

Shaping better futures with innovative semiconductor solutions

AIM:ENSI
“ShareSoc”
September 2024



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Our focus

1

5G Satcomms Convergence

- Expertise in RF, mmWave, Analogue technology in NRN/Satcomms

2

Industrial Motor Controllers

Updates driven by legislation in the US and Europe create opportunities across the sector

3

Automotive

- Reduces time to market and enhances our competitive position, includes Radar, RF, beamforming, Cryptography, Mixed Signal sensing and control

4

Healthcare

- An opportunity to use our own IP

Focussed on large growing markets

Customised ASIC chips are widely and increasingly used to differentiate market-leading products.

We are initially aiming to capture 0.5% of these markets, aligning with our specialist expertise and IP.

AUTOMOTIVE



\$50bn

(2021)

CAGR¹ 21-30 13% - \$150bn

INDUSTRIAL



\$60bn

(2021)

CAGR¹ 21-30 9% - \$130bn

HEALTHCARE



\$7bn

(2023)

CAGR² 23-28 11.4% - \$12.8bn

SAT COMMS



\$4.9bn

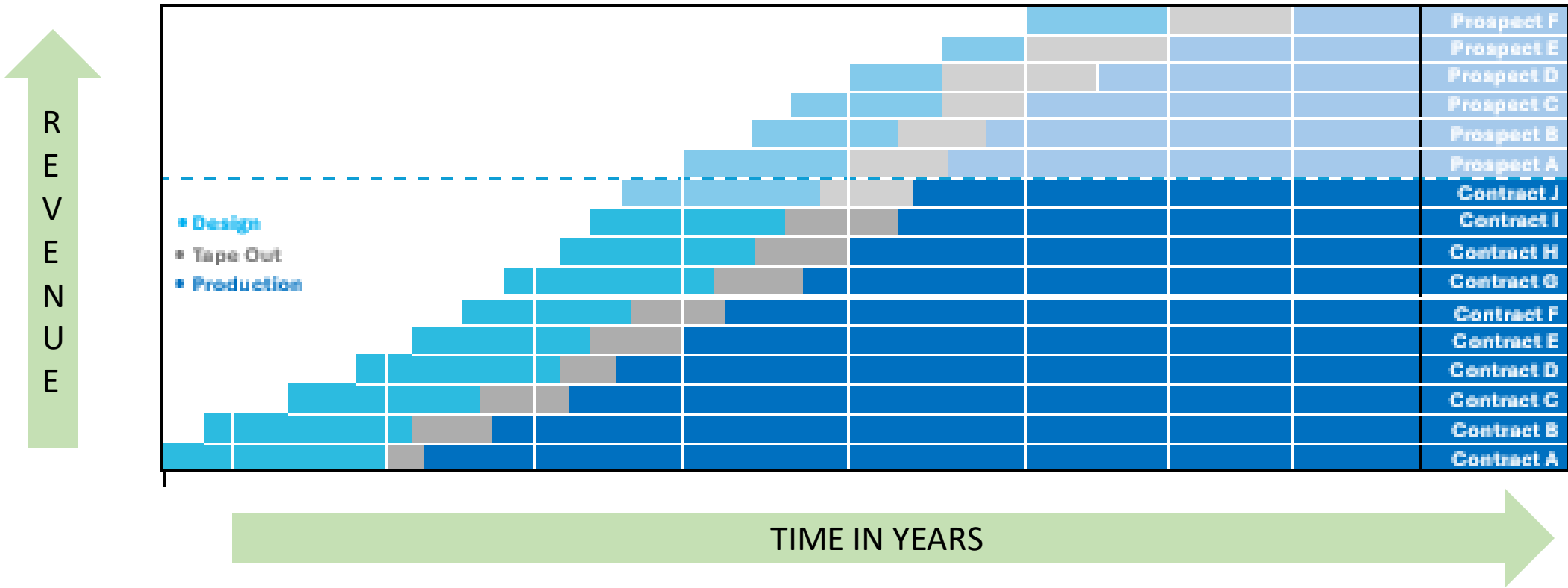
(2024)

