

How A Foundry Can Help to Improve Your Bottom-line? Accuracy Matters!

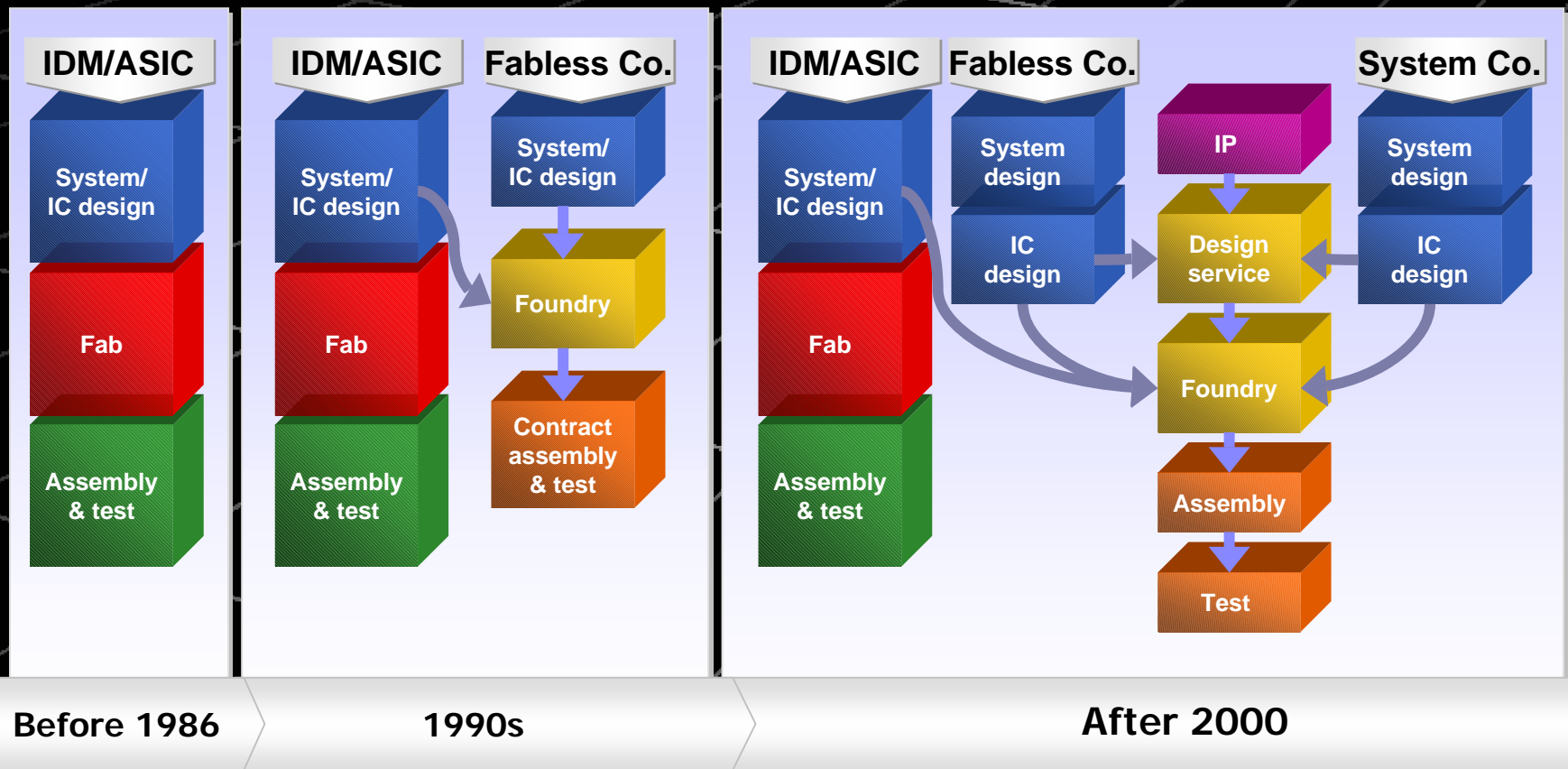
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Vice President

