



Next Gen Wireless Micro Edge-AI SOC

Vijay Muktamath

Founder & CEO Sensesemi Technologies

EXECUTIVE SUMMARY

ABOUT

Sensesemi's is creating a next-generation data-driven wireless AIoT SoC, an exciting venture with significant potential across industries.

Technology

AI-Enabled Secure MCU with BLE for Intelligent and Connected SoC (System-on-Chip) to solve Low power, latency and decision at the **sensor node**.

OPERATIONS

Team	60 Years of cumulative experience in SOC and Products
Headquarters	Bangalore, India
Business Model	Sale of SoCs

WHY US

- The market for AIoT is closed to 30 billion nodes
- There are 5-8 companies targeting this market for tomorrow
- Sensesemi is growing with LOI traction (2 secured) for product SenseSoC
- The cost and feature rich for node intelligence chip makes us stand out with our customers on Performance and low power

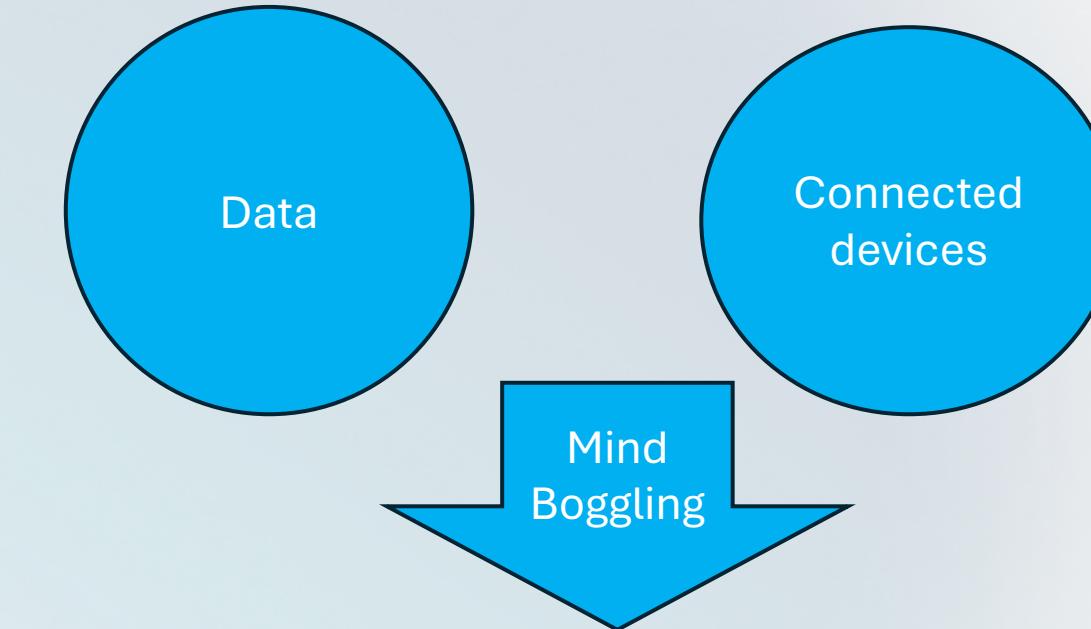
FINANCES

 Funding Ask \$3 M (Term-sheet for \$1.2 M)	 DESIGN LINKED INCENTIVE	GOI (Grants) Secured \$2 M
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THE PROBLEM

- Humongous data sent to cloud leading energy inefficiency, Privacy and security breach
- Low power and accurate intelligence to manage the data at the Sensor node is missing

160 ZB data is generated in cloud today



20 Billion Devices connected today

32 ZB is generated at the Edge Device, which will be 750 ZB by 2030



SENSESEMI'S FLAGSHIP PRODUCT

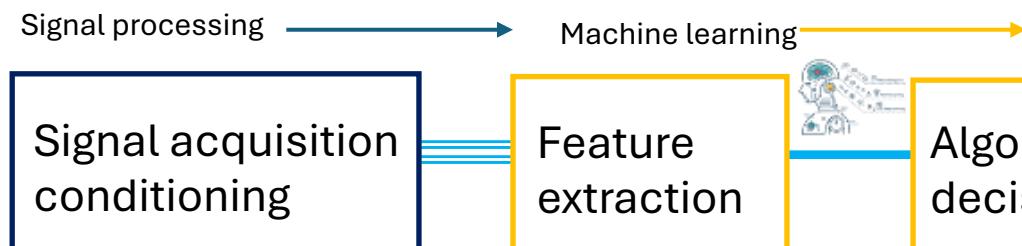
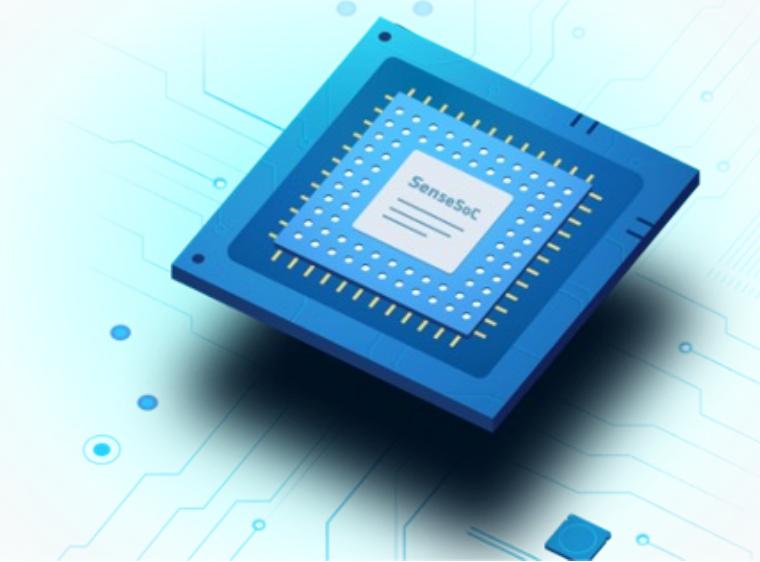
BRINGING AI TO SENSOR NODE

Features

- **SenseNPU™ - Novel Neuromorphic AI RL Engine**
- Powerful MCU with low power vector processing
- End-to-end crypto-based security in hardware
- Mesh network for data collaboration with BLE
- Novel On-Chip calibration for increased Performance

USP

- >10x reduced power with Neuromorphic AI Compute
- Reinforcement Learning AI engine for real-time learning and inference
- Verticalized SoC Product for high volume market (IoT)



Enhanced data driven machine learning

~2x Power Efficiency
Real World Signal Inputs

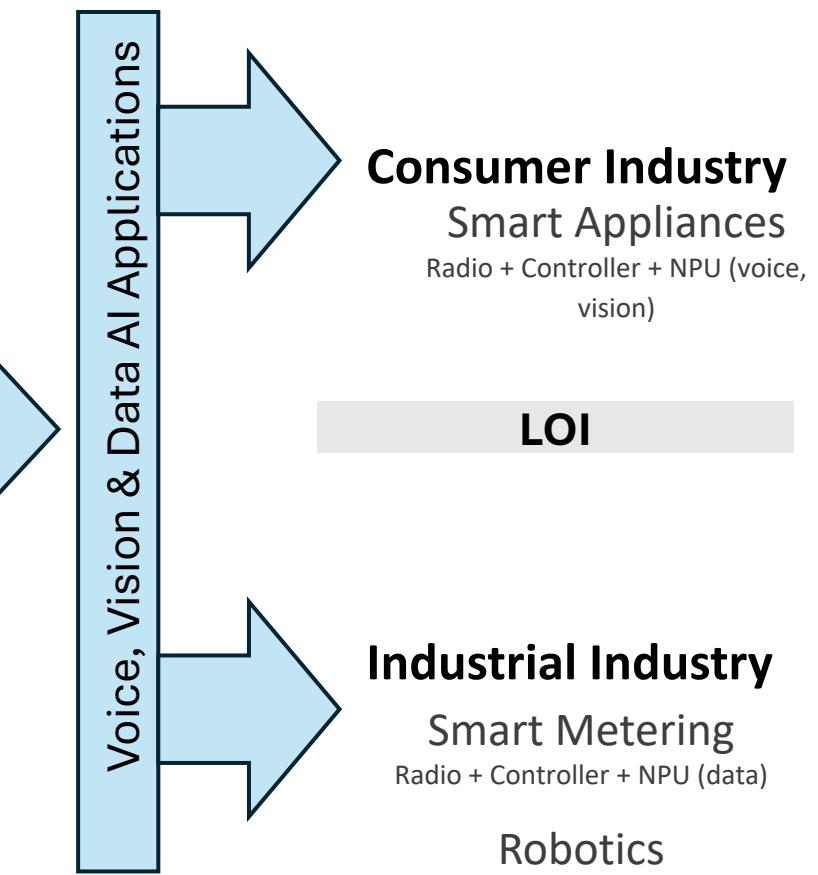
4x improved signal Processing & 15x on ML

