

The importance of Open collaboration

**K.E.Y.
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Conrad Seoul, Korea

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The world is changing

S&P 500 in 1980

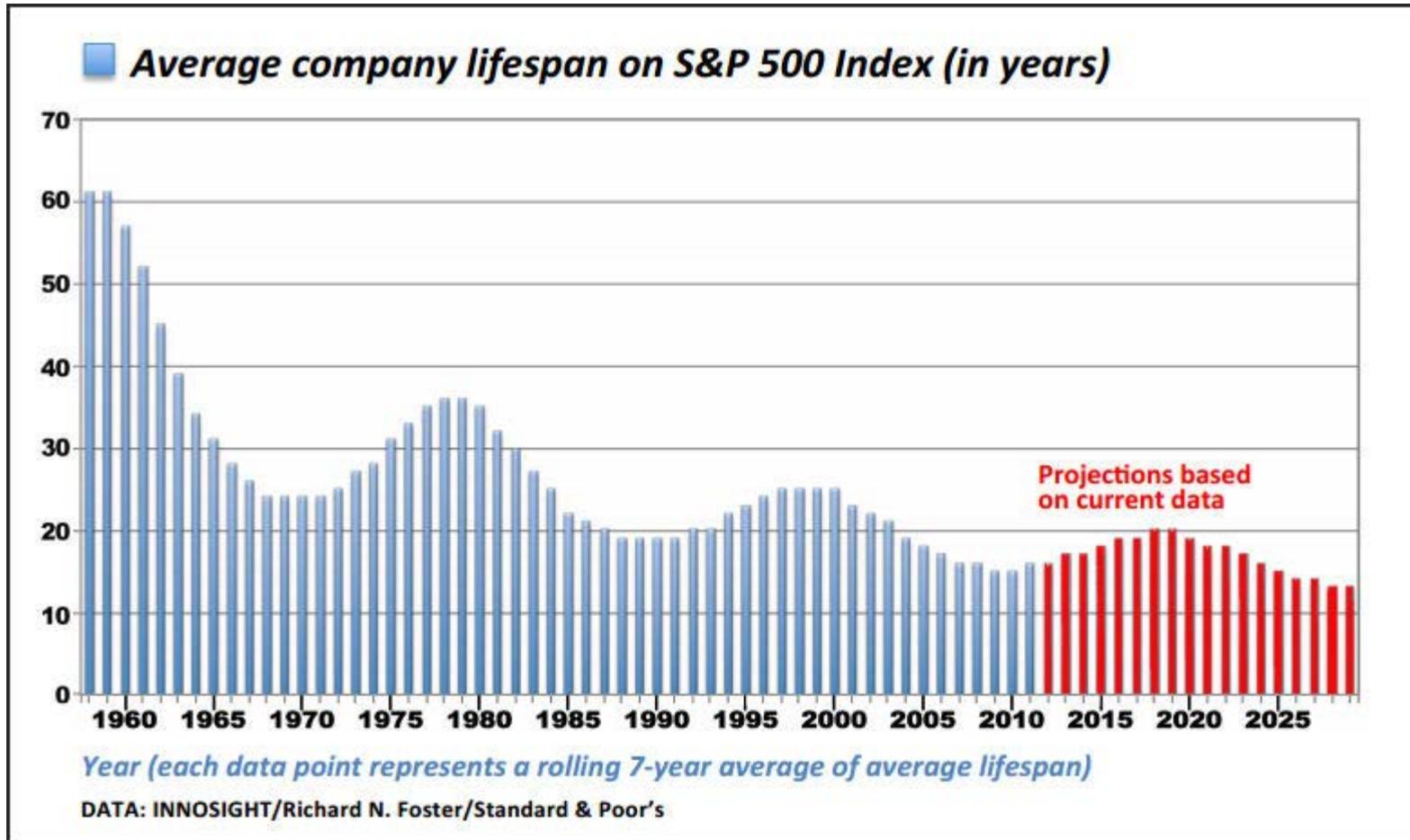
1. IBM
2. AT&T
3. **Exxon**
4. **Standard Oil Indiana**
5. **Schlumberger**
6. **Shell**
7. **Mobil Oil**
8. **Standard Oil California**
9. **Atlantic Richfield**
10. General Electric

