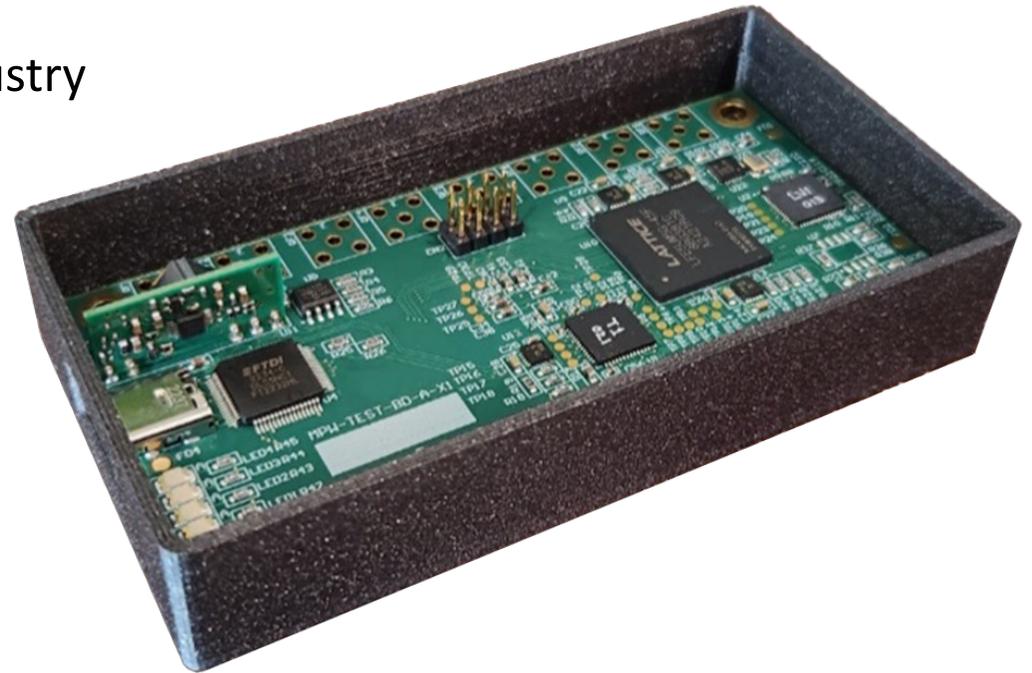
* Scrypt is the name of a specific algorithm used in cryptography, referred to as "hashing"

# Our Chip in Brief

Two applications currently in focus:

- Operate Blockchains and verify transactions (Mining)
  - A dramatic reduction in the energy consumption related to Blockchain operation
  - Consumes 75-80% less energy to mine Litecoin & Dogecoin compared to current chip leader
  - Validated prototype enables a successful pre-order launch late October 2023.
- Execute AI models (inferencing)
  - Significantly increasing the speed in AI Edge applications
  - Chip in development (Lower TRL), but expected strong synergies with the chip used for blockchain operation.
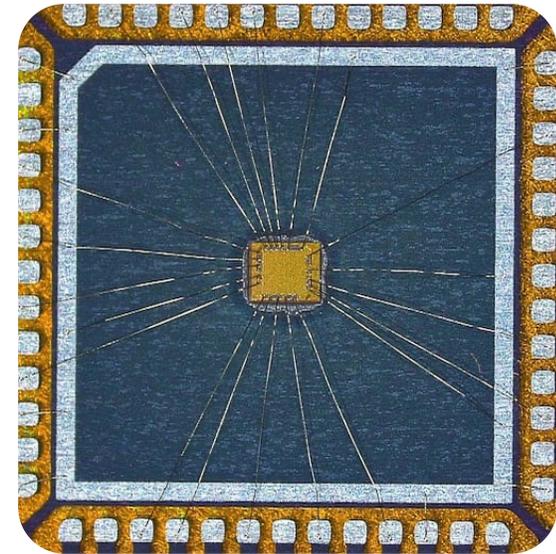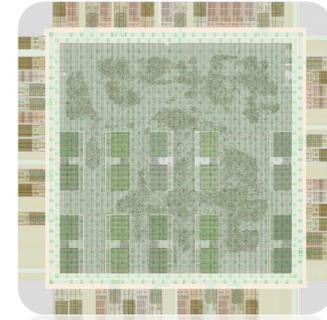
# Investment Highlights

- Lokotech - a fabless semiconductor company, that is about to introduce a disruptive chip to the market

- The initial prototype significantly reduces power consumption in blockchain operations. It has been successfully tested and verified by an independent third party to TRL5

- The pre-sale period is anticipated to launch in late October 2023.

- Early adopters have been granted a two-week exclusivity period. This has attracted over 2,300 unique subscribers to the program thus far.

