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SMART Ultra-Large-Scale Systems Forum
"Scale Changes Everything"

Thursday, March 6, 2008 | 8:00 am – 5:30 pm
Carnegie Mellon University, University Center
Pittsburgh, PA

Ultra-Large-Scale-Systems Development Challenges at Siemens

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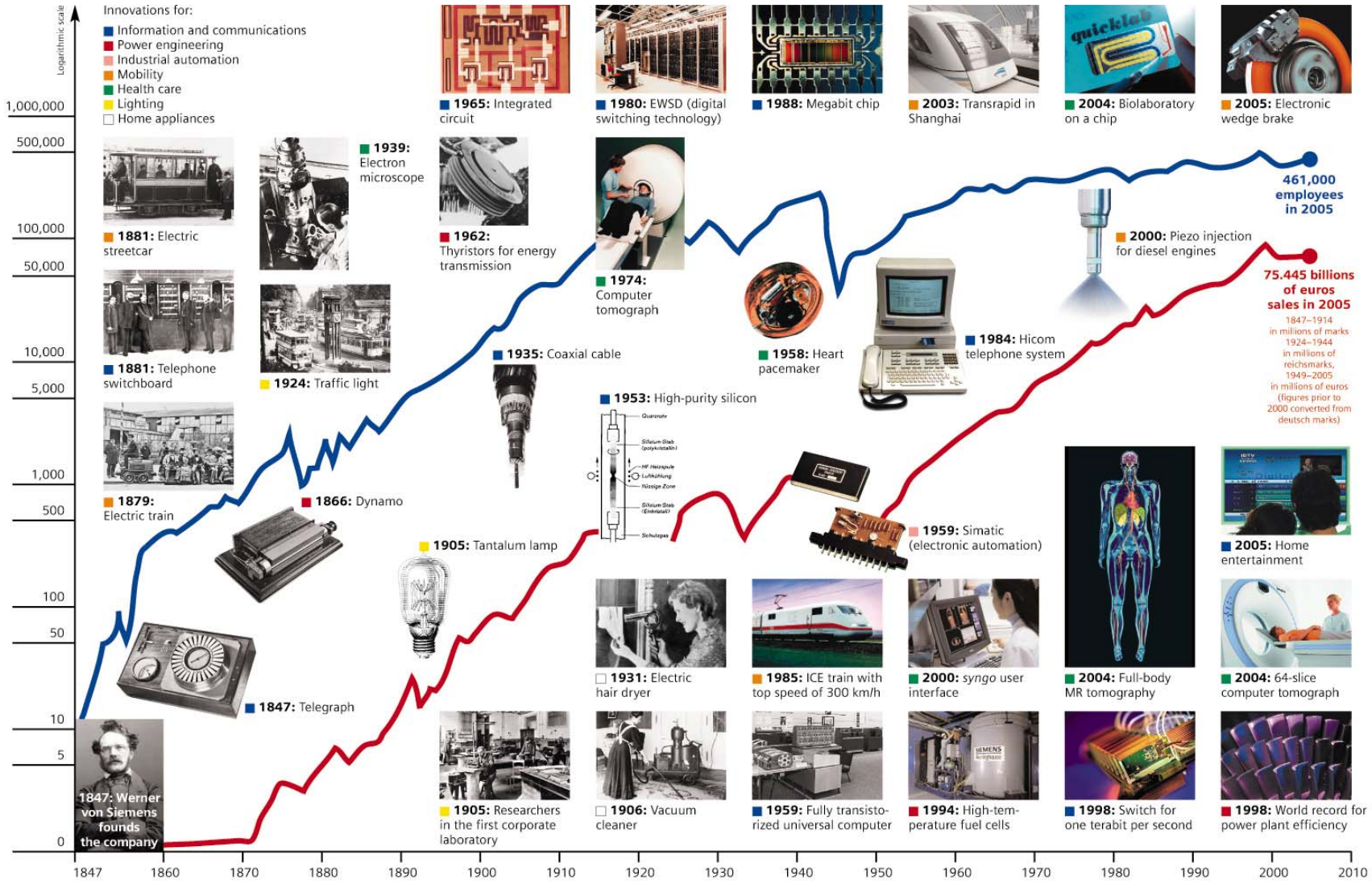
Siemens has a long tradition of technological innovations.