S&P 500 in 2013

1. **Apple**
2. ExxonMobil
3. **Google**
4. **Microsoft**
5. General Electric
6. Johnson&Johnson
7. Chevron
8. Procter&Gamble
9. JPMorgan
10. Wells Fargo

From oil to ICT

The company lifespan declines



The high-tech world is challenging too

- World wide competition
- Increasing complexity
- Flexibility and agility demanded
- Shorter product life cycles
- Upfront investment for new product development grows
- Pool of technical talent shrinks
- Cost price pressure
- Higher quality levels required

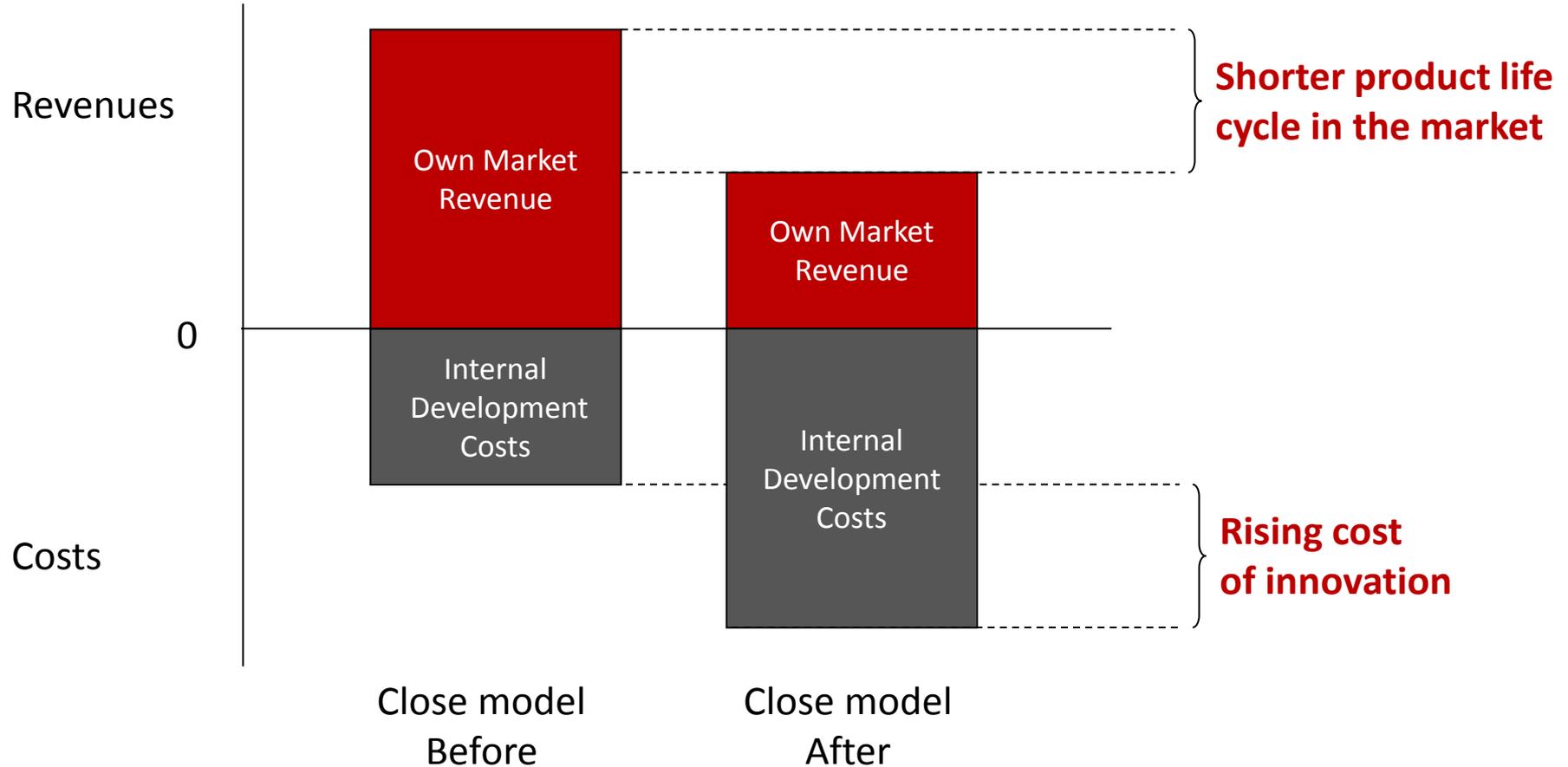