- Proceeds from pre-sale are exclusively designated for manufacturing of the Scrypt chip. We expect deliveries to start in H2 2024

- Strong synergies between the Scrypt chip and ongoing development of a chip for AI Edge
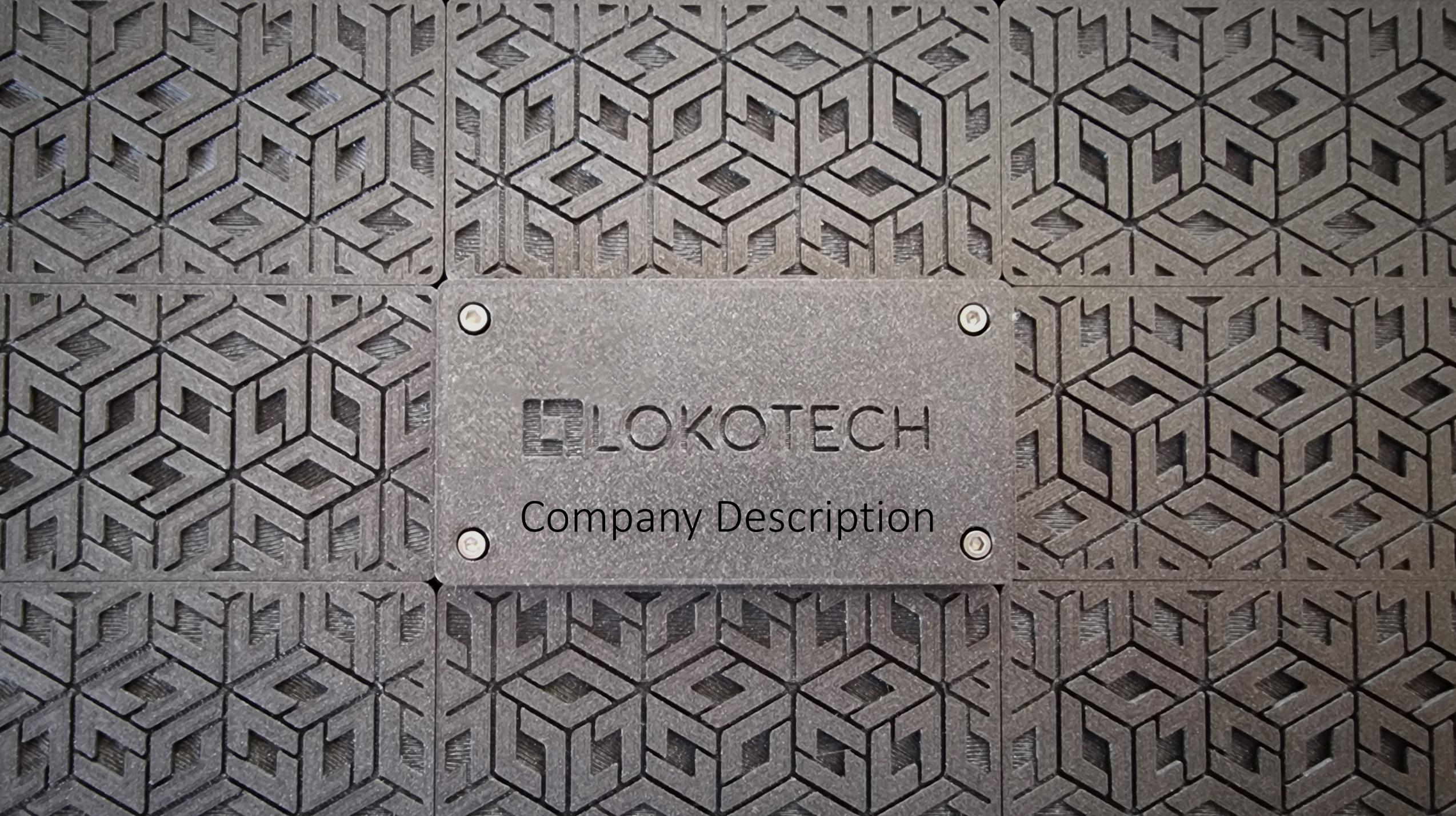
Company Description

# Lokotech Group in Brief

- Lokotech established in 2019

- Reverse merger with Harmonychain AS in 2021, raised NOK 110 million at NOK 1.8 per share

- Listed on Euronext Growth in May 2021

- Successful redesign of chip in 2022 with start of prototype development

- Testing and validation of prototype for Scrypt in September 2023

- Invested capital of NOK ~120 million

- Cash position of NOK ~38 million

- Ticker change expected in the near future: LOKO

**Subsidiaries:**

Lokotech - Hardware

Lokotech DC - Three datacenter projects in various stages in development and owns Filecoin hardware

Lokotech Development - Shelf company for future development projects. No activity

Nordic Green Data Center - SPV for future joint venture

# Business Model and Technology in Brief

- Our chip can be sold to the industry in multiple forms and scales; e.g., on USB sticks, Single / dual-tube servers, or rack-servers etc.

- The chip uses much less energy than current state-of-art in the market due to a combination of several techniques of solving the algorithm and advanced circuitry design that results in fewer transistors computing the algorithm.