>30x Faster ML Processing
>10x Lower Power

SenseNPU™

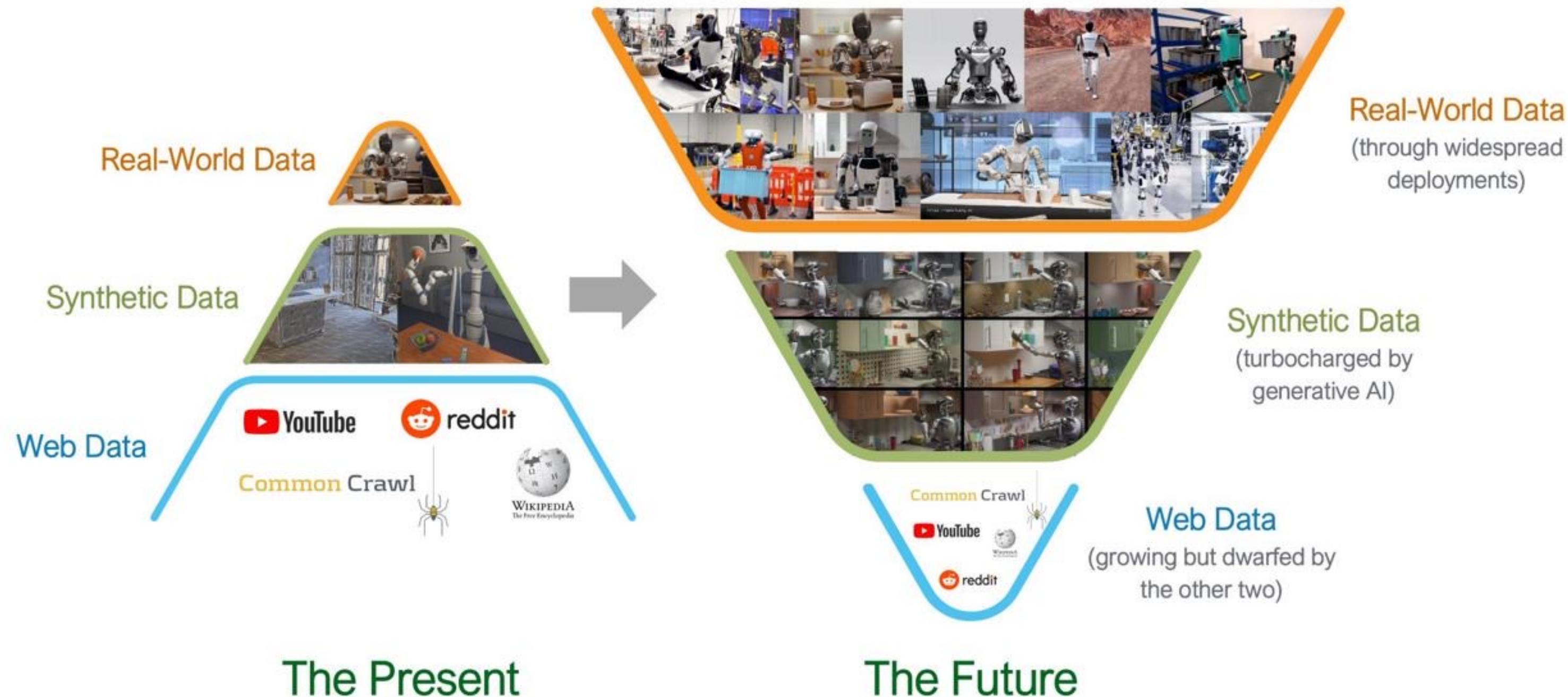
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SenseSoC
450x faster ML with SenseNPU™ & MCU



WHAT SENSESOC-200 WILL DO

Turn the **Data Flywheel**, Flip **Data Pyramid** Upside Down





TRACTION FOR SENSESOC-200

CONSUMER IOT

Smart Lighting

Wearables

Voice enabled Toys



INDUSTRIAL IOT

Voice Enabled Controller

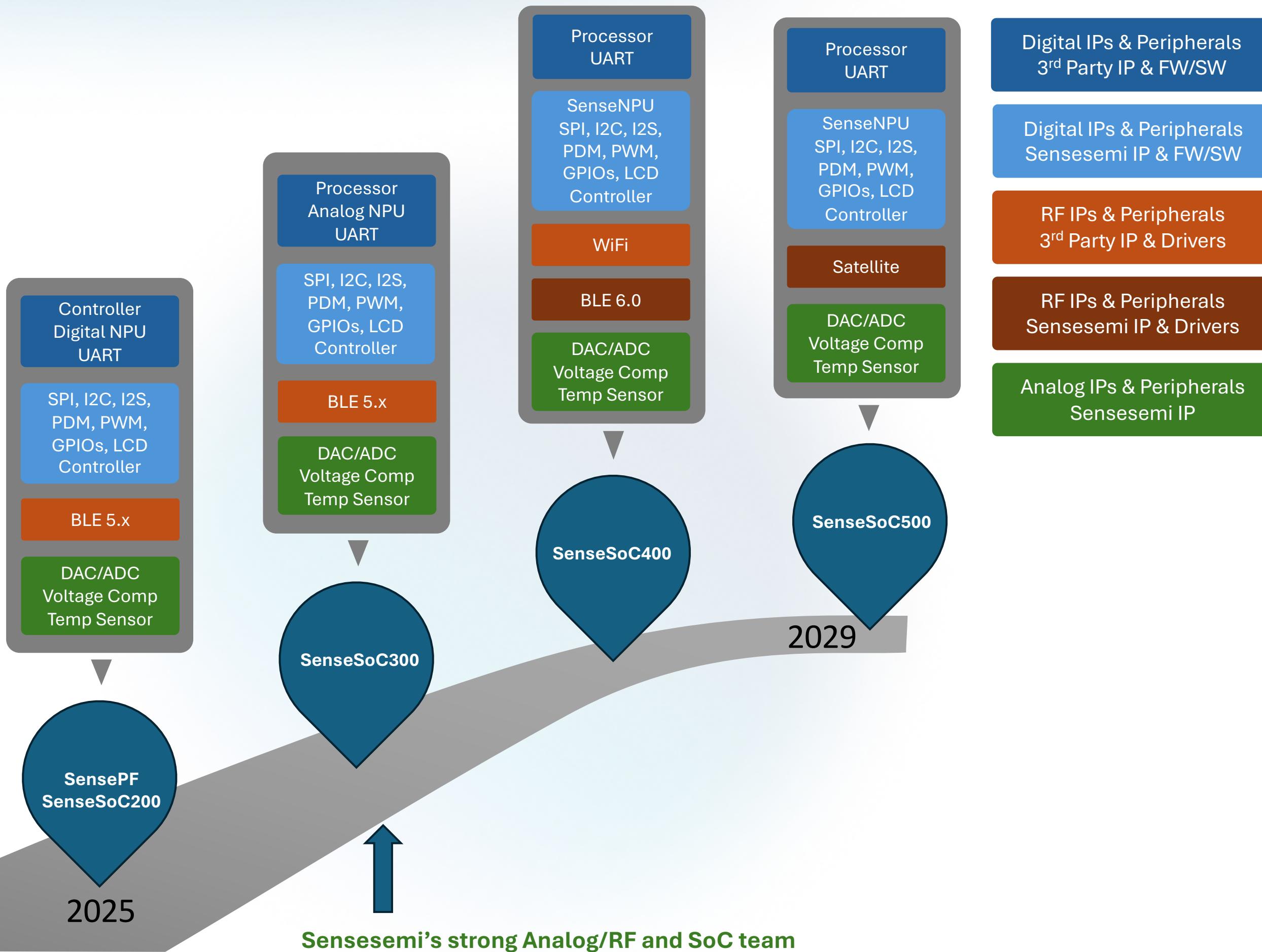
Smart Metering

Industrial Automation



Started talking to as many customers as we can in Industrial IOT on the product fit

TECHNOLOGY ROADMAP



Sensesemi IP Roadmap

- In-memory Analog Inference NPU
- BLE 6.0 (RF/Analog)
- Analog-Frontend blocks (Low Power)
- High-speed peripherals
- DSP & ML Algorithms

NPU Differentiation

- Low-power, high performance NPU
- 3 phases of NPU development:
 - Digital NPU – 3rd party digital IP
 - Analog NPU – 3rd party analog IP
 - SenseNPU – Sensesemi analog IP

Analog Peripherals

- Accurate sensor data inputs
- Capture data flow, Energy and Health sensors.