CAGR³ 22-27 38.2% - \$16.1bn

EnSilica's IP Portfolio: Proving Differentiation and Efficiency

- ✓ Our IP is focussed on
 - ✓ Cryptography,
 - ✓ Communications and mmWave,
 - ✓ Radar, and
 - ✓ Analogue Sensing and Control
- ✓ We have developed cutting edge IP for Post Quantum Cryptography (PQC) relevant to all our target markets

EnSilica Revenue Model



Key Technology Drivers

1

AI at the Edge

- AI at the Edge needs mixed signal / RF to interface to the real world, low power and high-density digital designs

2

Cybersecurity

- Cybersecurity drives re-design to meet new legislation and post quantum cryptography standards

3

Our IP library

- Reduces time to market and enhances our competitive position, includes Radar, RF, beamforming, Cryptography, Mixed Signal sensing and control

What differentiates us

- ✓ IP – Cryptography; Radar; Analogue Mixed signal; RF
- ✓ Know-how – 23 years of building our knowledge and associated IP
- ✓ Scarcity value – there are not a lot of companies who do what we do
- ✓ What we do is not easy – others can do that
- ✓ You don't always need the latest technologies, but we can do it if required
- ✓ AI at the Edge needs mixed signal / RF to interface to the real world, low power and high-density digital designs
- ✓ ***We are good at these things***

As the demand for higher data rates and the push for more power-efficient systems increases at pace, ASICs are becoming essential for the next generation of terrestrial and satellite telecommunications equipment.

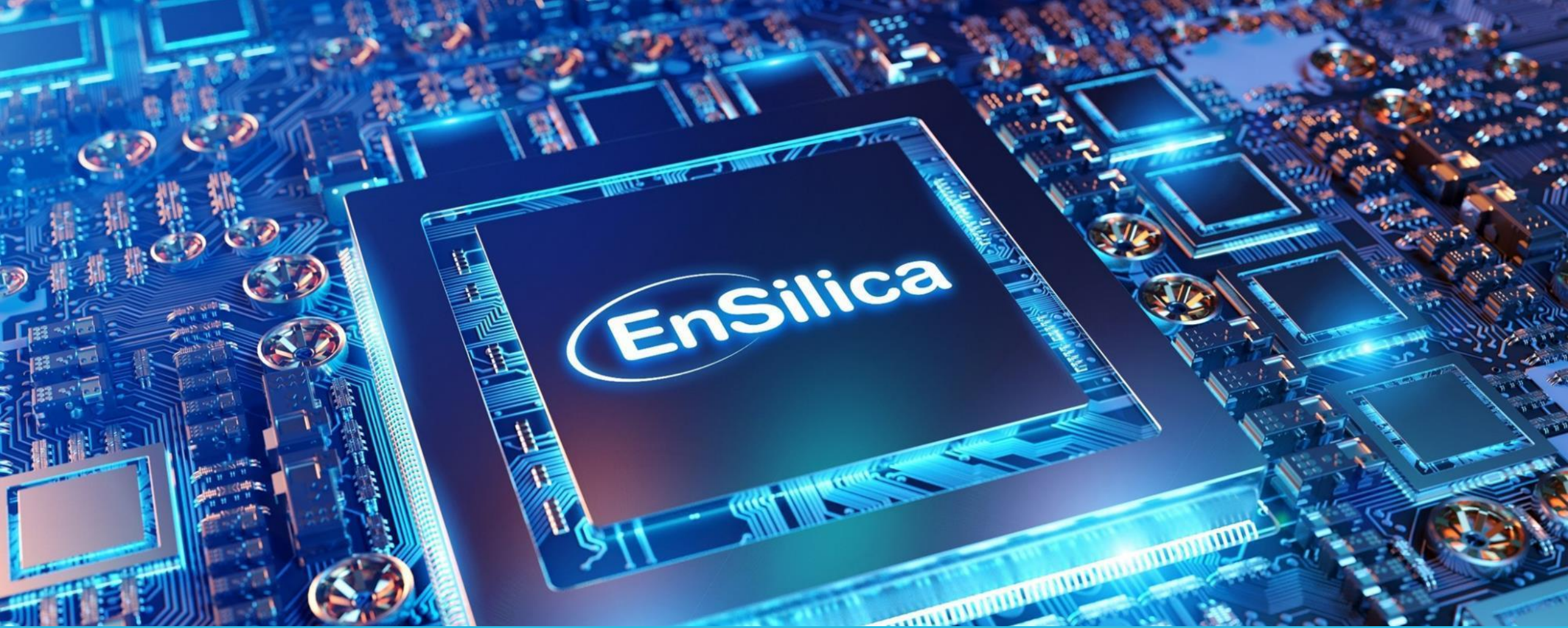
Our ability to both develop and deliver highly complex solutions continues to drive some of the world's leading equipment manufacturers to adopt EnSilica's ASICs, making us an ideal partner of choice.