Market share US:
2009: 50%, 2013: 2%

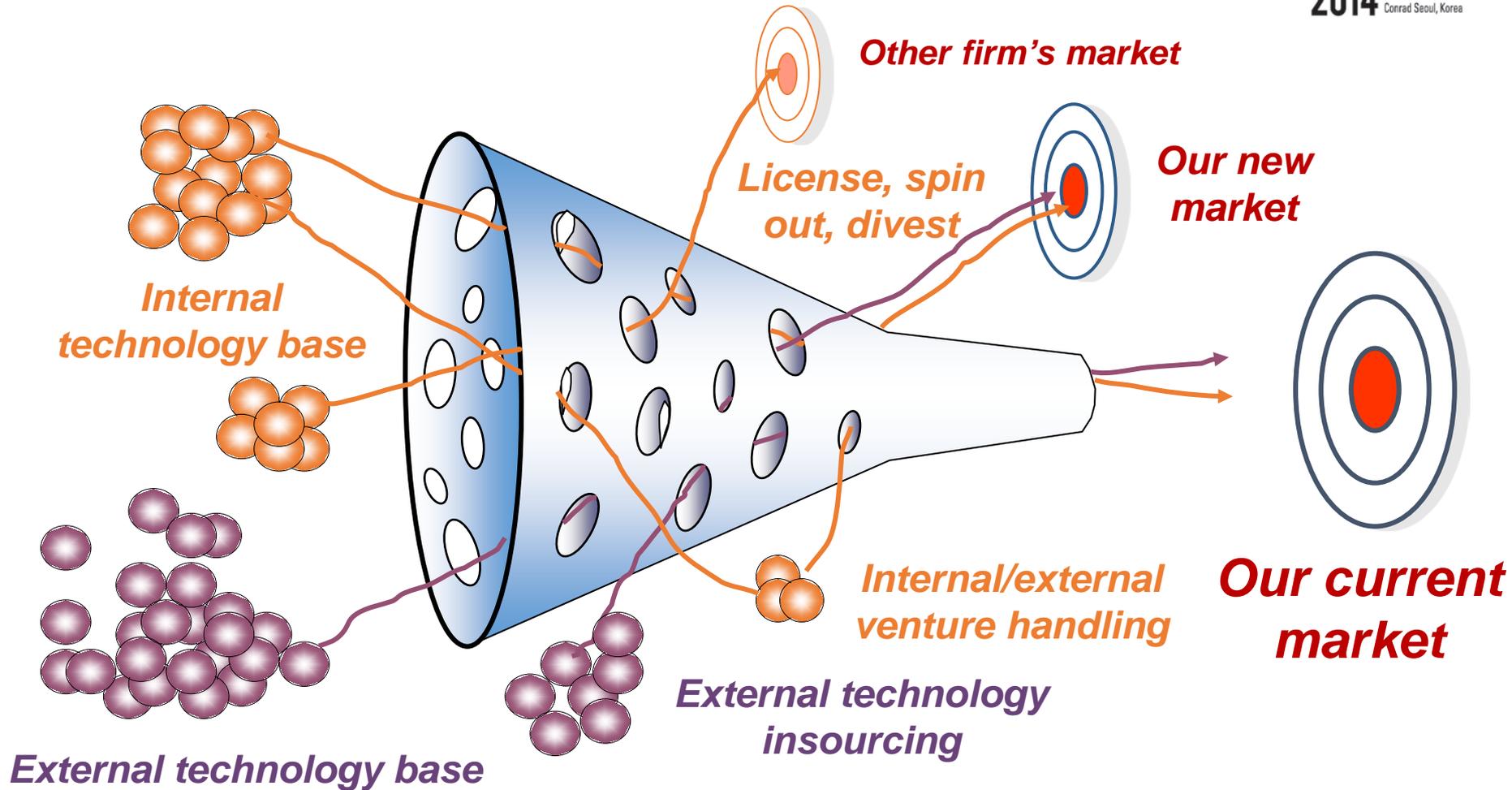


Global market share:
2007: 50%, 2013: 3%

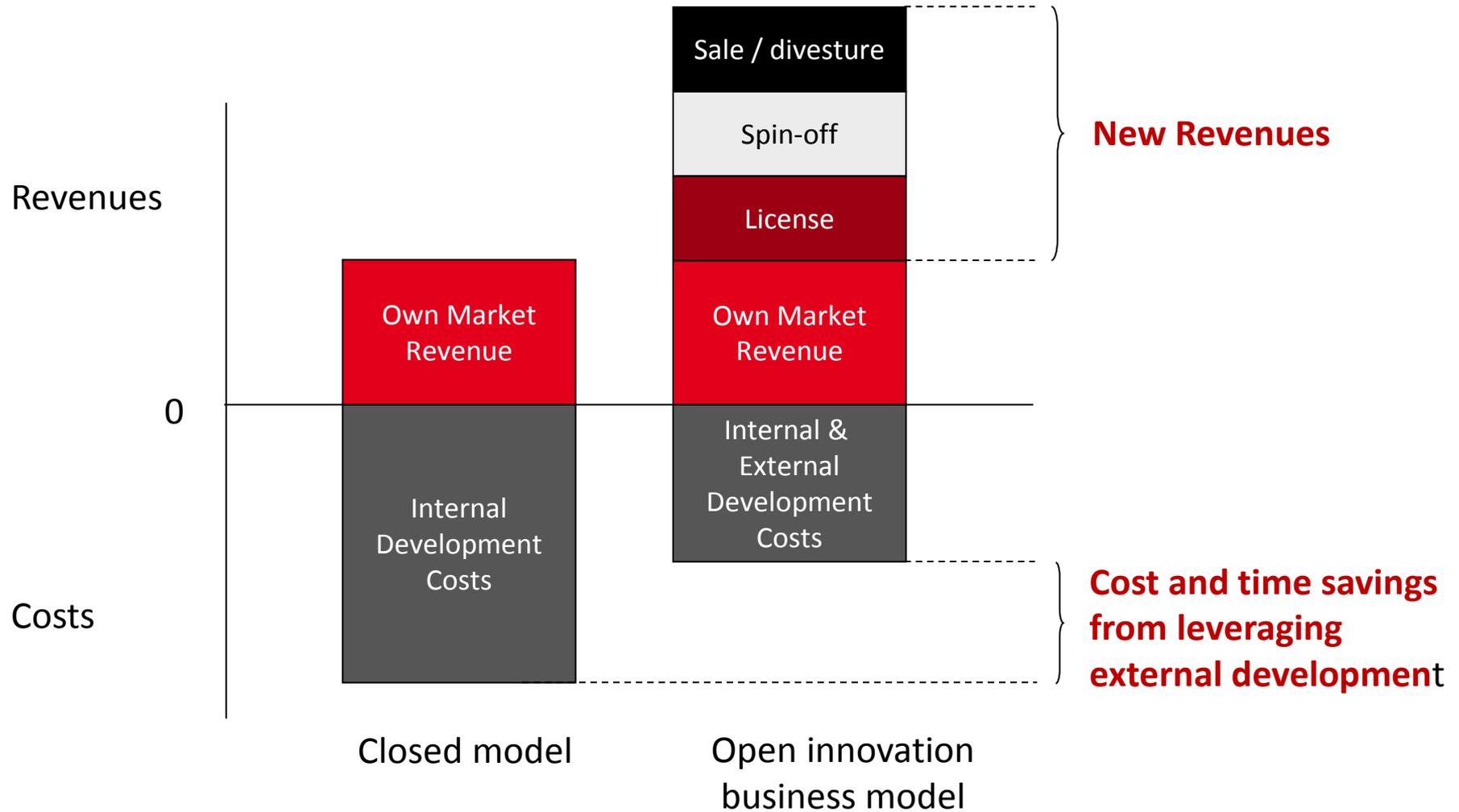
Innovation costs grow, revenues decline



Open innovation is one answer



With a changed business model



High Tech Campus Eindhoven

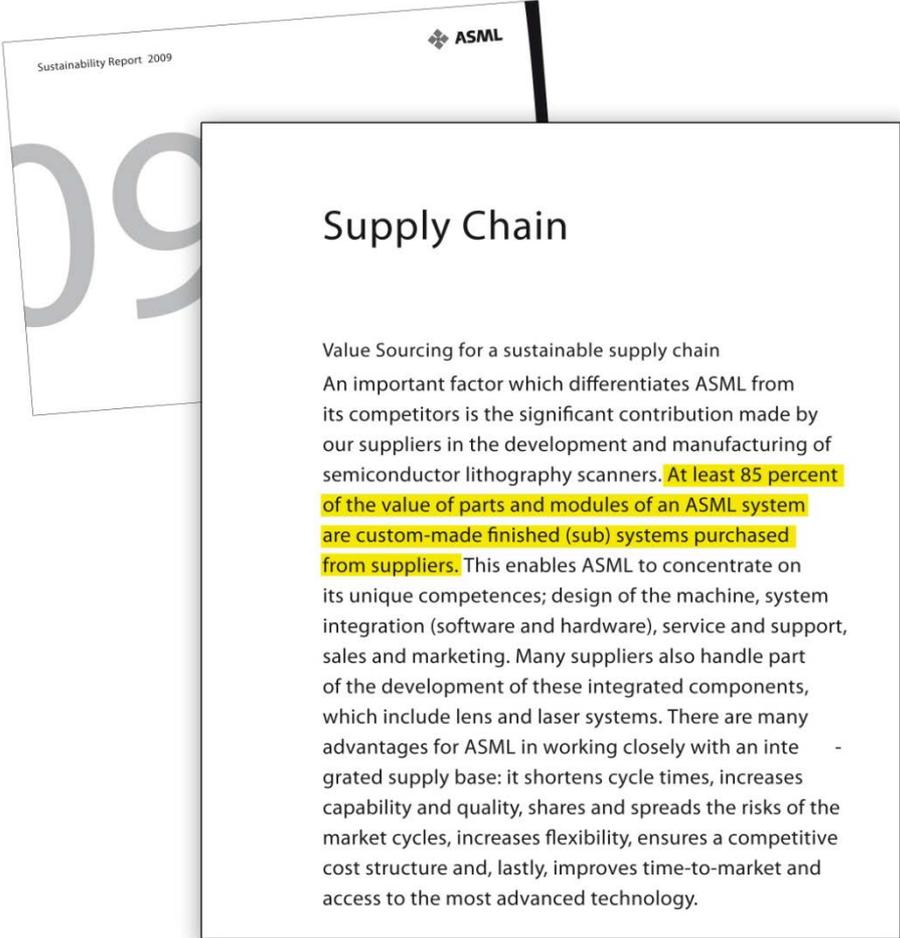
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- **Founded by Philips 100 years ago**
- **Now 125 companies**
- **10,000 researchers**
- **80 nationalities**
- **Shared facilities**