SENSESOC APPLICATIONS



- **SenseSOC-200 will be used in AC/Kitchen appliances for Industrial and House holds**

- Appliances will be voice-controlled with intelligence for predictive Analysis
 - **Voice Control**- Allowing users to operate the AC through voice commands
 - **Predictive Analysis**- Utilizing data and machine learning techniques to predict maintenance
 1. Predicting optimal temperature based on usage patterns and weather conditions
 2. Anticipating and alerting users to potential maintenance

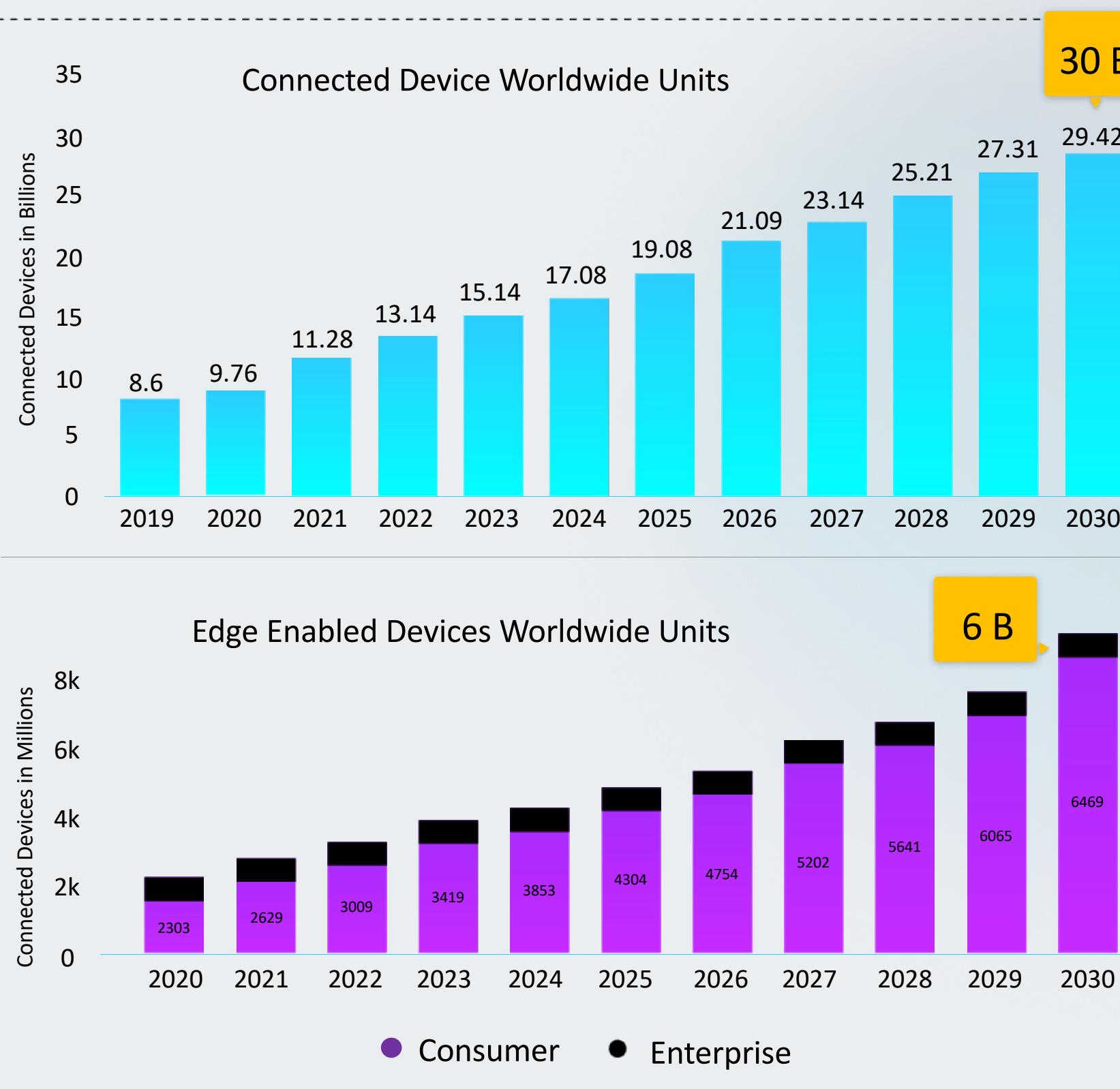
- **SenseSOC-200 will be in every Smart Meter**

- Gas, electricity and water for Industrial and Household
 - **Real-Time Monitoring**: Provide users and utility providers with real-time data on consumption, enabling better management and understanding of resource usage
 - **Data Analytics**: Offer insights through data collection and analysis, helping to optimize usage patterns and enhance efficiency
 - **Predictive Maintenance**: Identify potential issues with the infrastructure before they become significant problems, reducing maintenance costs and improving service reliability