Design & Technology Platform

TSMC

Foundry Business Model Enables Innovation and Entrepreneurship



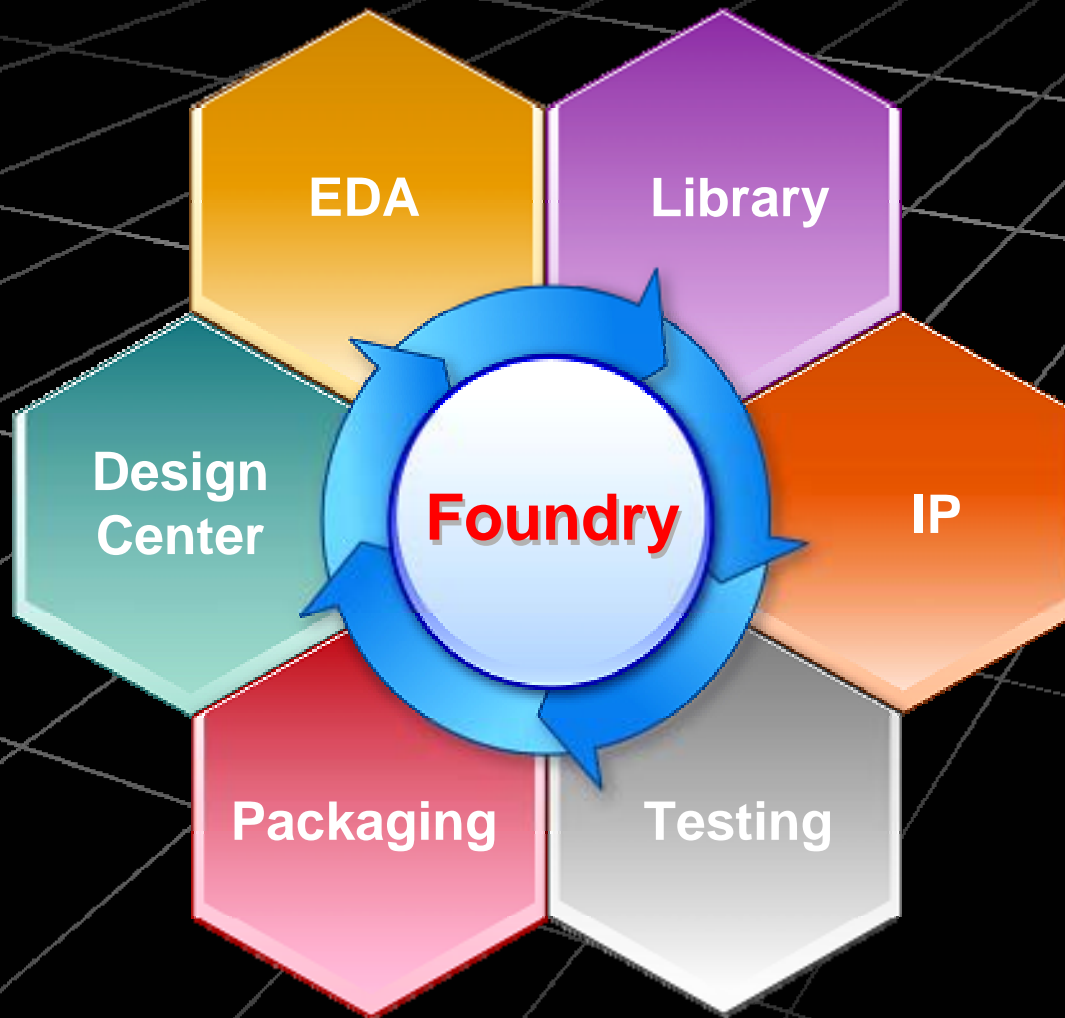
Before 1986

1990s

After 2000

Remark: IDM (Integrated Device Manufacturer)

Plays an Integrator of Semiconductor Ecosystem





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The TSMC Value Proposition: Our Trinity of Strengths

Successful Customers

Technology Leadership

- **Advanced Technology**
 - 90nm in production
 - 65nm delivered
- **Mainstream Technology**
 - HV/BCD for power management IC
 - CMOS sensor for DSC and cellular
 - RF CMOS for wireless