Our Investment Case

- ✓ Have delivered solid financial and operational growth since IPO
- ✓ We **are** successfully delivering to “SatComms”, automotive and industrial sectors now
- ✓ There are strong growth prospects in all segments
- ✓ The fabless ASIC supply model is proven
- ✓ Scaling is underpinned by our own IP and secured projects
- ✓ Delivering growth in annualised recurring revenues (ARR)
- ✓ Experienced management team to continue growth strategy
- ✓ Further development of our significant pipeline and order book now valued at \$510m

EnSilica's Vasiliki Xiradaki named among UK's best young engineers





Thank you



Presenter - Mark Hodgkins, Executive Chair

Mark started working with EnSilica in 2016. He is a chartered accountant and was formerly a partner at both Grant Thornton and Ernst & Young, with a particular focus on M&A. Mark left the profession in 2005 and since then has held several executive positions.

- Significant experience in leadership positions of listed businesses
- Focussed on Board performance evaluation, governance compliance and investor relations.



What is an ASIC?

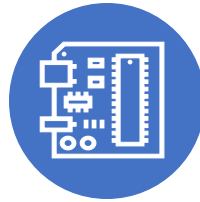
An application-specific integrated circuit is a custom chip designed for a specific purpose.

ASICs are used in a wide range of applications and are invaluable components of modern electronic devices. They will continue to play a vital role in both the green transition and the adoption of Edge AI



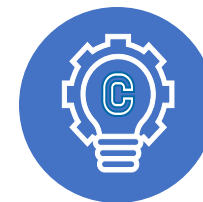
TYPICAL APPLICATIONS

- ✓ Automotive (incl. electric vehicles)
- ✓ Connectivity for LEO satellite
- ✓ Industrial IoT and AI
- ✓ Smart healthcare
- ✓ Networking and 5G
- ✓ Consumer devices



DIFFERENTIATORS

- ✓ Novel functionality
- ✓ Lower-power consumption
- ✓ Smaller form-factor
- ✓ Lower-cost (in large volumes)
- ✓ Improved data security
- ✓ Supply chain resilience
- ✓ Intellectual property protection



MAJOR OEMs USING ASICs

- | | |
|------------|-----------|
| ✓ Google | ✓ Square |
| ✓ Fortinet | ✓ Apple |
| ✓ Huawei | ✓ Siemens |
| ✓ Cisco | ✓ Tesla |

EnSilica - Strategic Positioning



A CLEAR MISSION

- ✓ EnSilica - **shaping better futures through innovative semiconductor solutions**
- ✓ **ASICs are first of a kind solutions for first of a kind products**



STRONG EXISTING FOOTHOLD

- ✓ Our business supports a global client base
- ✓ Delivering robust financial and operational growth
- ✓ Experienced management team with a strong track record of delivery and **c.170 employees worldwide**



HIGH GROWTH MARKETS

- ✓ Focused on high-growth opportunities in **SATELLITE COMMS, INDUSTRIAL, AUTOMOTIVE, and HEALTHCARE sectors**
- ✓ **Position underpinned by a strong IP portfolio**