- Our chosen form is to mount 128 ASICs on one Printed Circuit Board (PCB), with a PCI-e socket for plugging into stationary PCs

- We market it as a "Hashblade" - it can be plugged as one or multiple units into a PC, similarly as for a GPU

- We follow the usual business model in our industry and pre-sell hardware 12-18 months ahead of delivery



Hashblade
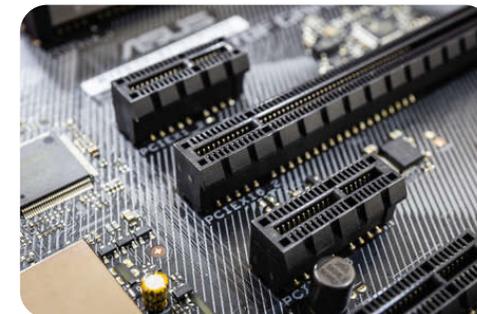
PCI-e Slots

# Management & Board

Yngve B. Johansen
Chairman

Christoffer Løvdal
Board Member

Wiktor Miesok
Board Member

Susheel Nuguru
Board Member

Kjetil Westeng
Board Member

Benjamin Miklozek
CFO, Board Member
and Co-founder

Ola Stene-Johansen
CEO, Board Member
and Co-founder

Christian Rustad
CTO, Board Member
and Co-founder

Henrik Danielsen
Board Member

Harald Wibye
Board Member

# Share Price & Shareholder Overview

## Share Price (NOK) & Volume (Millions)
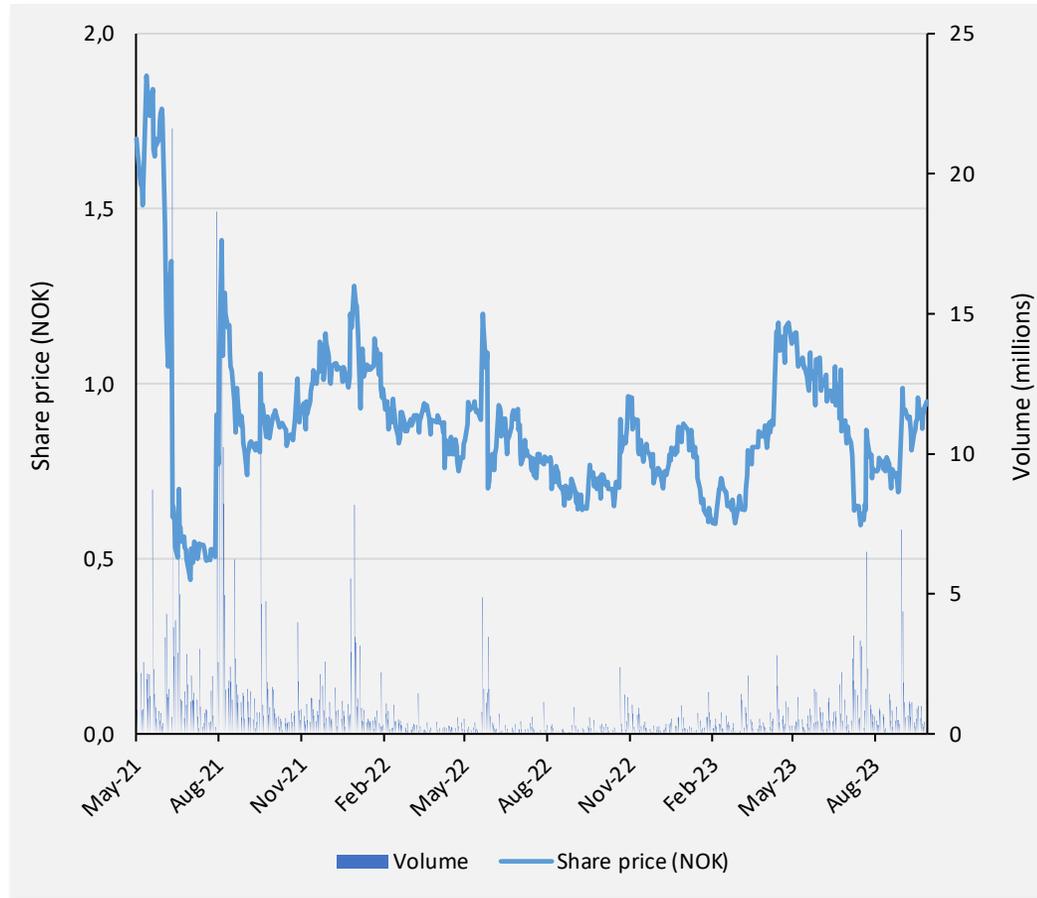


## Top 20 Shareholders

| | Name | Holding | in % | Comment |
|---|---|---|---|---|
| 1 | PROZIUM AS | 34,109,696 | 19.7 % | Controlled by CTO |
| 2 | INFIGENT AS | 12,967,695 | 7.5 % | Controlled by CEO |
| 3 | BLIPIT AS | 12,412,140 | 7.2 % | Controlled by CFO |
| 4 | ØSTLANDSKE PENSJONISTBOLIGER AS | 11,632,348 | 6.7 % | |
| 5 | DELTA INVEST AS | 8,577,097 | 5.0 % | |
| 6 | NORDNET LIVSFORSIKRING AS | 7,632,601 | 4.4 % | |
| 7 | LIE | 3,500,000 | 2.0 % | |
| 8 | MIKLOZEK | 2,507,305 | 1.4 % | CFO |
| 9 | JUVEREN AS | 2,000,000 | 1.2 % | |
| 10 | JOHANSEN | 1,733,100 | 1.0 % | Controlled by Chairman |
| 11 | Nordnet Bank AB | 1,704,855 | 1.0 % | |
| 12 | LIVERMORE INVEST AS | 1,600,000 | 0.9 % | |
| 13 | BERGGREN | 1,476,000 | 0.9 % | |
| 14 | PATIL | 1,400,000 | 0.8 % | |
| 15 | LARSEN | 1,361,501 | 0.8 % | |
| 16 | TRAFALGAR AS | 1,350,000 | 0.8 % | |
| 17 | ECH HOLDING AS | 1,300,000 | 0.8 % | |
| 18 | JOHNSEN | 1,250,000 | 0.7 % | |
| 19 | Guttis AS | 1,200,000 | 0.7 % | |
| 20 | Avanza Bank AB | 1,072,418 | 0.6 % | |
| | Top 20 shareholders | 110,786,756 | 64.0 % | |
| | Other shareholders | 62,413,261 | 36.0 % | |
| | Total shareholders | 173,200,000 | 100.0 % | |

