REGION FOCUS: WORLDWIDE

Quarterly Project Update: Intel's Business Transformation Addresses Largest Market Opportunities

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Intel Business Transformation Update:

Tracking Intel's progress in providing semiconductor solutions for end markets — automotive, IoT/ endpoints, primary clients, datacenter, communications infrastructure — and foundry

Repositioning Toward Solutions and for Larger Markets

In 2022, Intel announced its new strategy to accelerate to 10–12% annual revenue growth by 2026. Central to this strategy is repositioning from smaller, low-growth markets to larger, high-growth markets. By doing this, Intel increased the size and growth of its serviceable addressable market (SAM). Intel exited several market segments (including memory, connected home, and cellular modems) and entered several new segments (including foundry wafer, discrete GPUs, and high-performance computing [HPC] processors).

Intel also reorganized itself according to the end-market solution areas it would serve. Rather than offering single chips serving a single function, like processing or moving data, Intel's business units would offer holistic solutions based on multiple semiconductor, software, hardware, and service components arranged according to the demand of an end system's form factor and usage profile, including solutions for:

- **Client computing,** such as solutions for gaming PCs and computer-aided design workstations
- **Datacenter,** such as solutions for cloud-based services and server-based AI training
- **High-performance computing,** such as graphics and CPU offload solutions for supercomputing and data science

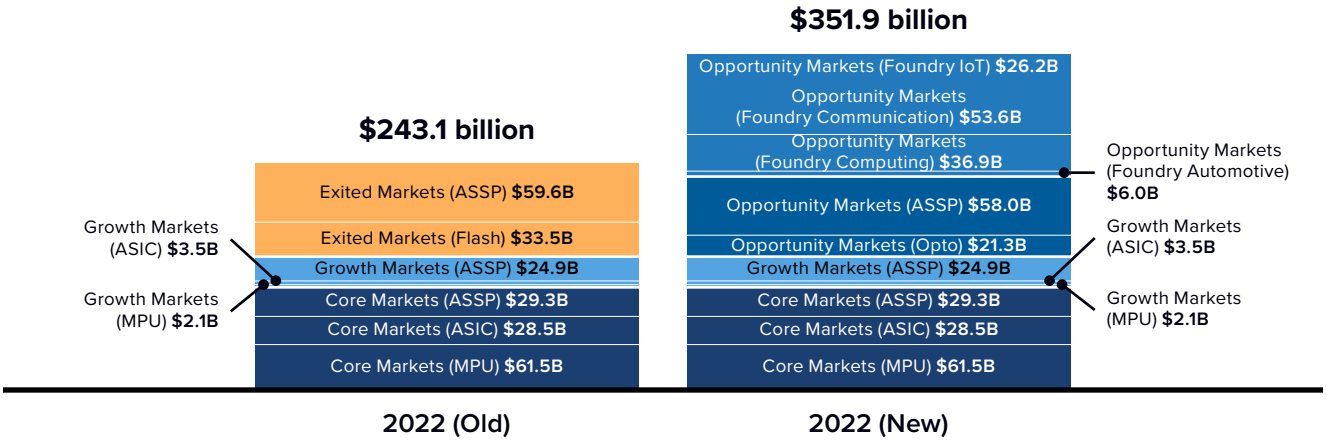
- **Communication infrastructure,** such as solutions for cellular basestations and software-defined networking
- **Internet of Things,** such as solutions for intelligent, industry-specific endpoints in retail, industrial, and healthcare
- **Automotive,** such as solutions for the automotive dashboard and electric vehicles
- **Foundry,** such as wafer foundry, packaging, testing, and other solutions for fabless semiconductor vendors

A key measure of Intel's progress is how its strategy has repositioned it for a SAM that is larger than its total market opportunity prior to its new end-market solution focus.

Figure 1 compares Intel's semiconductor and wafer foundry markets SAM after its reorganization (2022 New) to its SAM before its reorganization (2022 Old). According to IDC, Intel's new semiconductor and wafer foundry SAM in 2022 was $351.9 billion, 45% larger than its old semiconductor SAM would have been in 2022. Further, the new $351.9 billion SAM represents 50% of the total semiconductor and wafer foundry markets ($711.6 billion) in 2022 or 15 percentage points higher than the 34% of the total semiconductor and wafer foundry markets that its old $243.1 billion SAM would have represented in 2022.