Open supply chain is another answer



Supply Chain

Value Sourcing for a sustainable supply chain

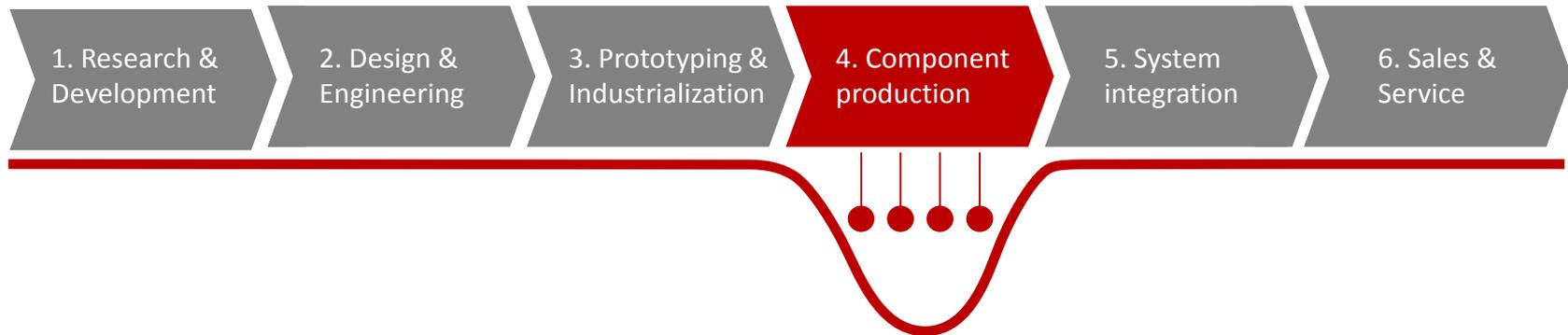
An important factor which differentiates ASML from its competitors is the significant contribution made by our suppliers in the development and manufacturing of semiconductor lithography scanners. **At least 85 percent of the value of parts and modules of an ASML system are custom-made finished (sub) systems purchased from suppliers.** This enables ASML to concentrate on its unique competences; design of the machine, system integration (software and hardware), service and support, sales and marketing. Many suppliers also handle part of the development of these integrated components, which include lens and laser systems. There are many advantages for ASML in working closely with an integrated supply base: it shortens cycle times, increases capability and quality, shares and spreads the risks of the market cycles, increases flexibility, ensures a competitive cost structure and, lastly, improves time-to-market and access to the most advanced technology.