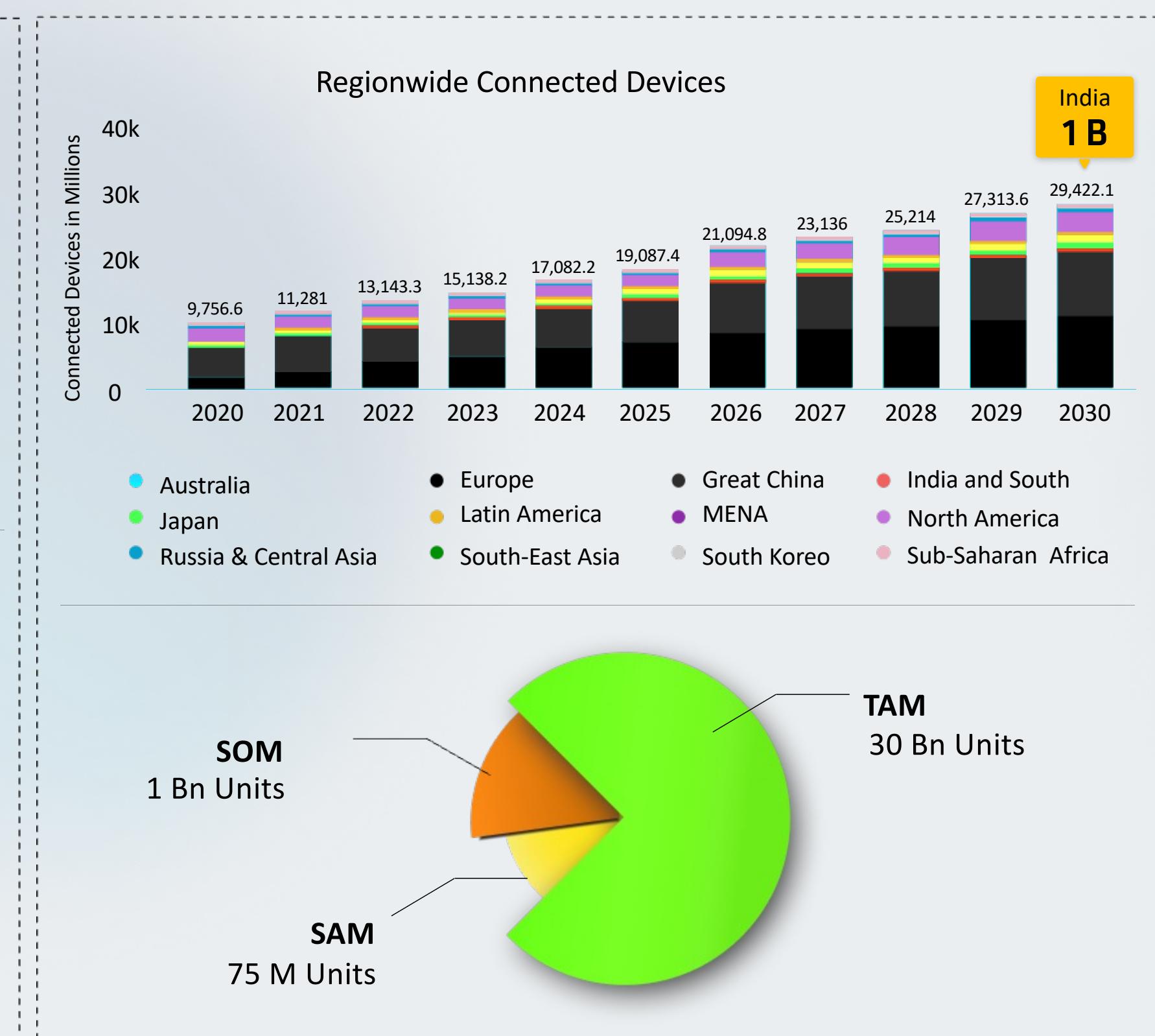
MARKET POTENTIAL



GLOBAL CONNECTED SHIPMENTS



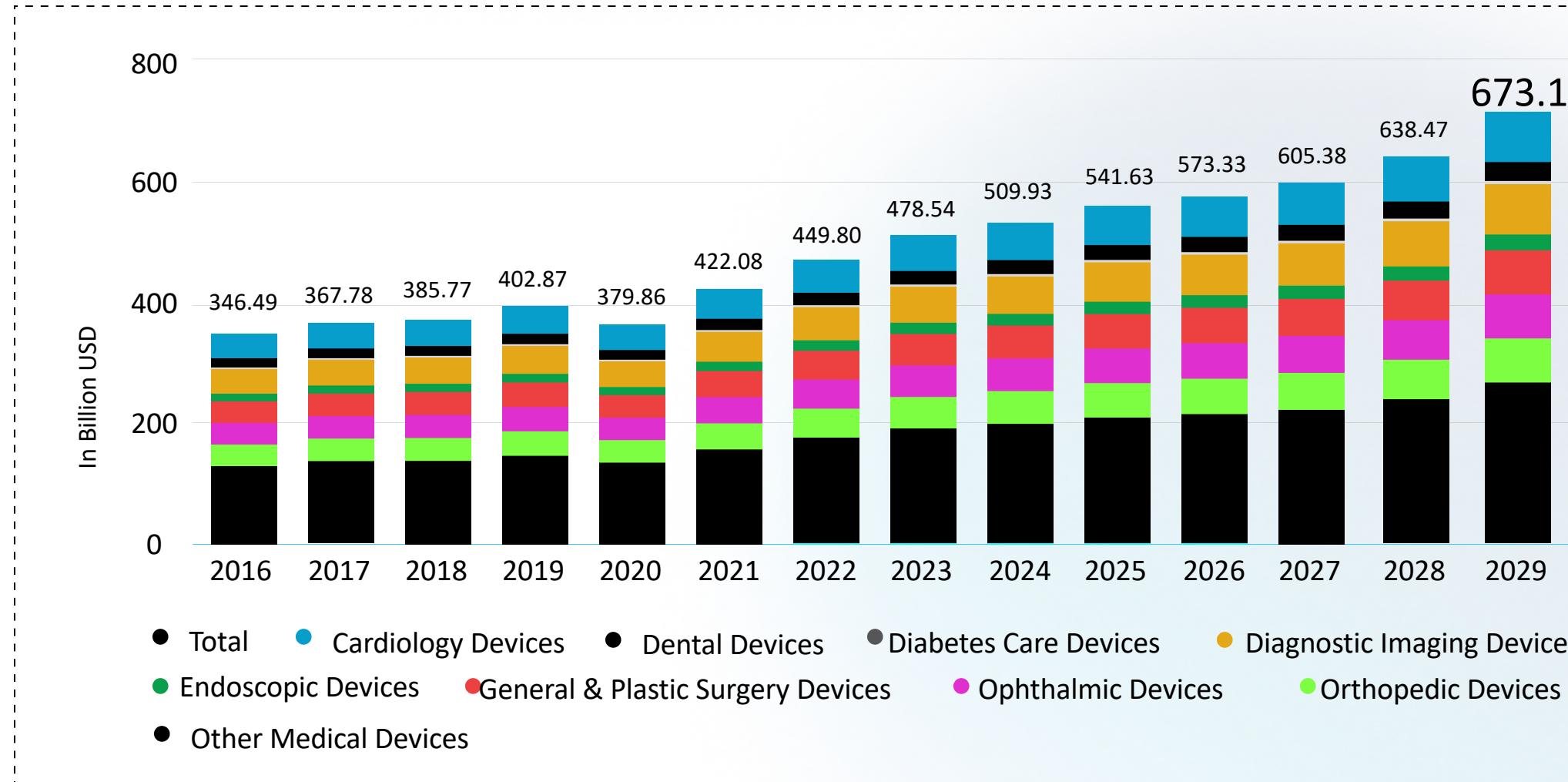
TAM, SAM, SOM



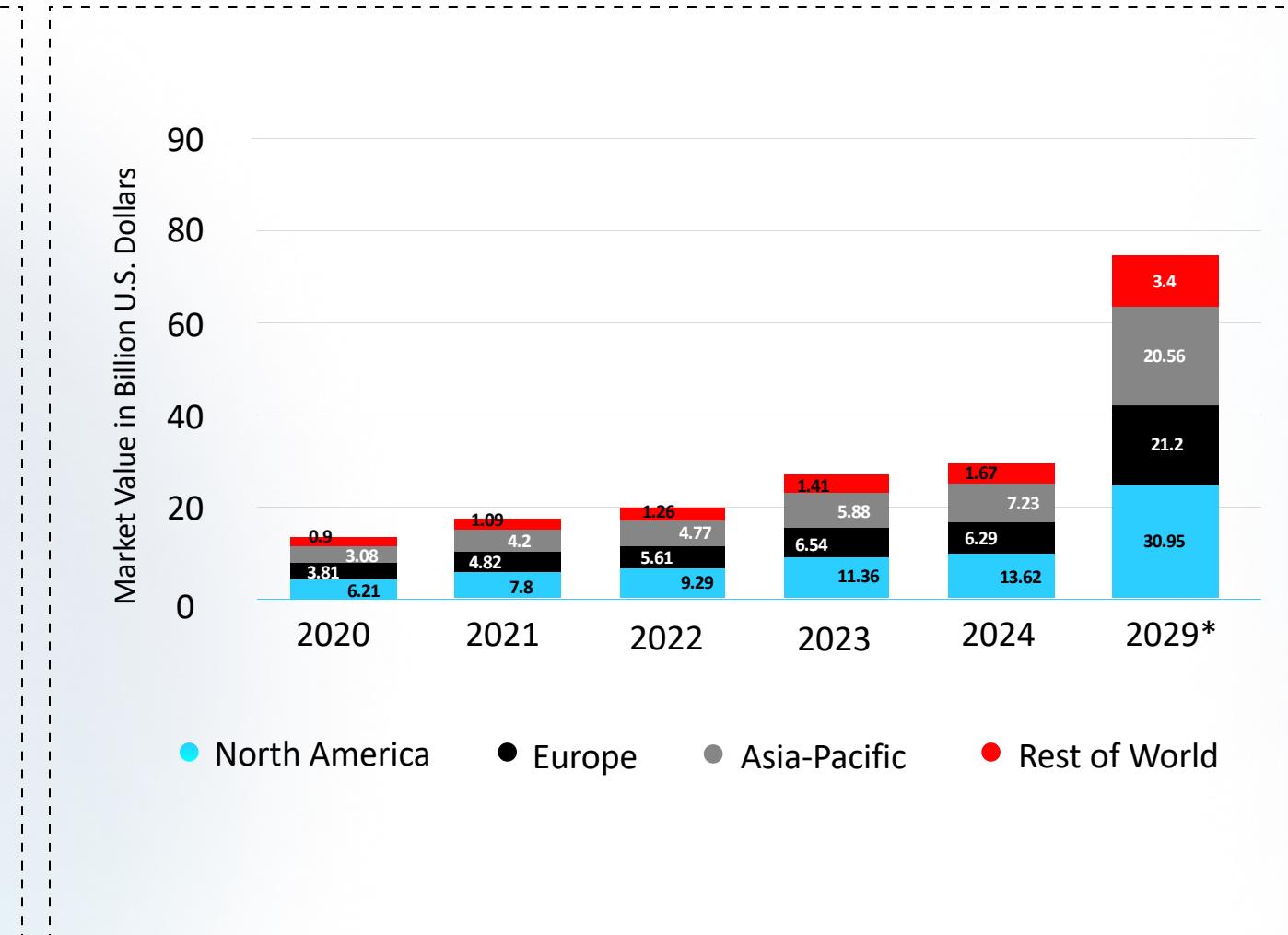
GLOBAL HEALTHCARE MARKET FOR SEMICONDUCTORS



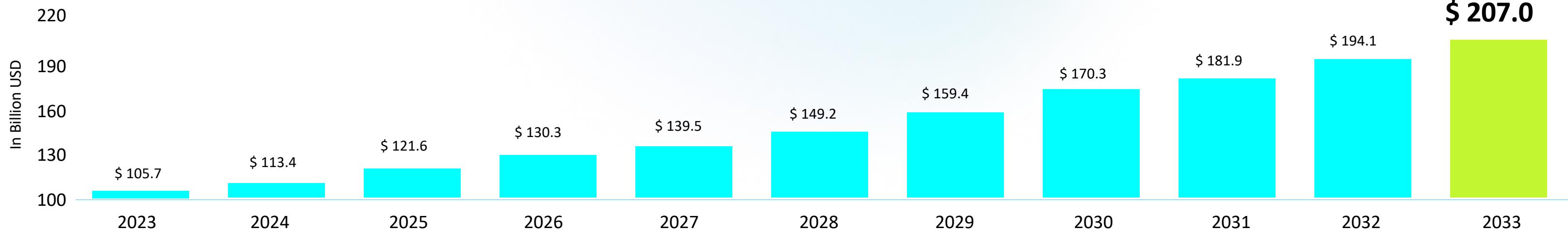
GLOBAL MEDICAL DEVICES MARKET



GLOBAL MEDICAL WEARABLES MARKET

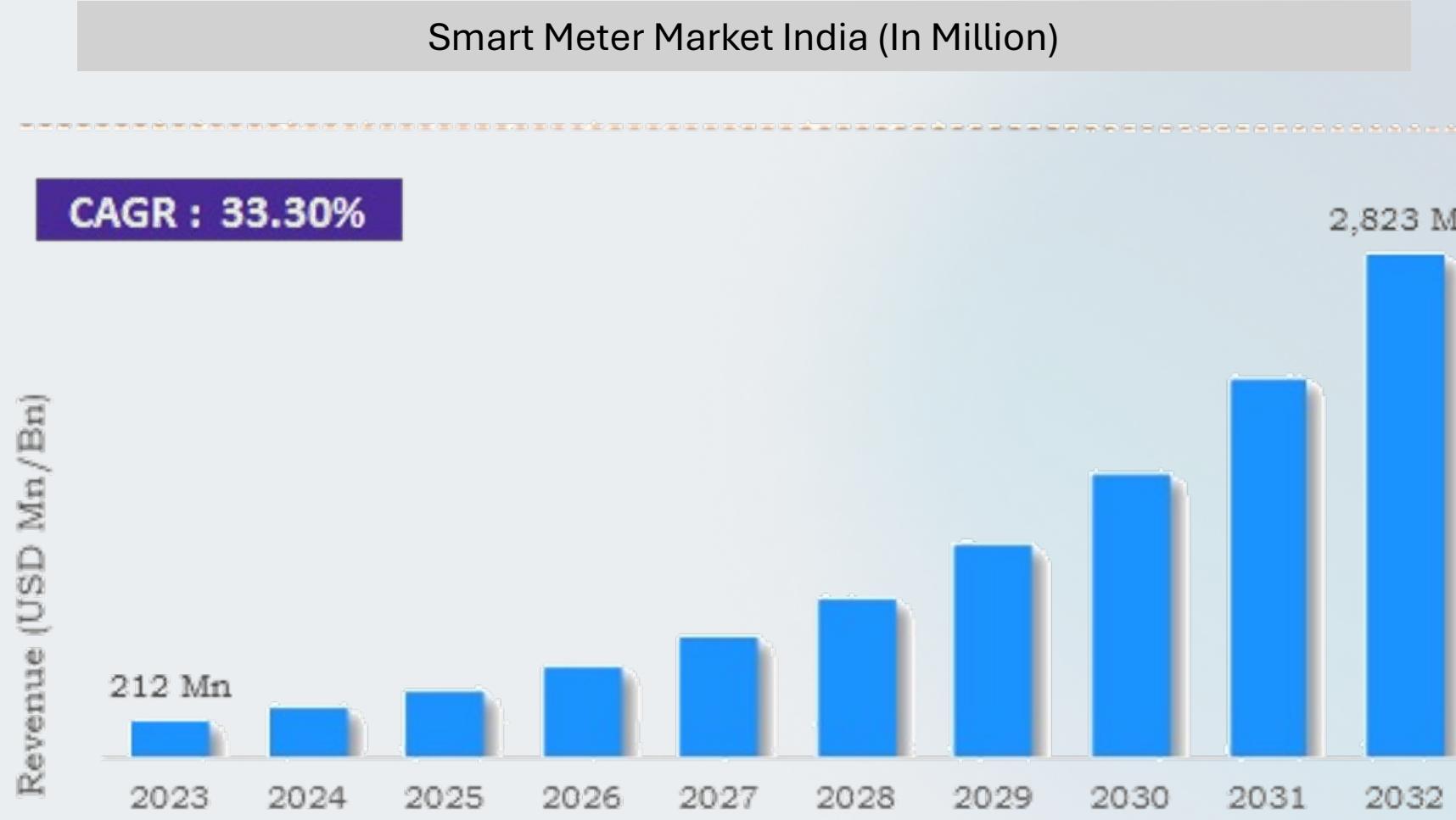


GLOBAL IMPLANT DEVICES MARKET



