



## Enhancing the Role of SMEs in Global Value Chains

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# SME Challenges in the Global Electronic Design Automation Industry

Session 2: Software Industry

Dr. Yorgos Koutsoyannopoulos, CEO, Helic S.A.



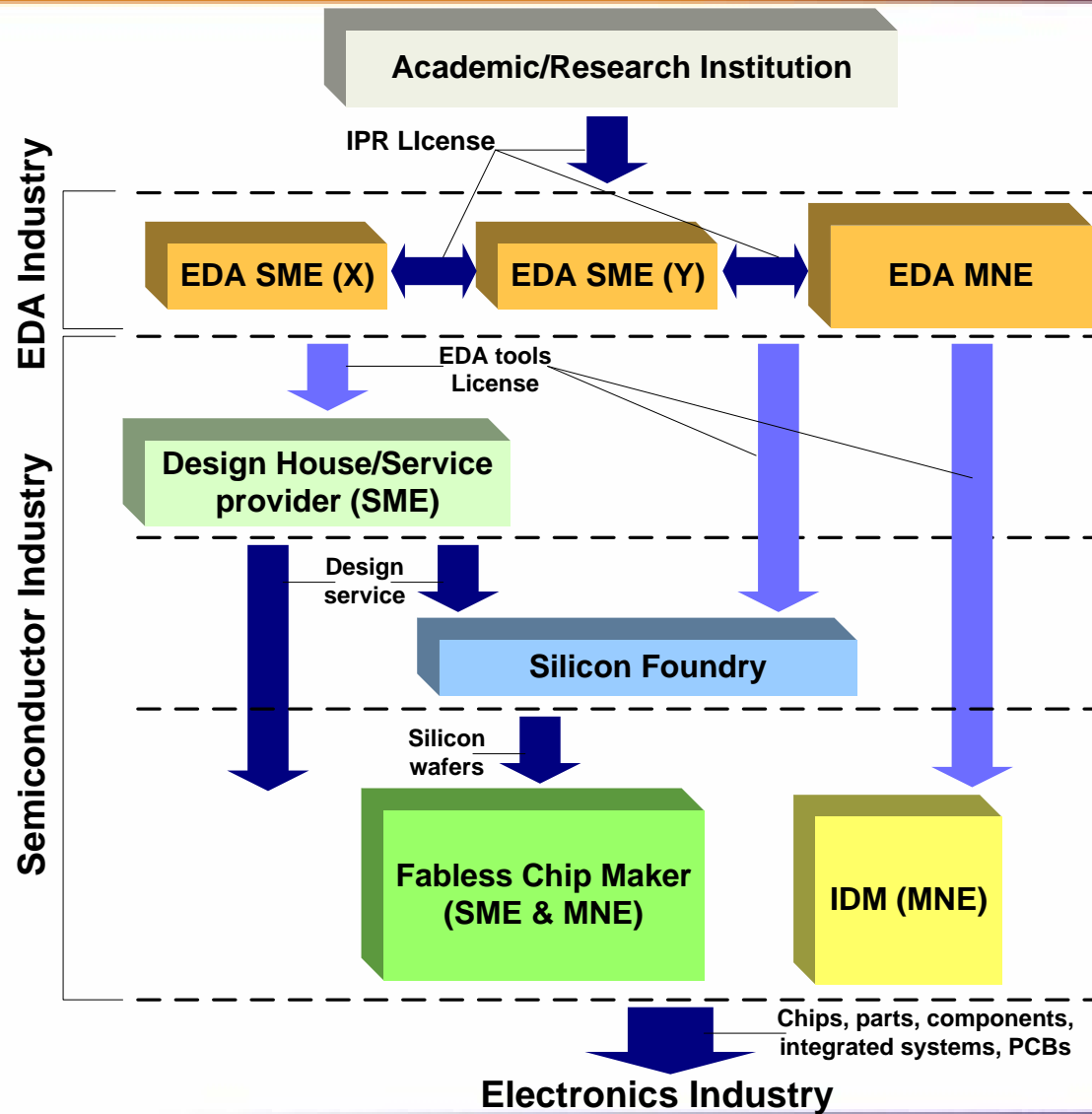
# Outline

- Global semiconductor industry
- EDA: Electronic Design Automation
- Characteristics of EDA value chain
- Challenges and obstacles to SMEs
- Case study: Helic S.A.
- Recommendations