POSITIONED TO CAPITALISE

- ✓ EnSilica has **pipeline and order book** of projects with a potential cumulative LTV of \$510m
- ✓ Proven business model that scales and delivers returns
- ✓ Delivering on plan, strong FY 2024 and trading in line for FY 2025

Expanding Markets for ASICS

AUTOMOTIVE



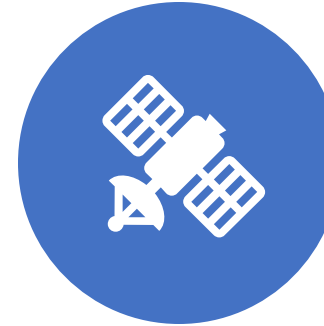
- Vehicle electrification
- Enhanced safety features
- Edge AI impact
- Resilient connectivity

INDUSTRIAL



- Enhanced cybersecurity requirements
- Edge AI impact
- Increased intelligence, improved quality & waste reduction

SPACE / COMMS



- Merging terrestrial and non-terrestrial networks (NTN)
- Leading market position in advanced comms ASICS
- NTN market growth predicted to be 38.2% CAGR
- EnSilica secured £10M+ backing from UK Space Agency

HEALTHCARE



- Aging population
- Complex drugs
- Increased awareness of fitness
- Cloud AI based diagnostic services

EnSilica's IP Portfolio: Proving Differentiation and Efficiency

- ✓ To scale a fabless semiconductor business, a strong IP portfolio is required, aligned with market needs and current trends
- ✓ We develop our IP to make our offering to potential customers more compelling, which promotes higher gross margins on the supply revenue element due to lower cost to develop the ASIC
- ✓ Our IP is focussed on Cryptography, Communications and mmWave, Radar, and Analogue Sensing and Control
- ✓ We have developed cutting edge IP for Post Quantum Cryptography (PQC) relevant to all our target markets
- ✓ We also licence our IP to other chipmakers, but not to competitors (whether real or perceived)
- ✓ By developing and reusing IP within our focussed business units we aim to make ourselves a “go to” provider for key application areas within our target market

Our Strong Cryptographic IP Addresses all our Verticals

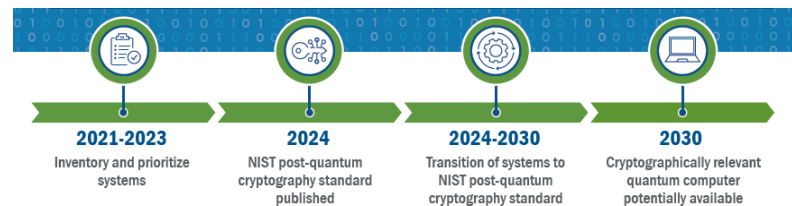
EnSilica's position

- ✓ EnSilica has been licensing its classical cryptography IP to semiconductor companies for over 15 years
- ✓ The latest IP includes Post Quantum Cryptography cores using algorithms which are selected by the standard setting bodies to be resistant to attack by Quantum computers
- ✓ This IP has been licensed to a leading fabless semiconductor company for use in a 5nm networking chip. We expect further IP sales in this critical area



Legislation driving change

- ✓ US guidelines and EU legislation are requiring the re-design of many ASICs
- ✓ This will either enhance the installed security or add PQC support
- ✓ EnSilica is already re-designing an industrial ASIC to enhance the cryptography to meet new EU legislation
- ✓ Given our strong IP and market drivers we expect strong growth in IP licensing and ASIC supply revenue based on our PQC IP