# Blockchain Application

# Market Positioning

- Scrypt is the algorithm that secures the integrity of the ledgers of certain Proof-of-work ("PoW") blockchains like Litecoin (LTC) and Dogecoin (DOGE)

- LTC and DOGE are 2 of the 3 largest "Proof-of-work" blockchains measured in Market Capitalization. The third and largest PoW blockchain is BTC.

- LTC & DOGE are more profitable to operate (also called mine) measured in USD per watt than Bitcoin

- Lower price point and as close to "Plug-and-play" as possible

- Can retro-fit into existing Ethereum mining rigs (GPUs) over PCIe

| 16.10.23 | |
|---|---|
| Price | $63.80 |
| M.cap. | $4,7 B #15 |
| Circulating | 74.8 M |
| Max Supply | 84 M |

| 16.10.23 | |
|---|---|
| Price | $0.060 |
| M.cap. | $8,5 B #9 |
| Circulating | 141 B |
| Max Supply | Infinite |

# Blockchain Application: Addressable Market

- Live GH/s on Top 3 Scrypt Coins: 900,000 => 450,000 units => 65.25 MW
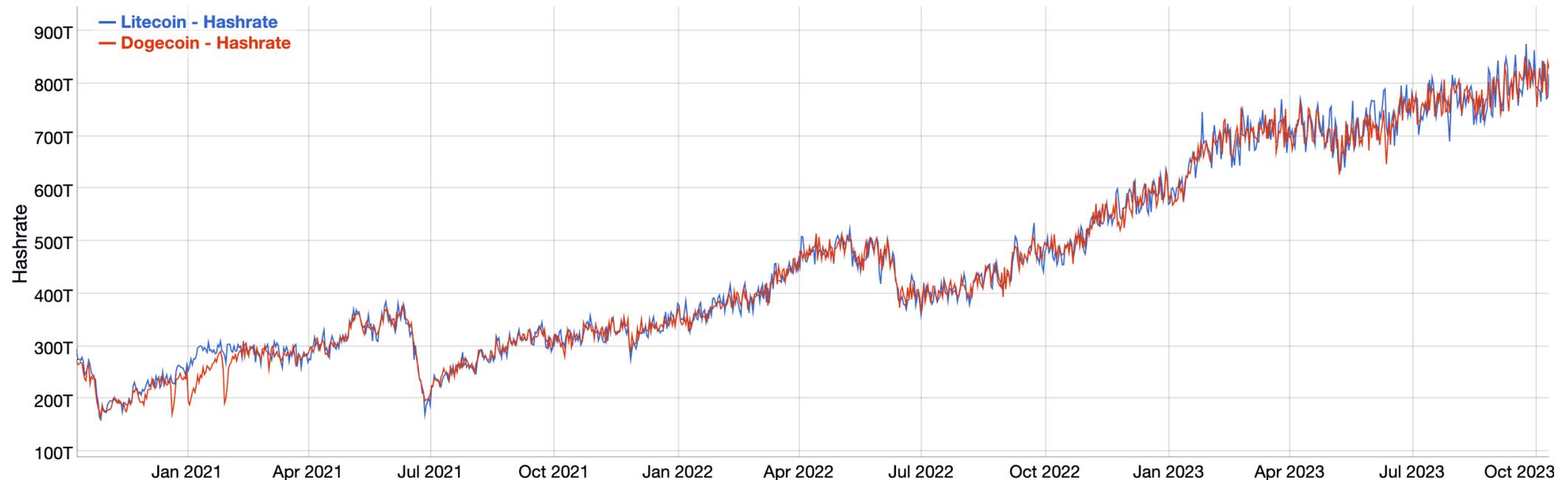


- Wattage: Assumed 670 MW=> 4.6 M Units => 9.2 PH/s

PH=Peta Hashes = Quadrillion Hashes

TH=Terra Hashes = Trillion Hashes

GH=Giga Hashes= Billion Hashes

MH=Mega Hashes= Million Hashes

KH= Kilo Hashes = Thousand Hashes

# Competitive Advantages

✓ Power efficiency: ~25 % power consumption of that of our closest competitor

✓ Norwegian: Transparency in an opaque market, existing semiconductor knowledge clusters and success stories, and governmental support of R&D (SkatteFUNN)

✓ Form of the hashing device is enabled by power efficiency: lower price point & ease of manufacturing

✓ Western mindset to customer service and advanced RMA enabled by "gradient degradation" & self-optimizing clock on ASIC

# Comparison

| LOKOTECH | Competitor 1 | Competitor 2 |
|---|---|---|
| J/ MH = 0.076 | J/ MH = 0.36 | J/ MH = 0.954 |

Lokotech saves power and increases mined cryptocurrencies per installed power capacity

# Chip Status

- All fundamental blockchain related IP has been thoroughly validated, and the critical architecture has been confirmed through the MPW run.
- Key insights from the MPW were learned and will be utilized in the commercial ASIC tape-out.
- Performance: (15.6 MH/s @ 1.04 Watts) +/-10%. This is equivalent to 0.067 Joules per Megahash at the chip level
- Demonstrates 4-5 times greater power efficiency compared to the closest competitor.
- Technology node: 12NMLP+
- On-chip microcontroller integration enhances product lifespan.
  - Incorporates gradient degradation and self-optimization features for clock frequency.