# Global Electronics Industry



# The value chain



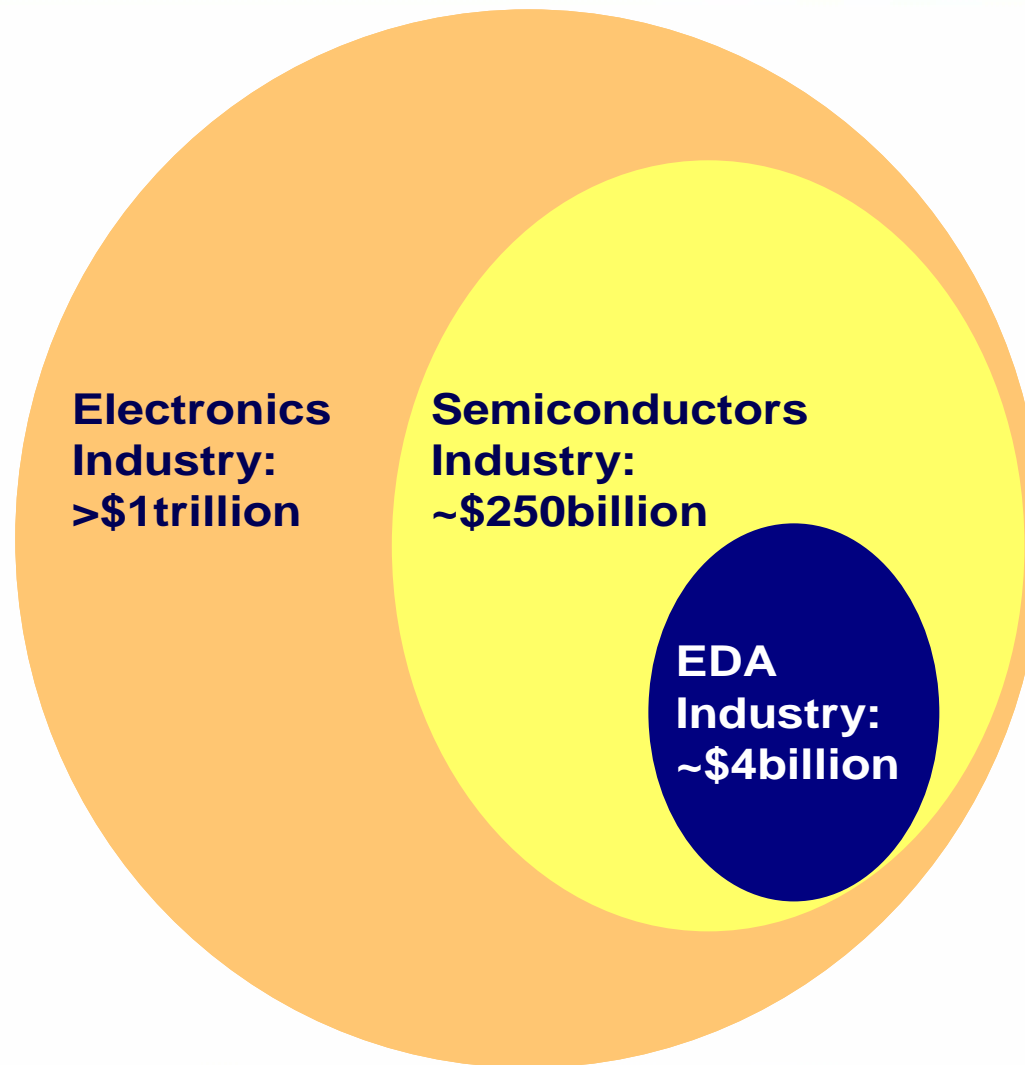
# EDA: Electronic Design Automation

- **Electronic:** anything electronic – from computer chips, mobile phones, chips for cars and satellites to servers and routers that run the Internet
- **Design:** phase of production cycle where creativity, new ideas, ingenuity and inspiration come to the fore - designers try to model the behavior of their designs to ensure completeness, correctness and manufacturability of final product
- **Automation:** software tools that perform millions of functions to model, analyze, validate and design chips and electronic components

# Centers of gravity – EDA R&D bases



# Relative market sizes



# Challenges and obstacles to SMEs

- Inefficient sales channels – long distance calls
- Limited access to capital
- Leadership scarcity – missing global perspective
- IPR creation and management
- Corporate legislation for high-tech entities outside the USA
- Accounting principles regarding software / intangible assets licensing

# Helic S.A. case study

- Founded May 2000 – team from Nat'l Tech. University of Athens
- 25 Employees in 2007
- World-class core technology in **EDA & RF IP**
- **Technology and products:** EDA tools to design chips to be used in:
  - mobile phones
  - wireless local-area-networks
  - internet infrastructure equipment
  - game devices
  - computer input devices, etc.
- First EDA product introduced in Dec 2003:  
**VelocRF™**