EnSilica Revenue Growth Model - an Illustration

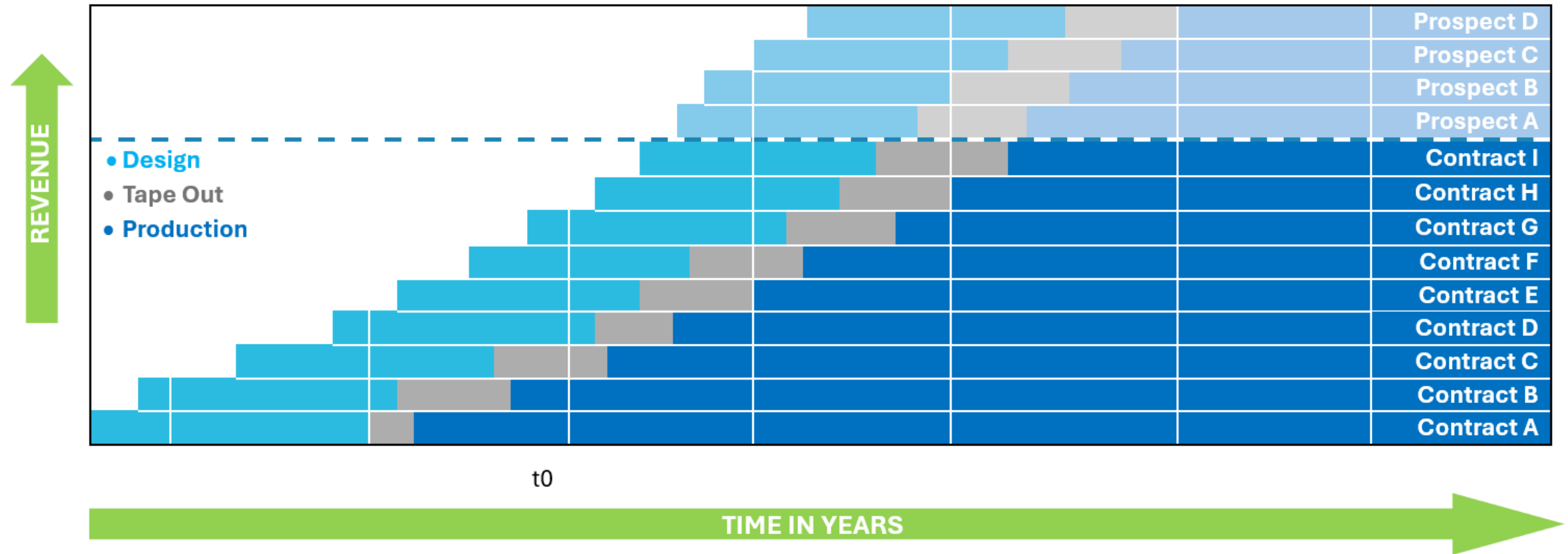


Illustration on how our Annualised Recurring Revenue (ARR) is building over time

ASICs Market - Strong Momentum Driven by Global Mega-trends

Customised ASIC chips are widely and increasingly used to differentiate market-leading products.

In 2021, the market opportunity was about \$119Bn and projected to grow substantially.

We are initially aiming to capture 0.5% of these markets, aligning with our specialist expertise and IP.

AUTOMOTIVE



\$50bn

(2021)

CAGR¹ 21-30 13% - \$150bn

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Material Traction in Satellite Communications Market

Market growth set to continue...

- ✓ The Starlink LEO constellation has demonstrated the demand for satellite based broadband connectivity
 - ✓ Each current Starlink terminal has around 600 chips.
 - ✓ Two types: i) RF/mmWave chips and ii) beamformer chips
- ✓ Opportunities with more than 10 other satellite constellations such as OneWeb, Telesat, Kuiper(Amazon) and the EU's IRIS2
- ✓ Applications include consumer broadband, automotive and mass transportation
- ✓ Lowering the terminal cost and power is key for mass market adoption
- ✓ Mass market adoption being driven by new 5/6G standardisation of non-terrestrial networks (NTN)

Developed ASIC for next generation satellite payloads:

- ✓ 2021 NRE revenues commenced for design of ASIC for use in LEO satellites with US based communication service provider
- ✓ Royalty revenue per chip, expectation of \$15m over five years from 2024

And wins for use in land-based user terminals

- ✓ EnSilica has developed a RF/mmWave chip; €2.2m of funding in 2019 from ESA/UKSA. An improvement on state-of-art by peer reviewed paper
- ✓ €5m contract to develop a new innovative Beamformer chip
- ✓ August 2023 - Lead customer secured, committing €2.5m towards production including order for first 50k devices for use in land-based user terminals



Significant Automotive Market Progress

Market driven growth set to continue...