# Plan for Pre-sale Release

Pre-sale scheduled to open later this month.

A 14-day exclusive access period for over 2,300 dedicated subscribers who have demonstrated interest.

Enhance guerilla marketing initiatives during the second week of the exclusive pre-sale period.

Opening to public following closure and revision of the exclusive pre-sale outcome.

Closing the pre-sale phase upon reaching a satisfactory volume for negotiating slot alignment.
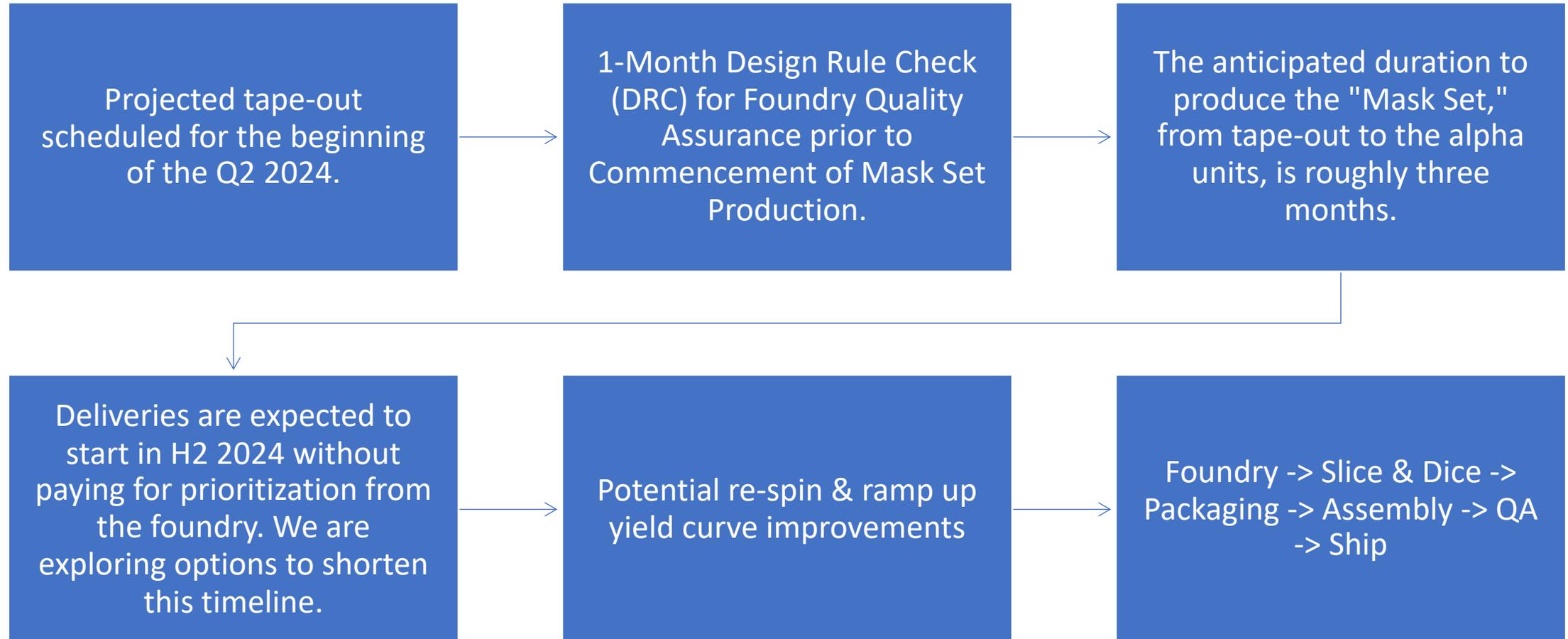
Targeting 50,000-100,000 units in first two batches

Actively monitor the Scrypt hashrate and adjust sales accordingly to maintain profitability.