# Vision - Mission

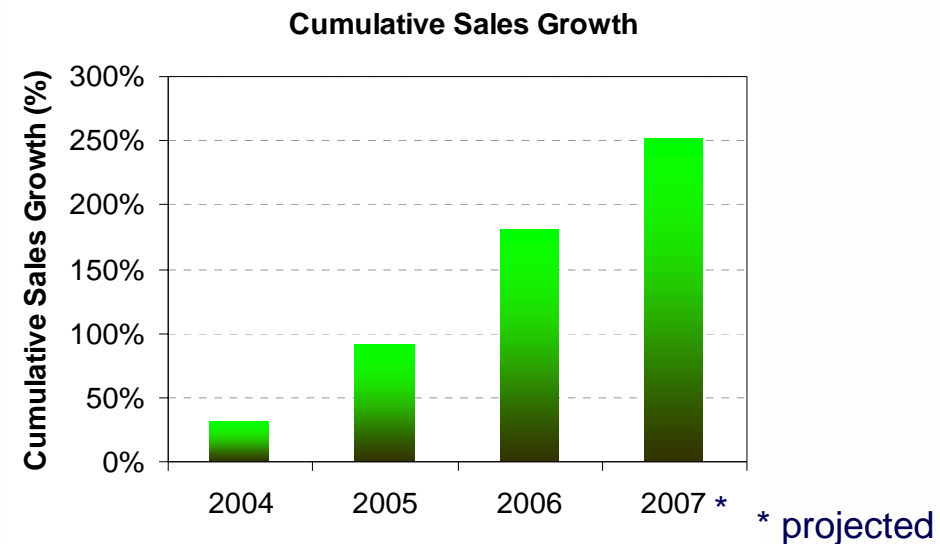
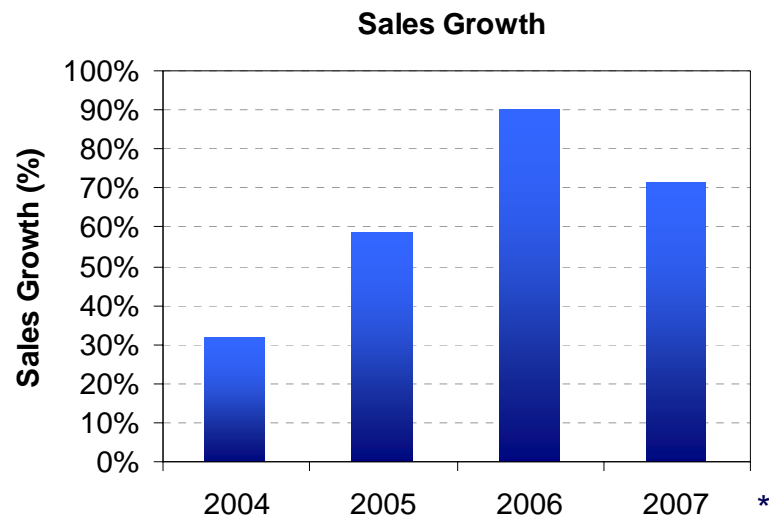
- Vision:
  - To establish a leadership position in RFIC/SiP\* design automation
- Mission
  - Design EDA tools that revolutionize the way RF chips are designed by bringing true automation
  - Invest in basic R&D of world-class quality
  - Develop and market fast, easy-to-use, fun-to-use EDA tools
  - Provide excellent customer support, devoted to success
  - Partner with companies that match our vision

\* Radio Frequency Integrated Circuit / System-in-Package

\*\* Intellectual Property

# Helic financial performance

- Two financing rounds from local and foreign financial investors till 2002
- Profitable and cash-flow positive since 2004
- Significant sales growth



# Partners - Customers

- Partners:
  - **EDA MNEs:** Cadence Design Systems (US), Agilent Technologies (US), Mentor Graphics (US)
  - **EDA SMEs:** CST (GER), AWR (US), EdXact (FR)
- Customers:
  - Big US and Japanese Integrated Device Manufacturers
  - Large and medium-sized fabless corporations
  - VeloceRF™ in production of sub-100nm silicon chips: cutting-edge technology

# Recommendations (1)

- Labor law adaptation
- Streamline corporate legislation
- IFRS accounting standards adoption
- “Avoidance of double taxation” treaties
- Taxation incentives to EDA SMEs for technology exports
- Standardization of Design Flows and scripting languages by EDA Consortium
- Open standards between EDA players
- Clustering activities

## Recommendations (2)

- Financial measures to stimulate investment
- Raise awareness for IPR value, protection and management
- Financial incentives for patent filing
- Special investment laws to attract boutique venture capital funds
- Financial measures to support establishment of sales subsidiaries



# Thank you

Yorgos Koutsoyannopoulos