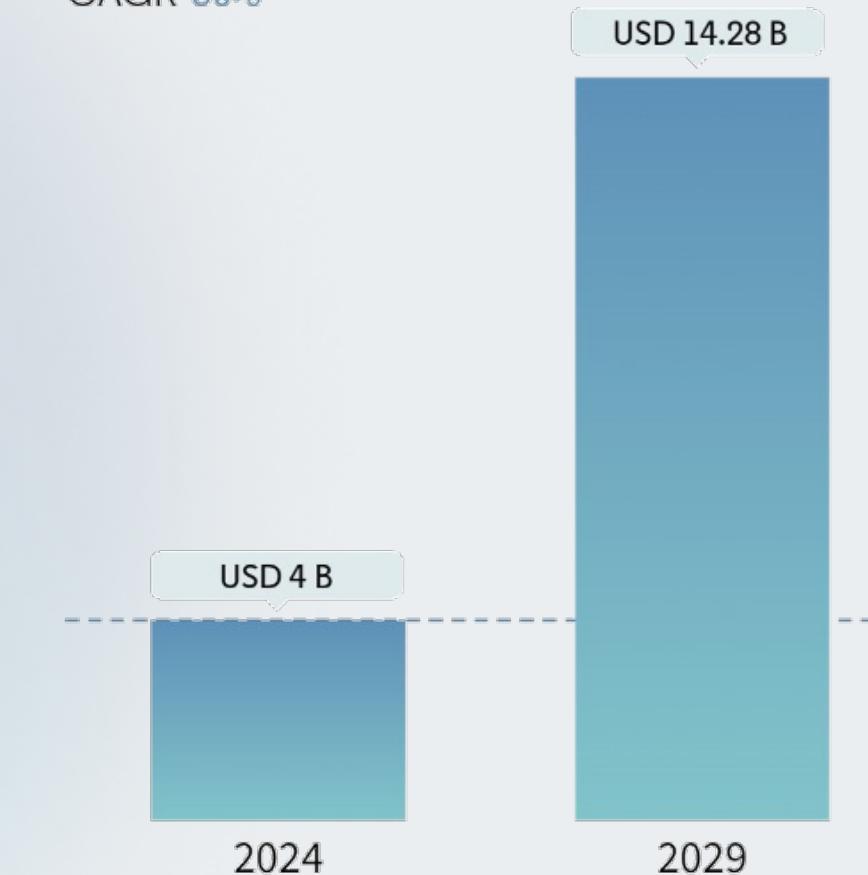
INDIA MARKET POTENTIAL AIOT

INDIA MARKET FOR INDUSTRIAL IOT



INDIA MARKET FOR CONSUMER IOT

India Smart Home Market
Market Size in USD Billion
CAGR 30%



- SENSESEMI has LOI of 1.2 M units yearly for smart metering
 - Have 240 Million units Roadmap for the OEM
- SENSESEMI has 10 Million units per year soft commitment into Voice-Enabled Smart Appliances for 2026