# Plan for Manufacturing and Delivery

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┌─────────────────────────┐     ┌─────────────────────────┐     ┌─────────────────────────┐
│  Projected tape-out     │     │  1-Month Design Rule    │     │  The anticipated        │
│  scheduled for the      │ ──> │  Check (DRC) for        │ ──> │  duration to produce    │
│  beginning of the       │     │  Foundry Quality        │     │  the "Mask Set," from   │
│  Q2 2024.               │     │  Assurance prior to     │     │  tape-out to the alpha  │
│                         │     │  Commencement of Mask   │     │  units, is roughly      │
│                         │     │  Set Production.        │     │  three months.          │
└─────────────────────────┘     └─────────────────────────┘     └─────────────────────────┘

┌─────────────────────────┐     ┌─────────────────────────┐     ┌─────────────────────────┐
│  Deliveries are         │     │                         │     │                         │
│  expected to start in   │     │                         │     │  Foundry -> Slice &     │
│  H2 2024 without paying │ ──> │  Potential re-spin &    │ ──> │  Dice -> Packaging ->   │
│  for prioritization     │     │  ramp up yield curve    │     │  Assembly -> QA ->      │
│  from the foundry. We   │     │  improvements           │     │  Ship                   │
│  are exploring options  │     │                         │     │                         │
│  to shorten this        │     │                         │     │                         │
│  timeline.              │     │                         │     │                         │
└─────────────────────────┘     └─────────────────────────┘     └─────────────────────────┘
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# Key Risk Factors

- **Mask Set Quality Risk**: Quality risk associated with the manufacturing of the mask set.

- **Slot Allotment:** Allocation of production slots, contingent upon volume and pre-sale metrics.

- **Tape-Out Delays:** Potential delays in the completion of the GDSII.

- **Geopolitical Risks and Supply Chain Disruptions:** Vulnerabilities stemming from geopolitical tensions and interruptions in the value chain.

- **Gross Margin Reduction from Unexpected Yield Curve Decline:** Potential decrease in gross margins due to a yield curve that performs worse than anticipated.
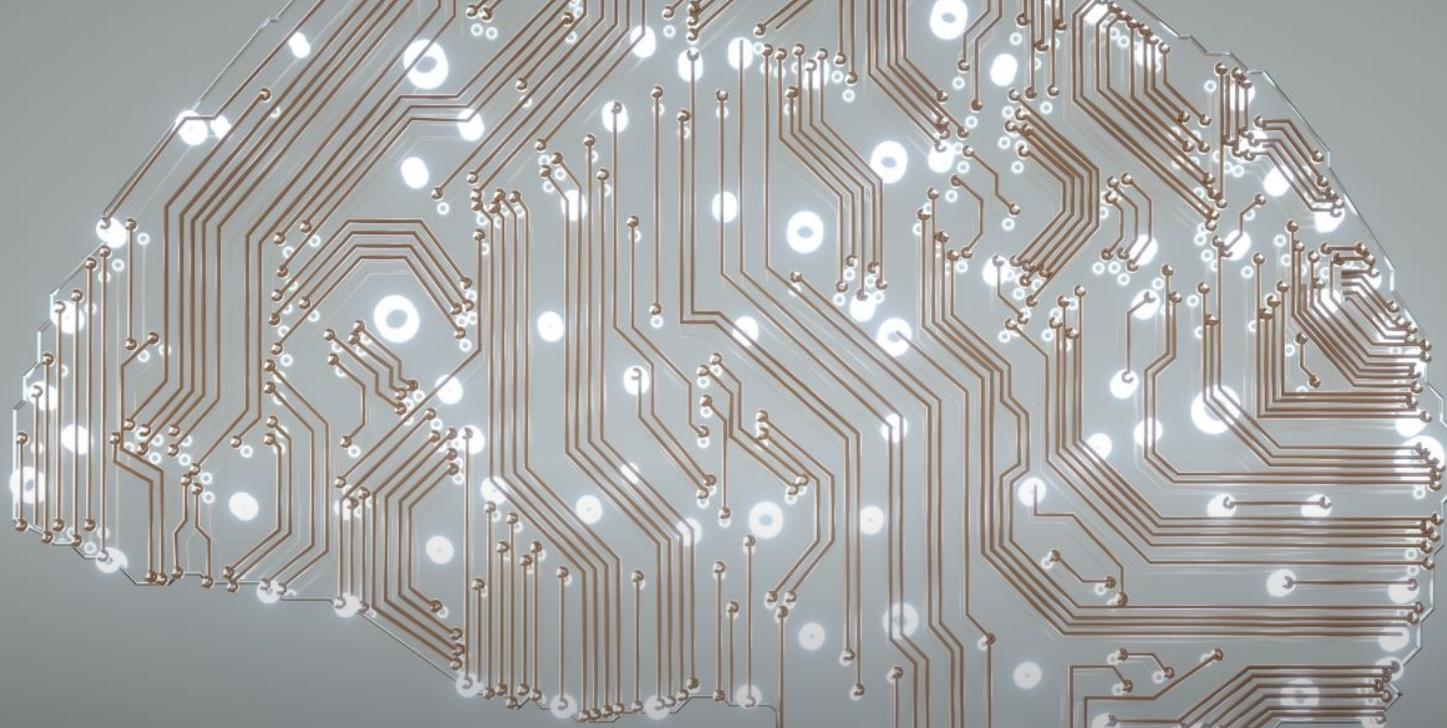
AI Application
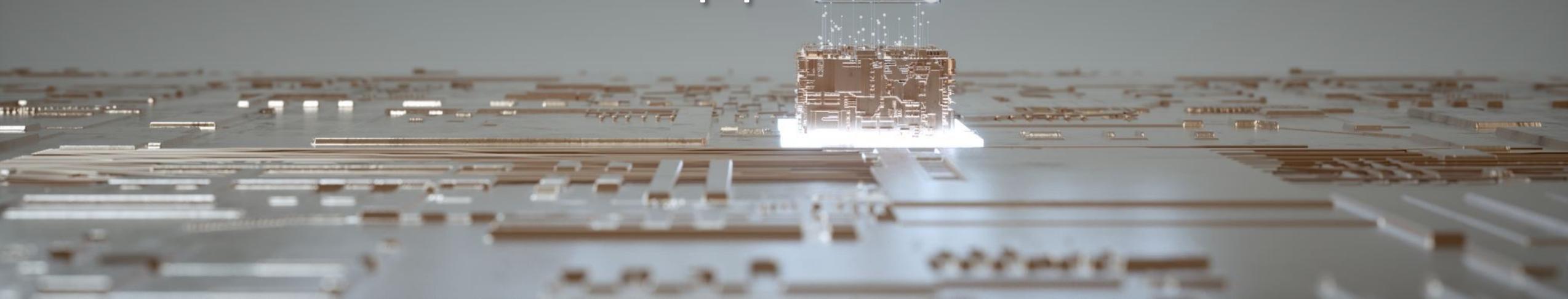
# Development Status