- ✓ Number of chips per car increasing for EV and advanced safety features
- ✓ Next Generation Features
 - ✓ Advanced Driver Assistance Systems
 - ✓ Electrification
 - ✓ Infotainment
 - ✓ Digital instrumentation
 - ✓ Driver awareness
 - ✓ Resilient connectivity
- ✓ EnSilica is an approved supplier to automotive and market leaders such as Continental and Visteon

\$40m contract with Tier 1 supplier

- ✓ 2018 – \$1.8m NRE commenced on design of ASIC for a Tier 1 supplier to a high-end vehicle manufacturer
- ✓ ASIC is a key differentiating feature in the chassis control
- ✓ June 2022 – vehicle launch, up to 24 EnSilica ASICs per vehicle
- ✓ May 2023 – ASIC to be used in additional models
- ✓ \$40m revenue expectation over 6 years



Capitalising on Industrials Market

Typical Industrial ASIC Applications

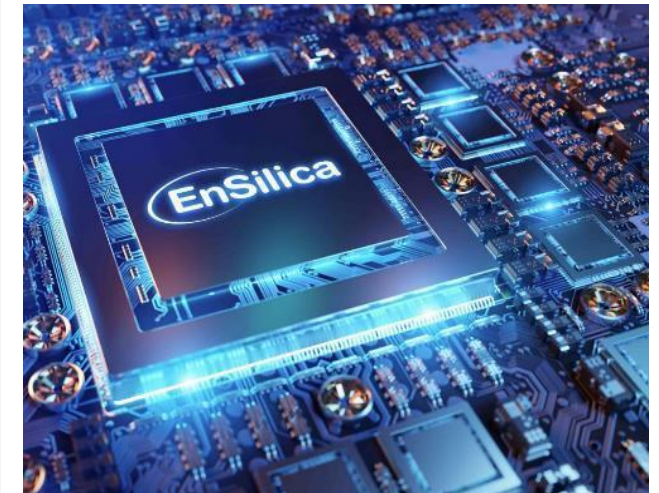
- ✓ Arm based system and bus controllers
- ✓ Pressure and flow sensors
- ✓ Gas sensors
- ✓ Chemical sensors
- ✓ Movement and occupancy sensors
- ✓ Motor and Solenoid controllers
- ✓ Torque sensor
- ✓ Inductive speed and position sensors
- ✓ Precision timers

Key disruptions

- ✓ Machine learning accelerator delivering **AI at the Edge**
- ✓ Enhanced cyber security driven by **EU Cyber Resilience Act and new PQC standards**

\$30m contract with leading European OEM

- ✓ July 2022 – Awarded contract to Design & Supply an ASIC for industrial and factory automation products
- ✓ Based on projected volumes by the customer, worth in excess of \$30m over seven years
- ✓ NRE design component commenced 2022 and is fully funded by the customer
- ✓ Production and supply expected to start Q4 calendar 2024



Strong EnSilica IP across Healthcare Sector Gaining Market Traction

Key market opportunities

- Continuous glucose monitoring (CGM)
- Blood pressure monitors
- Vital signs including BPM
- Electronic diagnostic testing
- Smart watches, rings and fitness trackers
- Women's health (Femtech)

Semiconductor sensors interface can measure

- Electrode sensing - ECG, heart rate, respiration rate
- Body temperature
- Optical sensing for Blood oxygen saturation (SpO2), heart rate and Glucose levels
- Electrochemical sensors for Glucose levels and virus detection

Next generation of product needs:

- Reduce size
- Increase the battery life
- Reduce cost
- Provide multi-vendor sourcing
- Novel sensors interfaces

