Revenue exceeded 10 billion dollar in 2018, growing continuously.
## Business Milestones

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>Foundry Business Start</td>
</tr>
<tr>
<td>2010</td>
<td>Foundry 1&lt;sup&gt;st&lt;/sup&gt; HKMG Mass Production</td>
</tr>
<tr>
<td>2015</td>
<td>Foundry 1&lt;sup&gt;st&lt;/sup&gt; FinFET Mass Production</td>
</tr>
<tr>
<td>2017</td>
<td>Spin-off into Independent Business Unit</td>
</tr>
<tr>
<td>2018</td>
<td>Industry 1&lt;sup&gt;st&lt;/sup&gt; 7nm EUV Production Start</td>
</tr>
<tr>
<td>2021</td>
<td>S5 Line Production Start</td>
</tr>
<tr>
<td>2022</td>
<td>World 1&lt;sup&gt;st&lt;/sup&gt; GAA 3nm Production</td>
</tr>
</tbody>
</table>

### Key Events:
- **S1-Line Construction**
- **S2-Line Ramp up**
- **S3-Line Ramp up**
- **World 1<sup>st</sup>**
- **Foundry 1<sup>st</sup> HKMG Mass Production**
- **Foundry 1<sup>st</sup> FinFET Mass Production**
- **Spin-off into Independent Business Unit**
- **Industry 1<sup>st</sup> 7nm EUV Production Start**
- **S5 Line Production Start**
- **World 1<sup>st</sup> GAA 3nm Production**

*High-K Metal Gate*
Global Manufacturing Sites

Advanced 300mm Fabs, Matured 200mm Fab, Test/Package Facilities

- in Korea and US
- in Korea
- in Korea and China

Samsung Foundry Capacity

<table>
<thead>
<tr>
<th>Year</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>1.0x</td>
</tr>
<tr>
<td>2024</td>
<td>2.0x</td>
</tr>
<tr>
<td>2027</td>
<td>3.4x</td>
</tr>
</tbody>
</table>

Giheung Campus
Hwaseong Campus
Pyeongtaek Campus

Austin Campus
Taylor Campus

Line-6
S1-Line
S3-Line
S4-Line
S5-Line

TSP-OY (conventional PKG)
TSP-CA (Advanced PKG)
CONTENTS

BUSINESS UPDATE

FOUNDARY MARKET OPPORTUNITIES

SAMSUNG FOUNDARY STRATEGY

KEY TAKEAWAYS
New applications emerge with HPC, Automotive bringing greater demand for semiconductor industry

Foundry will be a pathfinder in realizing unforeseen technology

- **Foundry Market**: CAGR 12%
- **Data Traffic**: 1ZB: $10^{21}$ Bytes, CAGR 21%
- **EV Market**: CAGR 37%
CONTENTS

BUSINESS UPDATE

FOUNDARY MARKET OPPORTUNITIES

SAMSUNG FOUNDARY STRATEGY

KEY TAKEAWAYS
Business Overview

5/4/3nm
High Performance IPs
Design Methodology for HPC
Advanced PKG (3D, 2.5D)

14/8/5/4/3nm
Critical IPs for Mobile
Mobile Design Methodology

HPC
Mobile / 5G

Samsung Foundry Total Design Platform

Automotive
14/8/5nm and 130nm (8")
Automotive Qualified IPs
Design for ISO 26262/AEC-Q100
Automotive Service PKG (ASP)

IoT
14/11/8nm
Critical IPs for IoT
Ultra Low Voltage Design Methodology
Cost & Form-factor Optimization
Specialty Value-Added Offerings

Portfolio Expansion from eMRAM, eFlash, Power IC, DDI, CIS, RF to Power-discrete

Technologies extensively optimized through many years of product manufacturing
Advanced Package Solutions

X-Cube
- Production HBM2
- Production HBM2E Flash-bolt

I-Cube
- Production 2xHBM 2.5D
- PKG Qual 4xHBM 2.5D
- PKG Qual 6xHBM 2.5D
- Production 8xHBM 2.5D

X-Cube Production
- u-Bump
- Bump-less (HCB)
Foundry Design Ecosystem

Collaboration
SAFE™-EDA
SAFE™-OSAT
SAFE™-DSP
SAFE™-Cloud

SAFE™

Optimization
SAFE™-IP
DTCO
Integration
STCO

Realization
SAFE™-DSP
SAFE™-Cloud
HPC
IoT
Automotive
Application Specific Service

Innovation
Intelligence
CONTENTS

BUSINESS UPDATE
FOUNDRY MARKET OPPORTUNITIES
SAMSUNG FOUNDARY STRATEGY
KEY TAKEAWAYS
Key Takeaways

- Higher foundry opportunities in digital transformation era
- Aggressive investment including expansion of global operation
- Maintain firm leadership in technology, operation, and service
- Enable faster time to market and growing together with customer