- Theoretical speed very competitive in today's landscape

- I/O capabilities under testing. Prototype will follow tape-out of commercial ASIC

- In short: if you hash Scrypt fast, a lot of the chip design is reusable for Edge AI Inferencing, because your "full adder" logic circuit will be *very fast*

- I/O speed and throughput currently being tested from physical MPW-ASICs

  - Data transfer rates important to accurately describe the capabilities

  - I/O a potential bottleneck

- Important to note:

  - The AI compute capabilities has not been tested from MPW ASICs, but shows very competitive computational speeds in simulation

  - We need to run it with standard applications like Alex or PyTorch before we can benchmark it against competitors, and see the size of the matrix's impact on the theoretical computation speed

# Market Positioning

- Edge AI Inferencing: The processor performs computation on the edge of the network: on-device or in local computer/server, **not in the cloud/datacenter via Internet.**

- Use of trained AI-models at the "edge" of Internet. Can also be used w/o bandwidth.

- Testing the computational speed and accuracy over time will determine right market niche.

- High accuracy over time is important for "mission critical" use-cases such as object identification for autonomous cars.

- Not so important for less critical applications, such as face recognition, text interpretation or picture up-scaling.
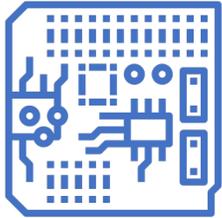
# Addressable Market

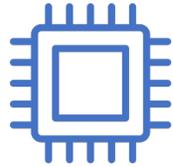Edge AI Market is Estimated to be 14.8 Billion USD in 2023, Growing at CAGR of 21%
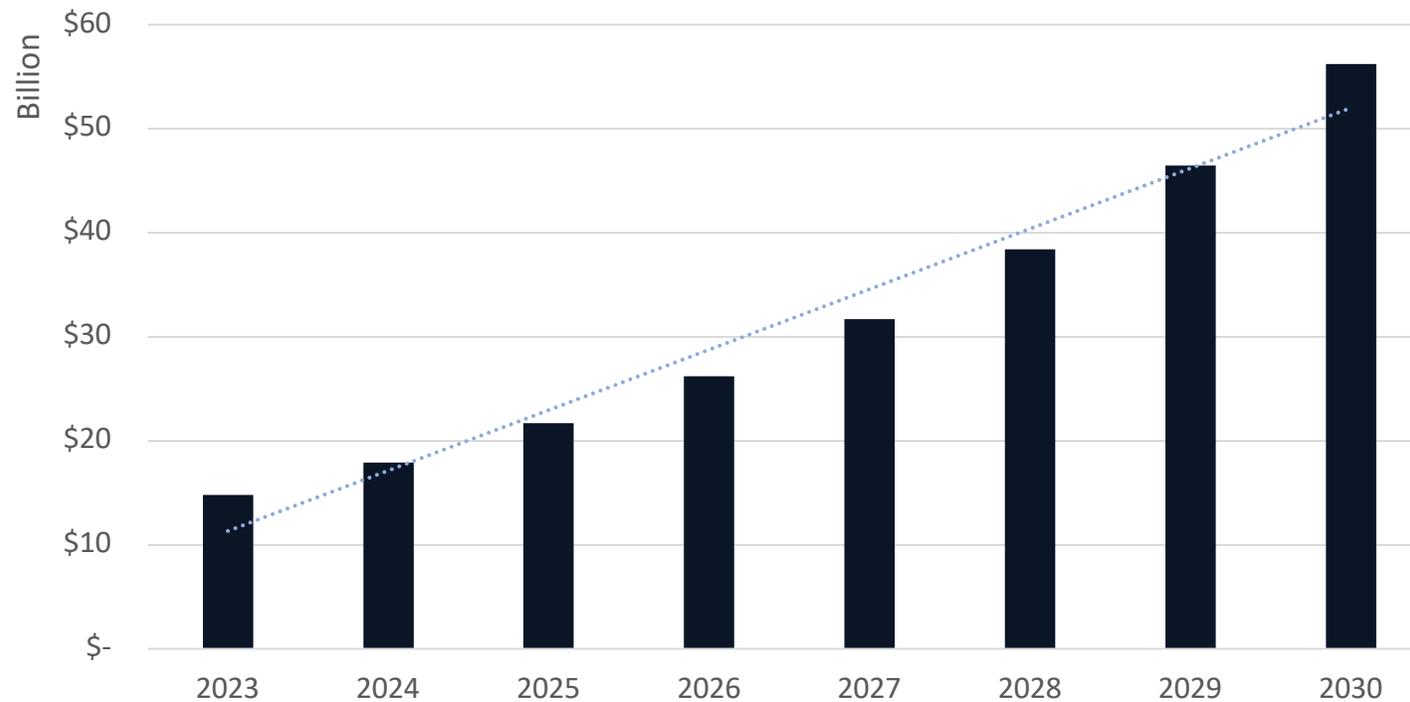
# Commercial plan