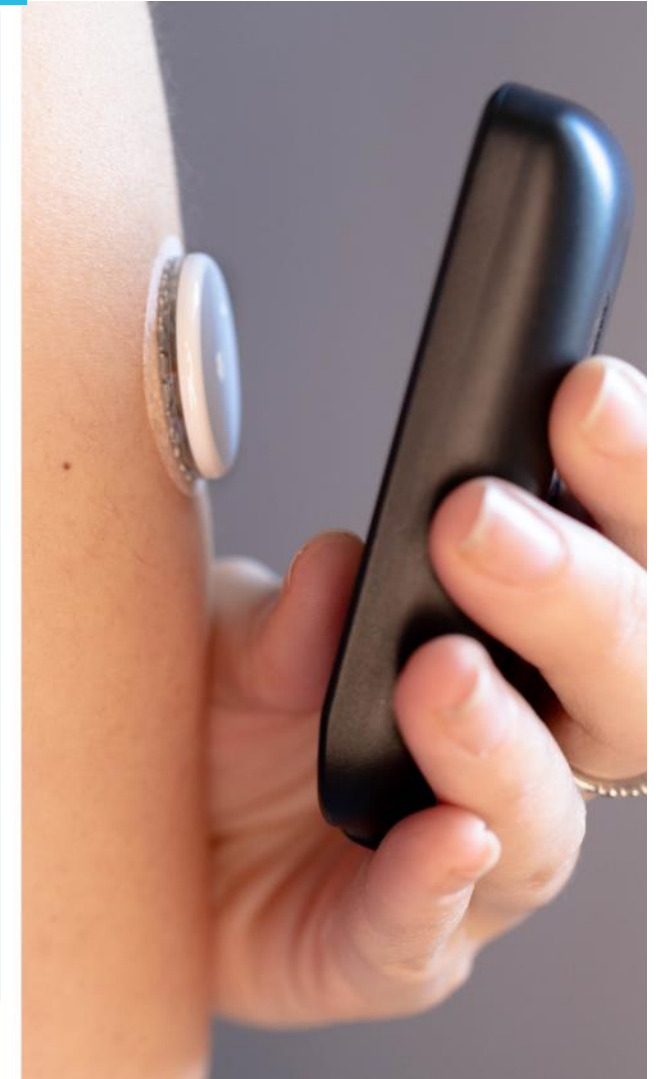
Our IP includes wireless interfaces such as blue-tooth low-energy and NFC radios and sensor interfaces

In 2021 we developed a prototype with the following sensor functions:

- ✓ ECG
- ✓ Optical signals including Heart rate, SpO2 and near infraRed spectroscopy and fluorescent Glucose Sensing
- ✓ Temperature
- ✓ Differential capacitance
- ✓ Works battery less from contactless reader (NFC)

The chip is already being evaluated by customers with the intention to use the reference design as a basis for an ASIC or develop an ASSP (sale to multiple customers)

The Marketing of this chip has resulted in customer enquiries for wider healthcare applications.



Our People & Culture

Strengths	Challenges	Actions & Plans						
<table><tr><td>Engineers</td><td>141</td></tr><tr><td>Sales Team</td><td>6</td></tr><tr><td>Finance and Admin</td><td>23</td></tr></table> ✓ High proportion of graduates, second degree level and PhDs ✓ High level of equity participation ✓ The variation we have in our workload is seen as attractive to our current and future employees	Engineers	141	Sales Team	6	Finance and Admin	23	✓ To support our growth, we need to grow new talent and attract additional experienced talent. Competition is strong ✓ Our people are seeking value creation, interesting work and a supportive culture. We seek to provide this ✓ We aim to give our staff a varied workload with a mix of work. This allows work on IP development as well as chip design projects	✓ We have an active graduate recruitment scheme - UKESF ✓ We actively support the Women in STEM schools programme with local schools ✓ Apprenticeship scheme - Engineering Trust ✓ We are actively pursuing teams of qualified engineers who are looking for interesting assignments
Engineers	141							
Sales Team	6							
Finance and Admin	23							