Manufacturing Excellence

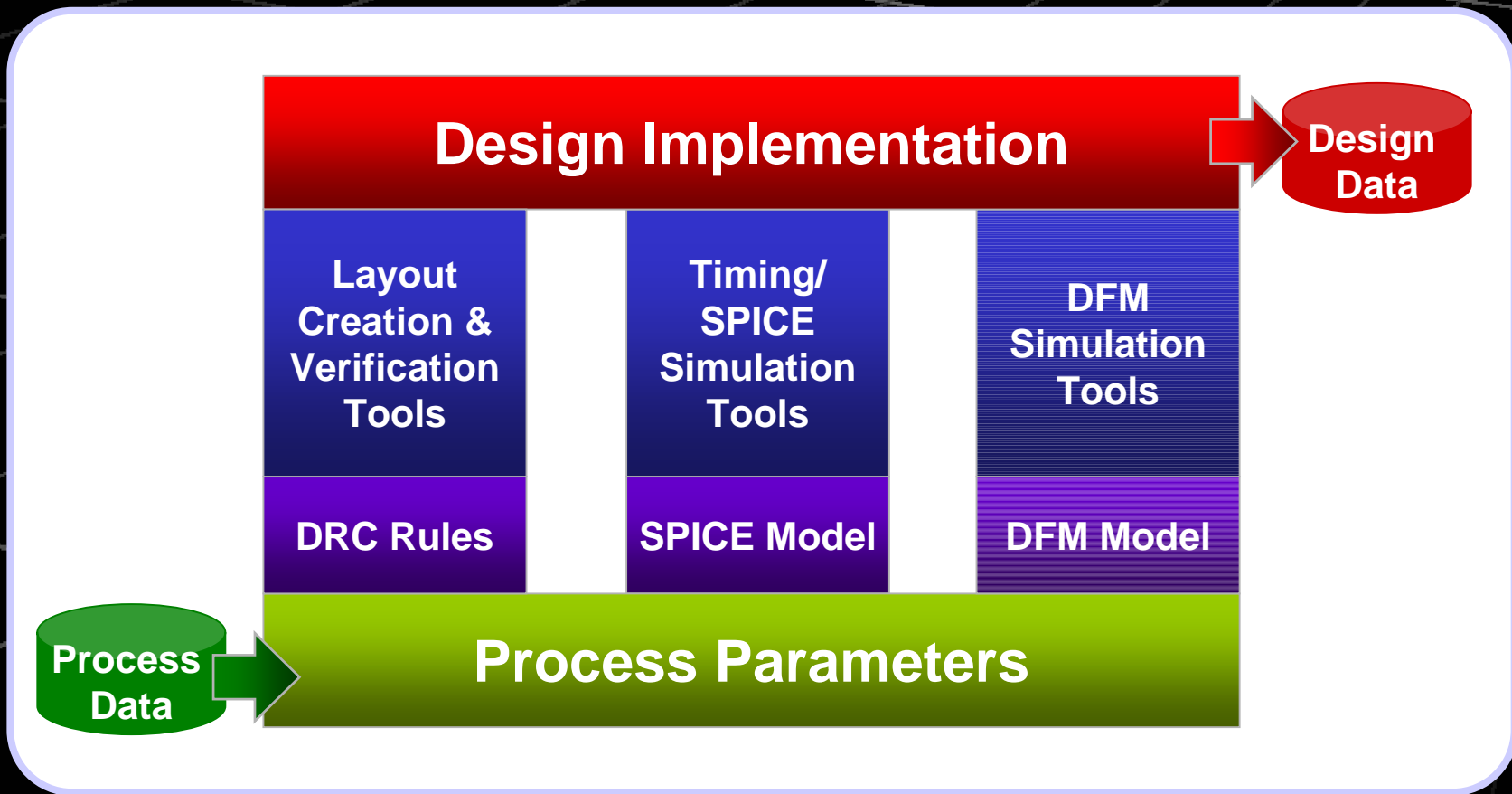
- Capacity leader
- Responsive and flexible
- Best yields and cycle time
- Fast Ramp
- Quality