- **Value chains compete instead of individual companies**
- **Supply chain is designed to outsource non-core activities or functionalities**
- **Cooperation within high intelligent networks is the model for the future**
- **The supply chain opens itself and takes more responsibility**

Classic way of outsourcing

OEM VALUE CHAIN

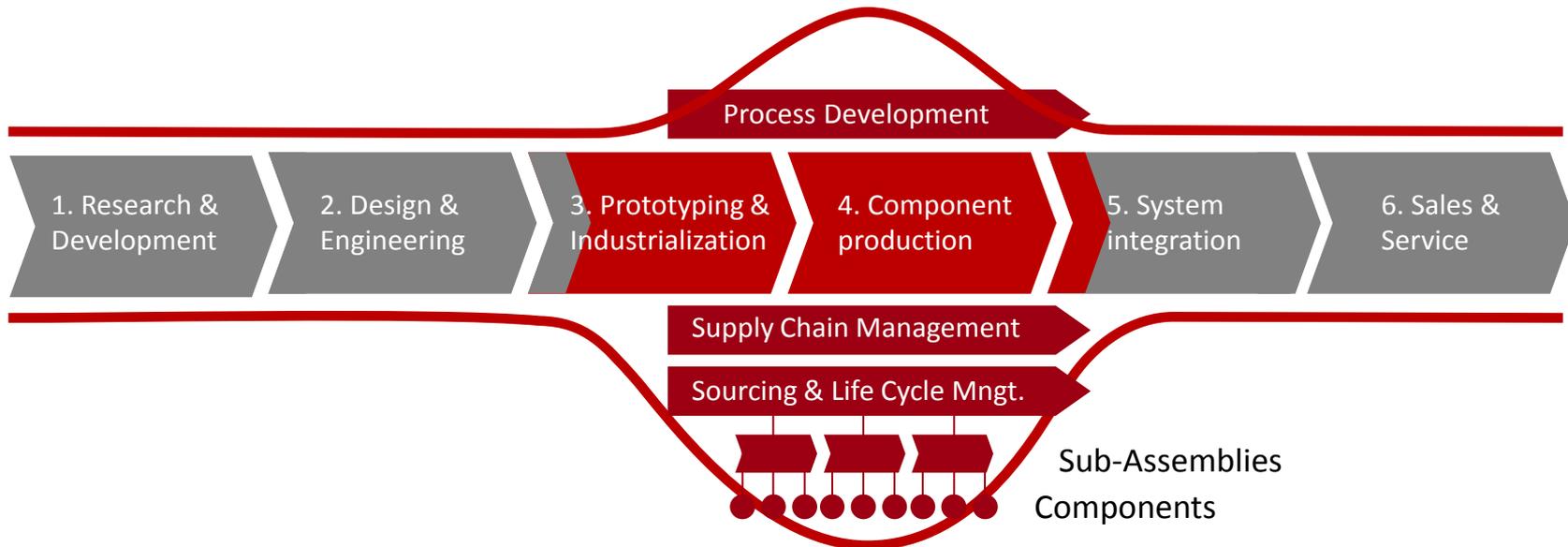
- Subcontracting of **component** production only with different suppliers