OUR TEAM



VIJAY MUKTAMATH | CEO

20+ Years in Semiconductors and Embedded Products

Ex-Asarva (VP), Ex-BVA (Research Fellow, Aus),
Ex-LSI, Ex-NEC (Aus) and MS (Aus)



NAMIT VARMA | VICE PRESIDENT

22+ Years in SOC Architecture and Design

Ex-Achronix, Ex-Intel, Ex-TI and
IIT-B (Mumbai)



DR. MANJUNATH K | TECHNICAL DIRECTOR

10+ Years in Analog Mixed Signal Design

Ex-AMD, Ex-Skyworks, Ex-Karmic and
PhD (Oregon University, USA)



ANUROOP IYENGAR

Advisory Board

Deep Tech Entrepreneur
Machine & Human Conversation Expert



VISHY M | CHIEF SOC ARCHITECT

30+ Years in Chip/System Architecture

Ex-Centillium, Ex-Arcus, Ex-ITI and
IIT-M (Chennai)

TEAM EXPERIENCE

6 Decades of SOC design

14 Test chips

08 Productions SOCs



COMPETITION



USA



JAPAN



ISRAEL



GERMANY



USA



WIRELESS

Energy-efficient DSP/ML Compute

- > 2x improvement in energy efficiency
- > 30% increase in Coremark Performance
- 8x uplift to DSP performance
- Low power Analog Peripherals

Low Power NPU

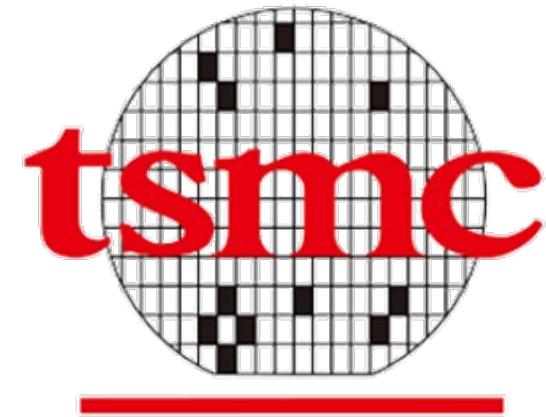
- < 10mW for KWS
- < 5mW for Image detection
- Up to 256 MACs configuration

Roadmap (Ultra Low Power NPU)

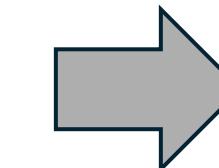
- < 500 uW for KWS
- < 100 uW for Image detection
- Analog MACs

40% Lower Cost

PARTNERSHIP & VALIDATION



Having ARM partnership gives us to build the AI Chips for future,
Faster to the Market with customer applications



REVENUE FORECAST OF SENSESOC

Revenue/Year	2026	2027	2028	2029	2030
SenseSOC (M units)	0.5	10	20	50	75
Revenue Before Tax US \$ M	2** (advance payment certification, Initiate production)	15	30	75	150

5 million SoCs in 2028 is a realistic base case

CLIENT FEEDBACK

Organize workshops with potential clients.
Understand their vision & align expectations
Sign LOIs

MARKETING

Engage at industry forums
Leverage Network
Showcase the unique parts of the Sensesemi solution



BUSINESS CASE

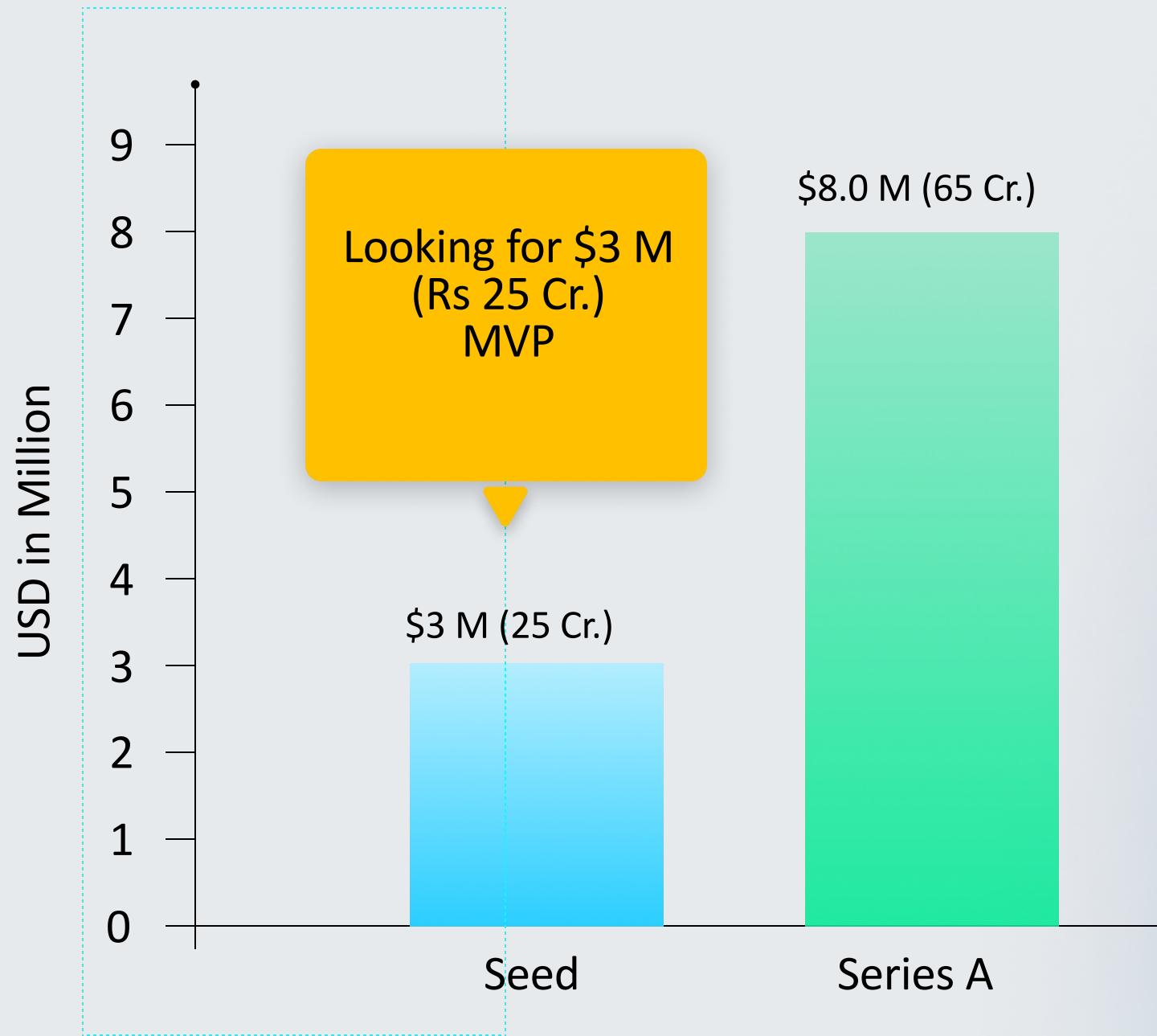
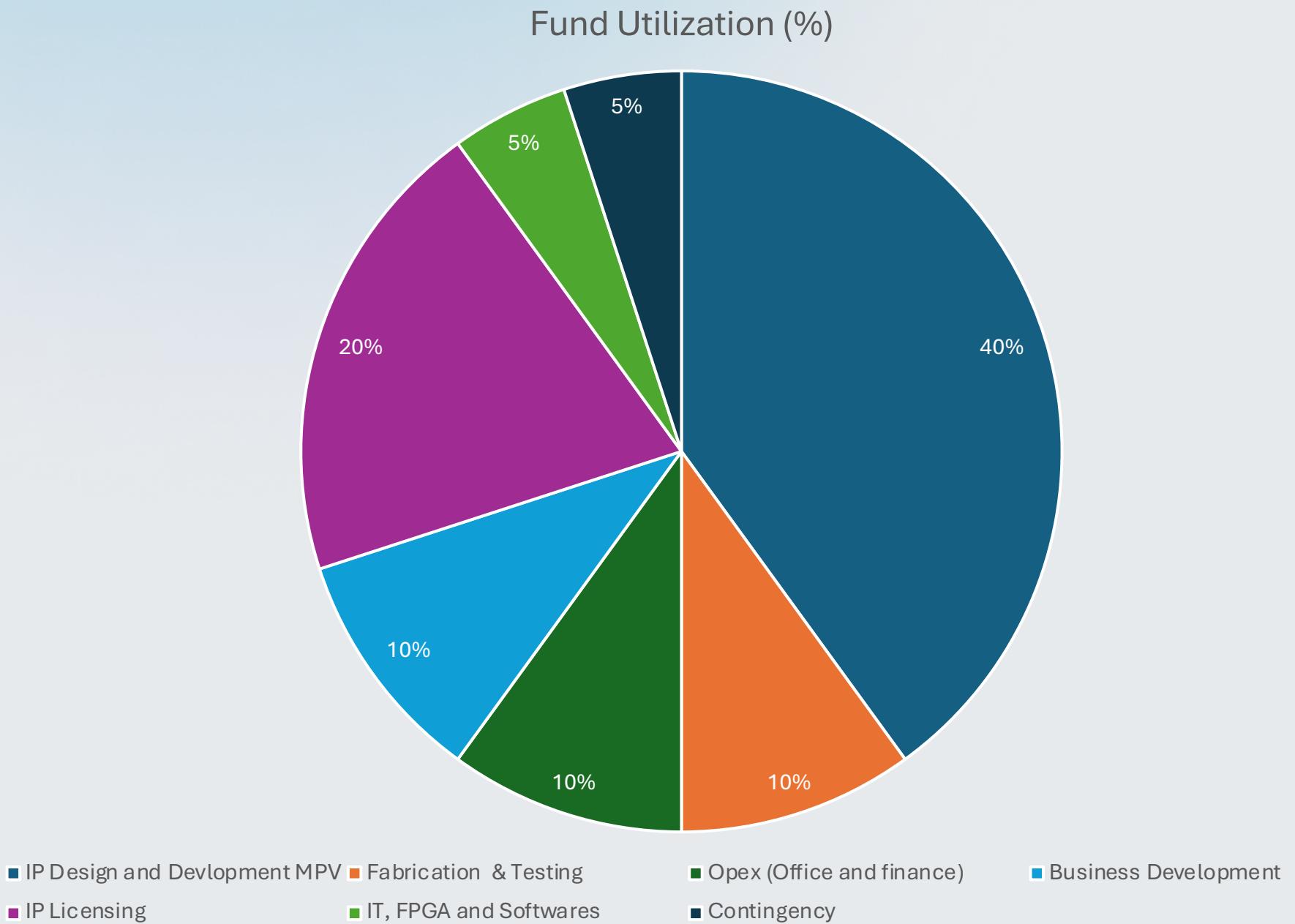
Articulate value proposition
Validate hypotheses with real world data
Enter into agreements with fabrication and other parts of the supply chain