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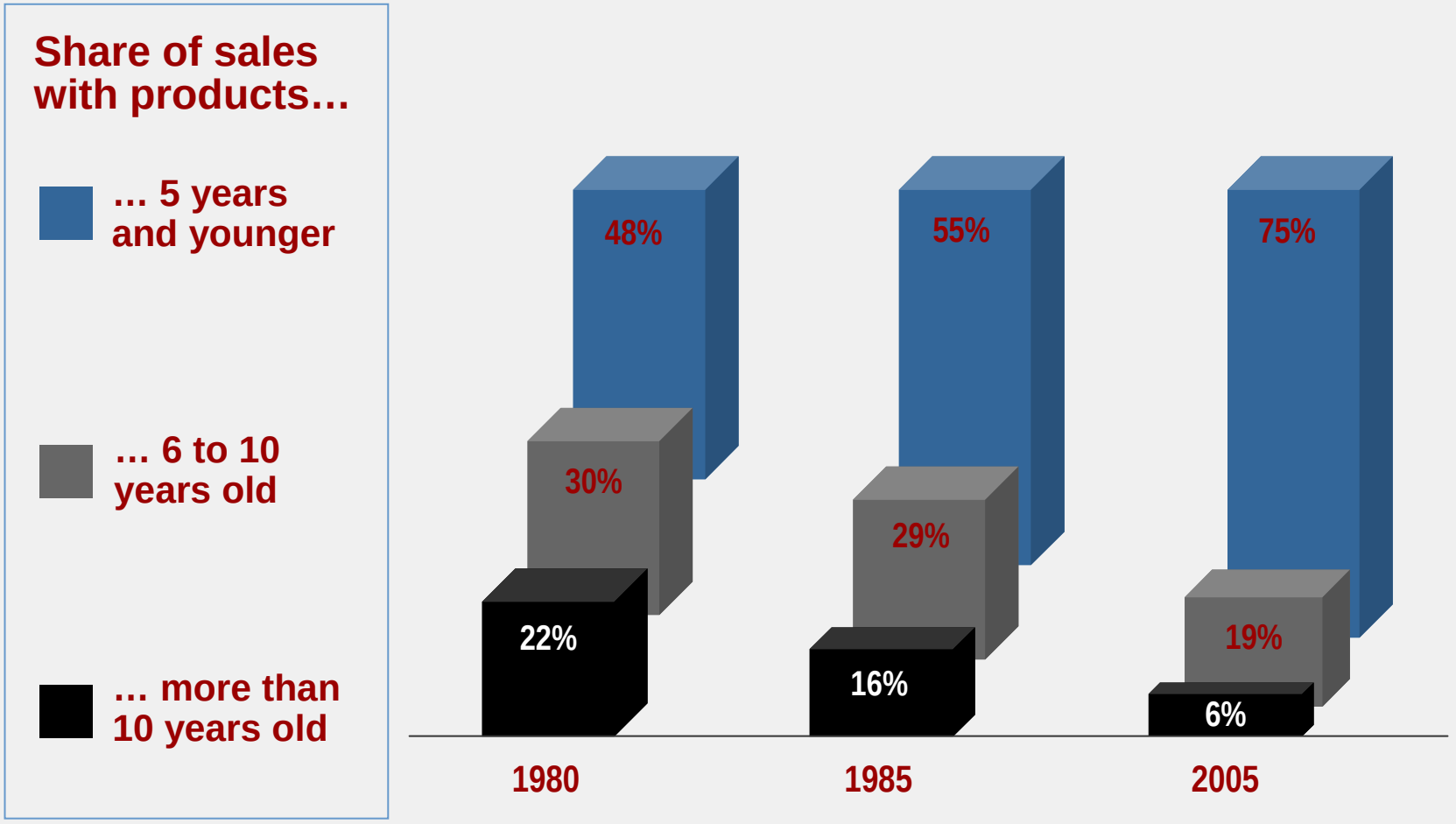
The rate of innovations is increasing.



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Siemens is one of the world's largest software companies.

- Siemens has more than 30,000 software developers.
- 60% of Siemens' business is based on software.
- Siemens spends more than 3 billion euros per year on software development.

But, Siemens is not recognized as a software company, since most of our software is embedded.

Examples:

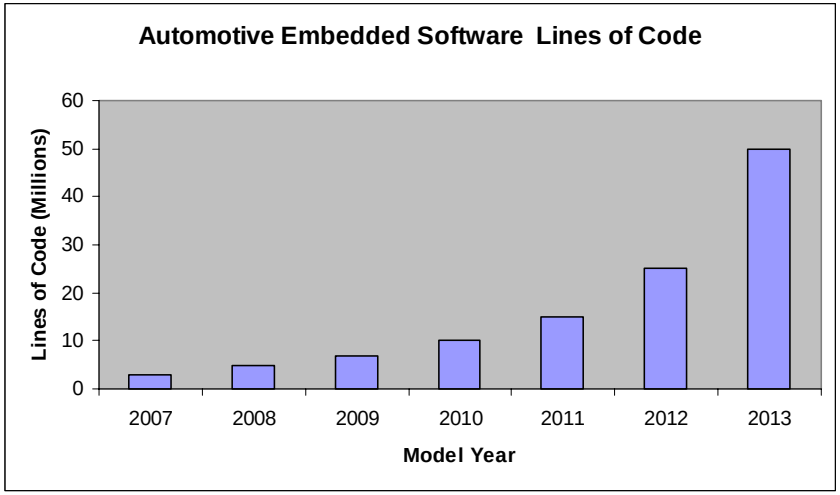
- Automation devices
- Industrial control systems
- Automotive components
- Communication systems
- Rail systems
- Medical devices






For Example… Automotive

- Chassis & Car body
- Fleet Management
- Infotainment
- Interior
- Marine Solutions
- Special OEM Solutions
- Power Train
- Public Transport Solutions
- Replacement Parts



Software Engineering Challenges at Siemens

§ Functionality previously realized in electrical or electro-mechanical systems is now being realized in software => bigger, more complex, & more software projects (hundreds of developers, millions of lines of code).

§ Meeting functional and non-functional requirements is important to business success => restricted hardware resources, real-time performance, safety critical applications.

§ Multisite development projects.

§ High quality (i.e., thoroughly tested, reliable) software is important to business success.

Our software systems engineering methods and technologies must address the increasing scale and complexity of emerging software systems.

Thank you!

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