Recent development in outsourcing

OUTSOURCING PART OF THE VALUE CHAIN

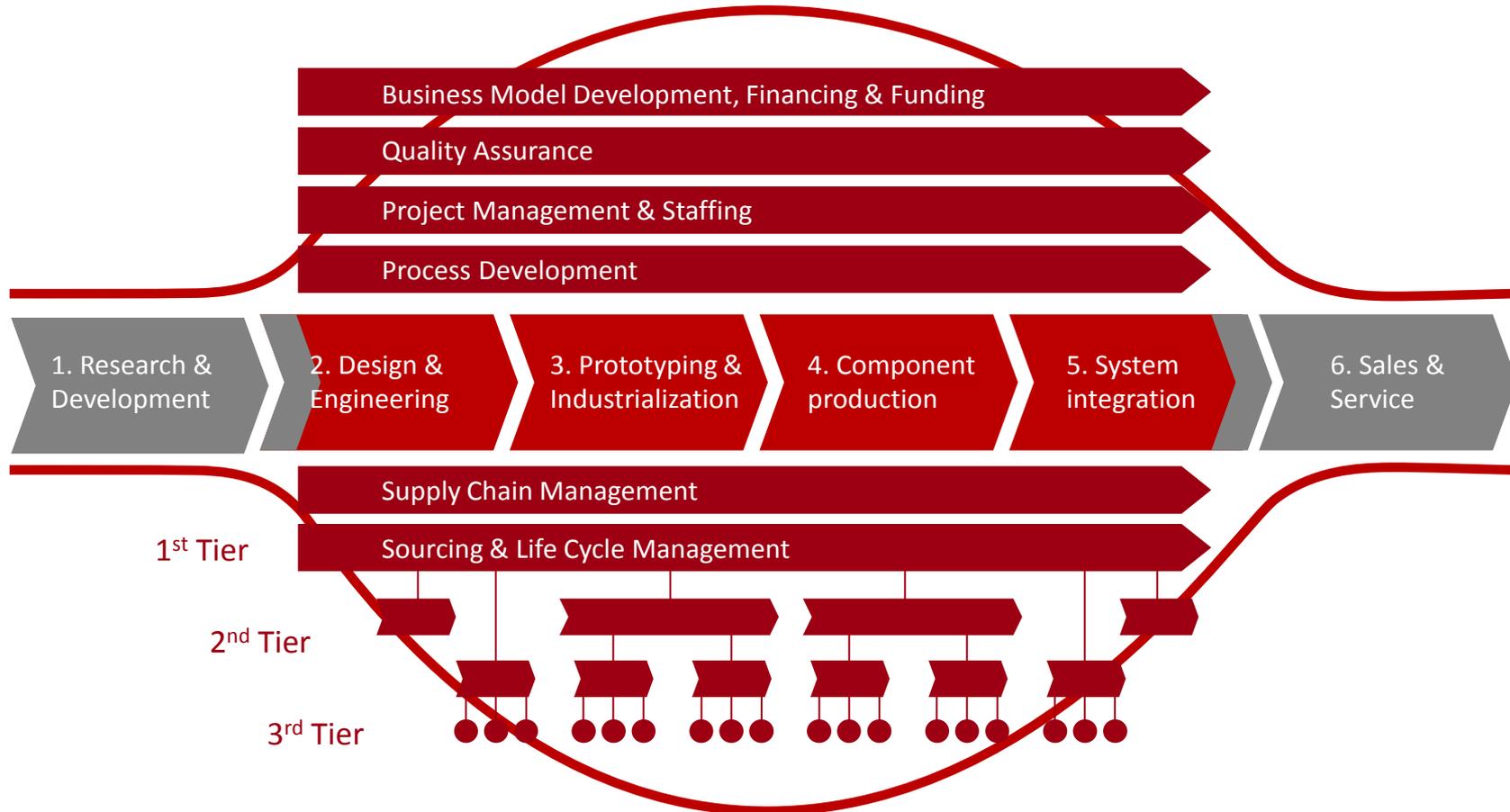
- **Outsourcing core processes** including Process Development
- **Outsourcing support processes** like Supply Chain Management, Sourcing and Life Cycle Management



Future in European high-tech industry

OPEN SUPPLY CHAIN, BUILD TO BUSINESS CASE

- OEM transform to lean companies



Example of build to business case

PHENOM

originally being a product of FEI, it has been developed and brought into production by NTS-Group and Sioux.



Not an easy road to go

- Transparency & Trust between parties
- Cooperation skills at OEM & supplier
- Clear IP agreement between OEM and supplier
- Insight in the business case of OEM
- Risk & reward agreement: how to share
- Willingness and ability to invest by supplier
- Communication on all levels (C-level, BuDev, R&D, Operations)

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Thank you!

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