Sale of AI Accelerators

OEM sale of ASICs to customers that integrate these into their product(s)
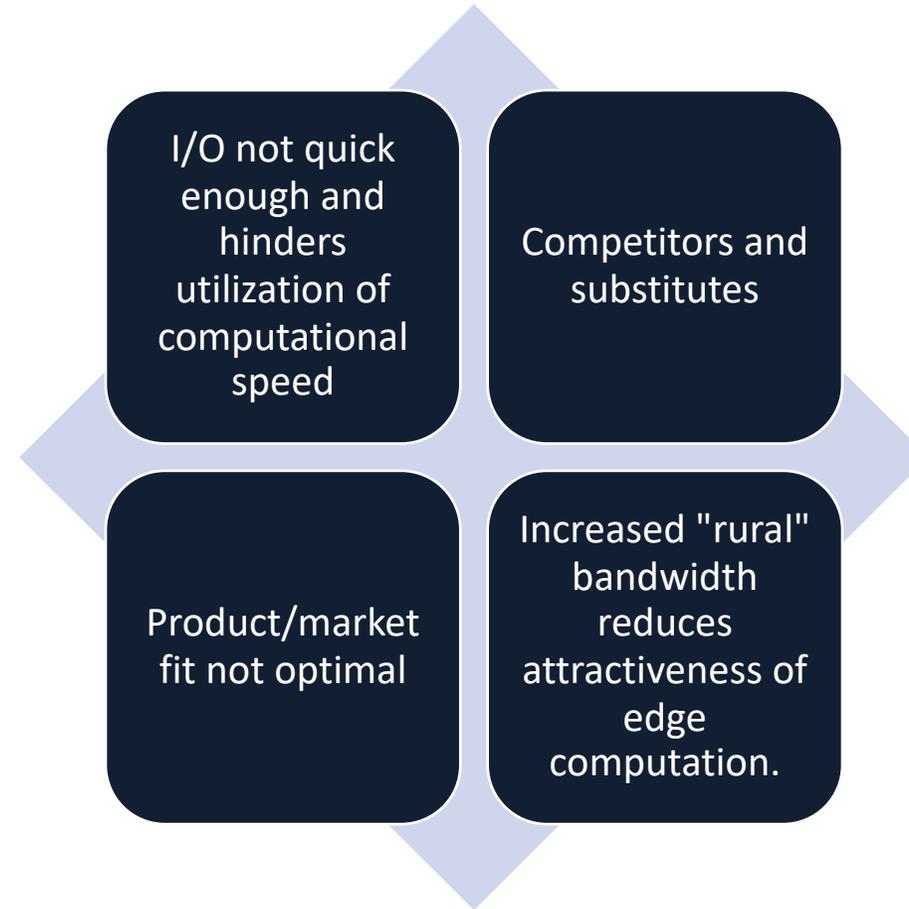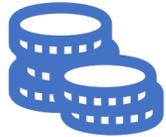
Licensing the design to integrate into SoC's

Downstream potential: Identify, develop and compete for attractive applications based on proprietary hardware

# Key Risk Factors

I/O not quick enough and hinders utilization of computational speed

Competitors and substitutes

Product/market fit not optimal

Increased "rural" bandwidth reduces attractiveness of edge computation.

# Other Business Activities

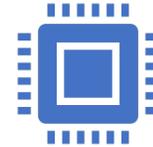**Mining on own balance sheet – cost advantage**

1 MW deployed equals ~6M USD ARR with todays rates

**Software**

WIC: Cryptographic messaging APP/Plugin targeting sensitive data communication launch sometime before Christmas

Pool for operating miners – ScryptPool.io – closed beta, ready to act when we have hashrate

**Hardware for other algorithms/blockchains**

Filecoin – promising architecture undergoing final testing as we speak, but bearish market conditions – exploring capital easy GTM-strategies

Longer term:

- SHA256 – Bitcoin – "easier" algorithm
- Other memory intensive algorithms – smaller niches, but relevant know-how
- Second generation Scrypt ASIC – lower geometry equals higher efficiency

**Supportive hardware and other form factors**

PSUs, rigs, motherboards, cables, controllers and other upsell products

# Investment Summary

- Lokotech - a fabless semiconductor company introducing disruptive chips to the market

- Chip to significantly reduce power consumption in blockchain operations and increase speed in AI Edge applications

- First prototype of Scrypt chip successfully tested and verified by independent third party

- Launch of pre-sale period expected at end of October 2023

- Expected delivery date in H2 2024

- Strong synergies between the Scrypt chip and ongoing development of a chip for AI Edge

# Q&A

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