FIGURE 1

Intel Increases SAM 1.45x



Source: IDC Semiconductor Market Outlook 23Q1 – Update (IDC #US50454723, March 2023)

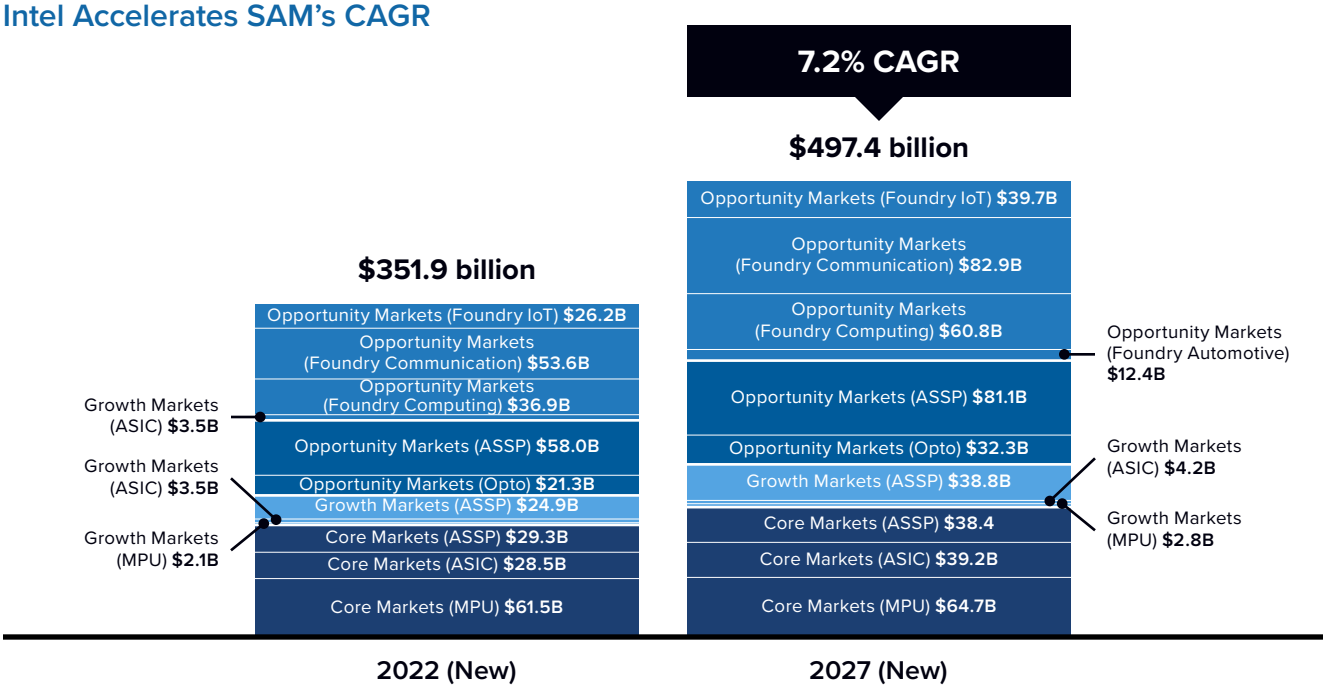
Repositioning for Faster Growth

Another key measure of Intel's progress is how its strategy has repositioned it for a new market opportunity (new SAM) that is growing faster than the overall combined semiconductor and wafer foundry markets.

Figure 2 (next page) compares Intel's new SAM in 2022 to the forecast of that new SAM for 2027. This comparison shows Intel's new SAM will grow at a compound annual growth rate (CAGR) of 7.2% from $351.9 billion in 2022 to $497.4 billion in 2027. In contrast, the combined semiconductor and wafer foundry markets will grow at a CAGR of 6% from $711.6 billion in 2022 to $955.1 billion in 2027.

FIGURE 2

Intel Accelerates SAM's CAGR



Source: IDC Semiconductor Market Outlook 23Q1 – Update (IDC #US50454723, March 2023)

For 2022, Intel's revenue, including semiconductor and all other sources of revenue, was $63.1 billion, down 16% (non-GAAP) compared with 2021. However, drilling down into these results for 2022 reveals that the Intel business units based on new solution segments in its SAM (foundry, automotive, graphics, communications) grew while business units based on traditional core segments in its SAM (PC microprocessors, server microprocessors) declined.

Being much larger, those core segments — undergoing a significant inventory correction — weighed down Intel's overall revenue performance; Intel's revenue decline in 2022 compared with 0.7% growth in the total semiconductor market and 28.9% growth in the total wafer foundry market. However, Intel's exit from volatile markets such as memory and consumer markets (connected home) protected it from further decline in a semiconductor market that is undergoing a significant market correction through 1H23.

By transforming to address high-growth markets, Intel reflects an overall semiconductor industry transformation. Reflecting a solutions-based, end market–driven demand model, Intel is investing in semiconductors, software, hardware, and services arranged for how systems will be used and built for when the end user will need them. For example, Intel offers OpenAPI for use across all business units to enable cross-architecture programming, Unison through CCG to enable seamless connectivity between PCs and mobile devices, and Granulate through DCAI to optimize datacenter applications and workloads. IDC's next report on Intel's business transformation will analyze Intel's investments in solutions and consider how they have enabled Intel to compete in its core and existing markets.

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