RESEARCH

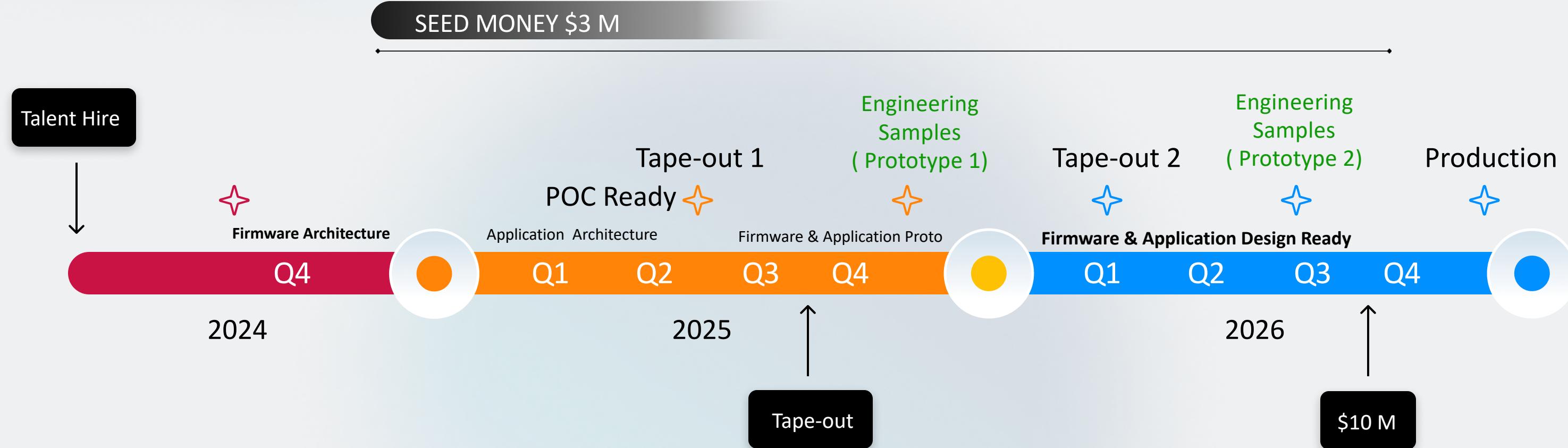
Interview Industry Veterans
Analyze reports
Understand macroeconomic trends

FUNDING ASK

FUNDING UTILIZATION FOR MVP



MILESTONES



MILESTONES

- IPs Procurement
- Proof Of Concept (POC) to Potential Customers using FPGA & Firmware
- SOC Execution
- 1st Test-chip Tape-out
- Testing and Evaluation Board & Initial Firmware
- One binding LOI from Customer for 0.5 M Units

MILESTONES

- 2nd Test Chip Tape-out & Testing, Evaluation Board
- Certification of BLE and Production
- 3 Customers for 2 M Units
- Production Ready & Application Codes Ready
- Binding LOI from Customers for 5 M Units
- IP Costs



THANK YOU



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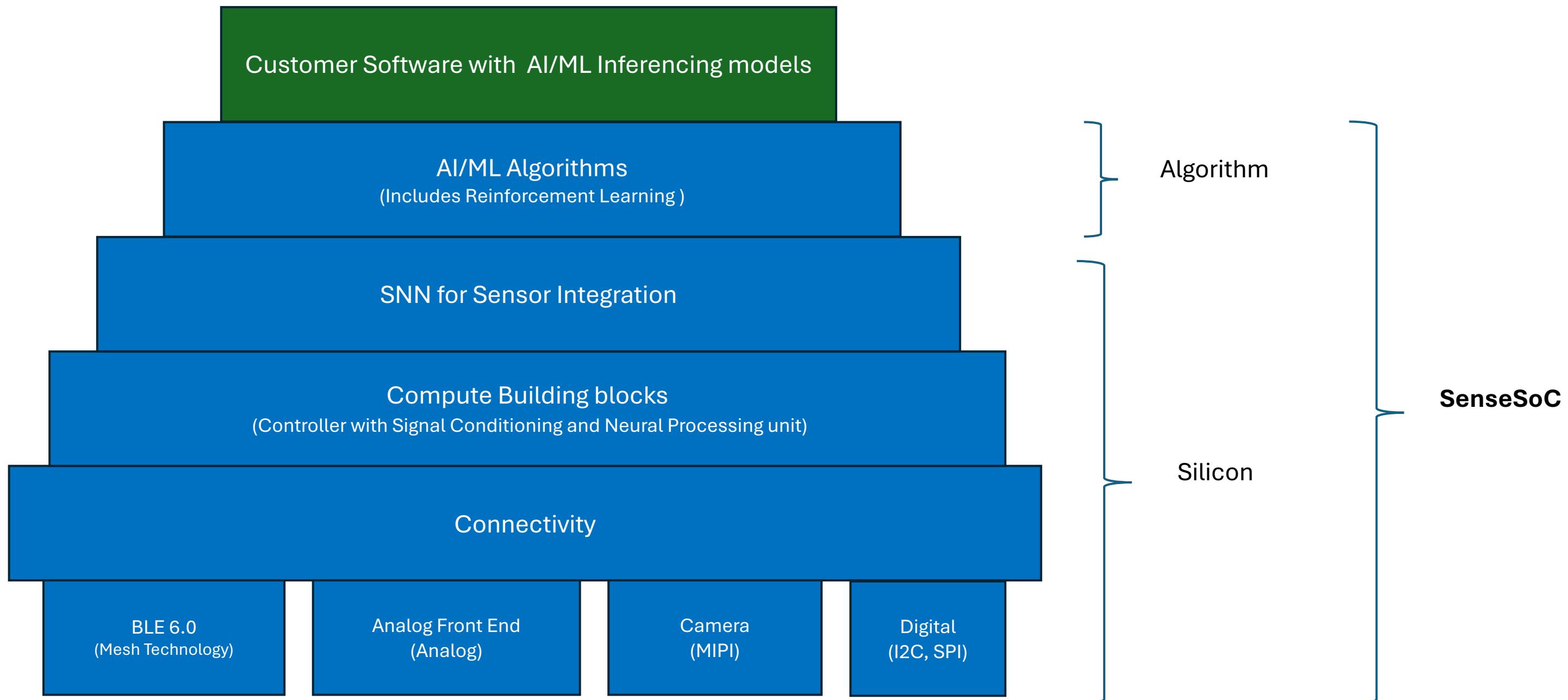