Customer Partnership

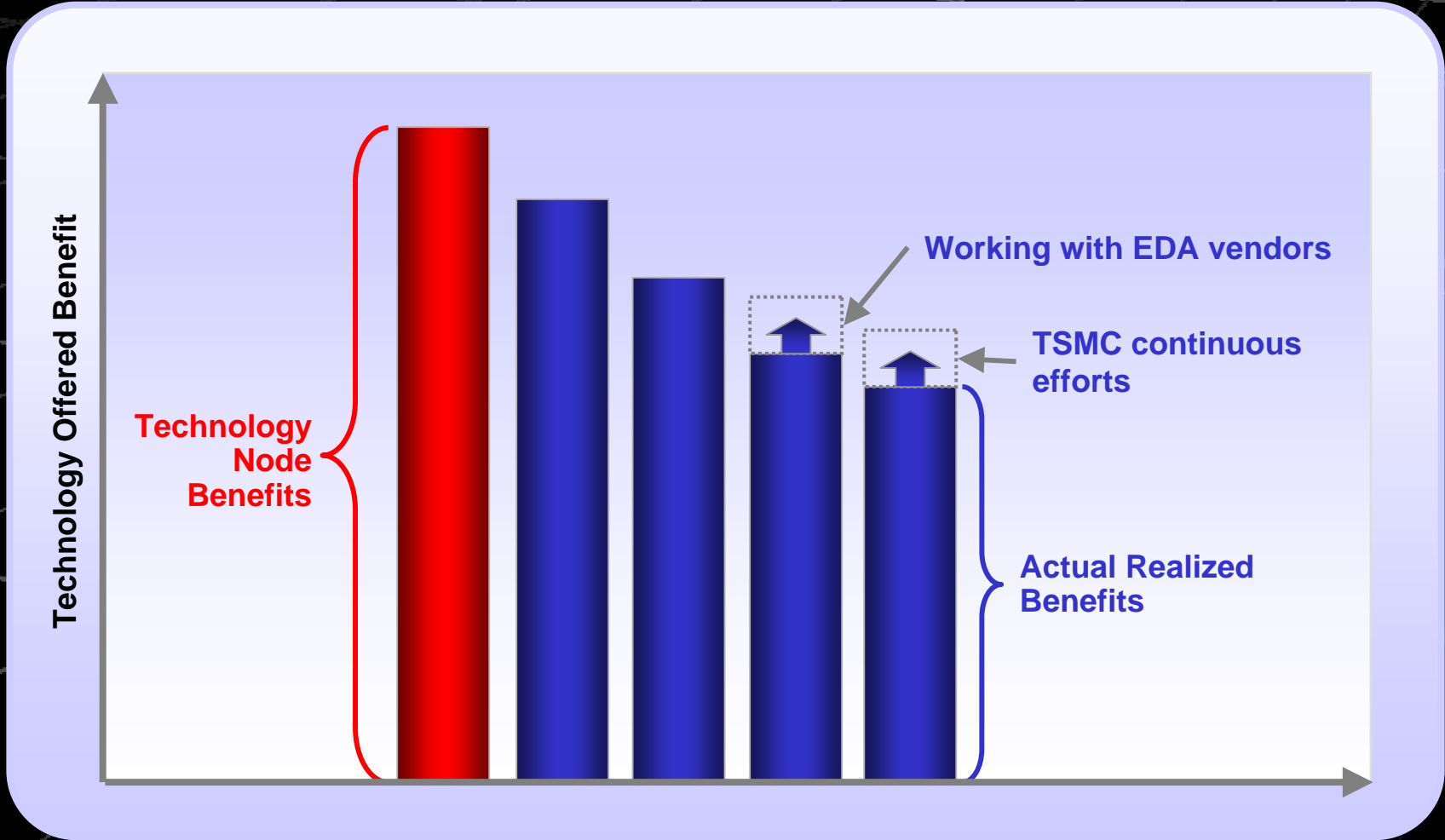
- 100% dedicated foundry
- Total solution service
- Partnership collaboration
- Long-term and win-win

Financial Strength and Manufacturing Capacity

Process Data Drives the Design Engine and Results



Reclaiming the Lost Benefits





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SPICE Modeling

- Length of Diffusion (LOD)
- Well Proximity Effect (LPE)
- Statistical
- Matching
- Substrate Noise
- Packaging
- Tool qualification



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DFM Modeling

- **Lithography Process Check (LPC)**
- **Chemical Mechanical Polishing (CMP)**
- **Critical Area Analysis (CAA)**
- **EDA tool qualification**



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