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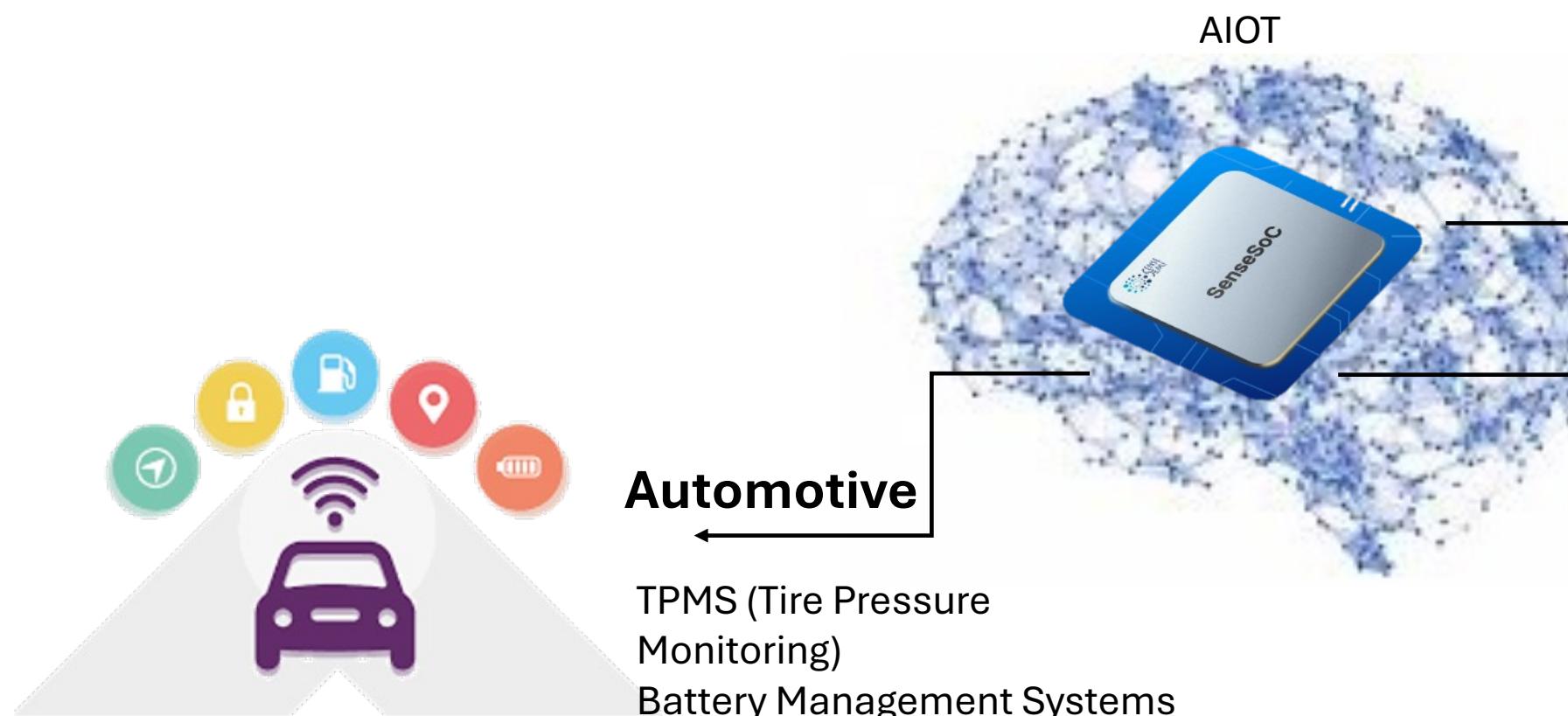


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SENSEOC TECHNOLOGY STACK

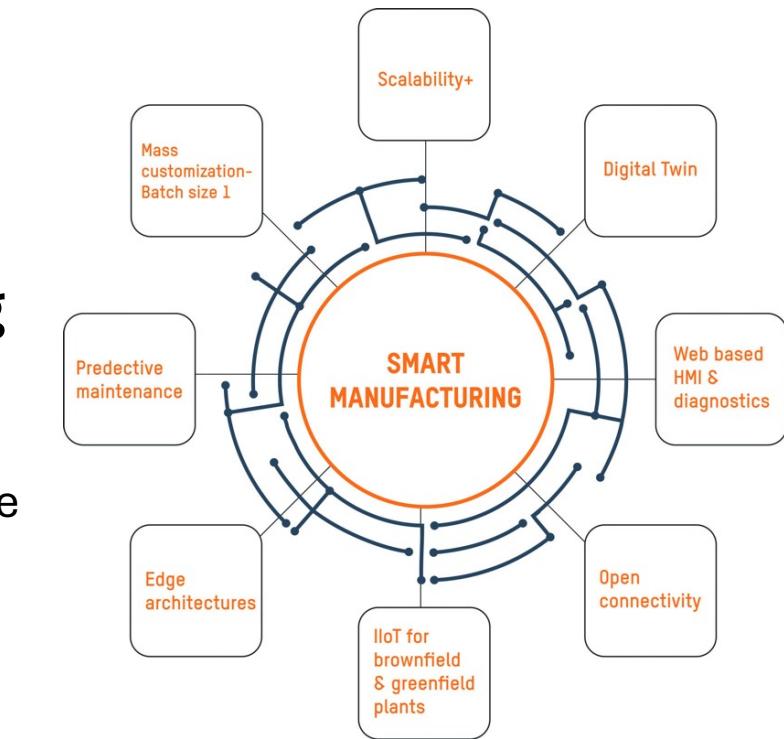


SENSESOC FUTURE IIOT APPLICATIONS



Smart Manufacturing

Robotics
Predictive Node Edge



THE TIME IS RIGHT TO INVEST IN INDIA / SENSESEMI

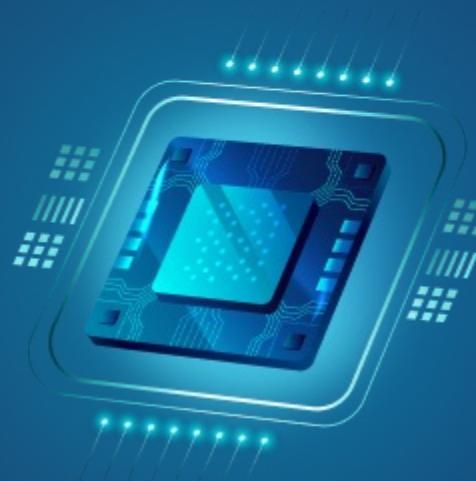
SENSESEMI ALREADY HAS:

- \$1.9 M (₹ 15 Cr) Grants from the Government of India
- EDA tools of Synopsys/Cadence/Siemens-mentor
- Traction with clients (LOI)
- Collaborations with academia and key institutions
- Collaborations with Fabrication partners (TSMC/GF)
- Access to talent – Located in the “Silicon Valley”

India

SENSESEMI WILL BE POTENTIAL PLI APPLICANT

- \$4 M from the Government of India



6 REASONS WHY INDIA IS AN INVESTMENT HUB FOR SEMICONDUCTORS



GOVERNANCE

India's ambitious push for using tech to transform governance in all sectors



TECHNOLOGY

India is investing in developing capabilities in 5G, IoT, clean energy technologies, data, AI, etc



ECONOMY

India is headed for robust economic growth



SILICON

India's semiconductors consumption is expected to cross \$80 billion by 2026, \$110 Billion by 2030



REFORMS

Wide-Ranging reforms for ease of doing business in India



MANUFACTURING

Many measures towards transforming the Indian manufacturing sector