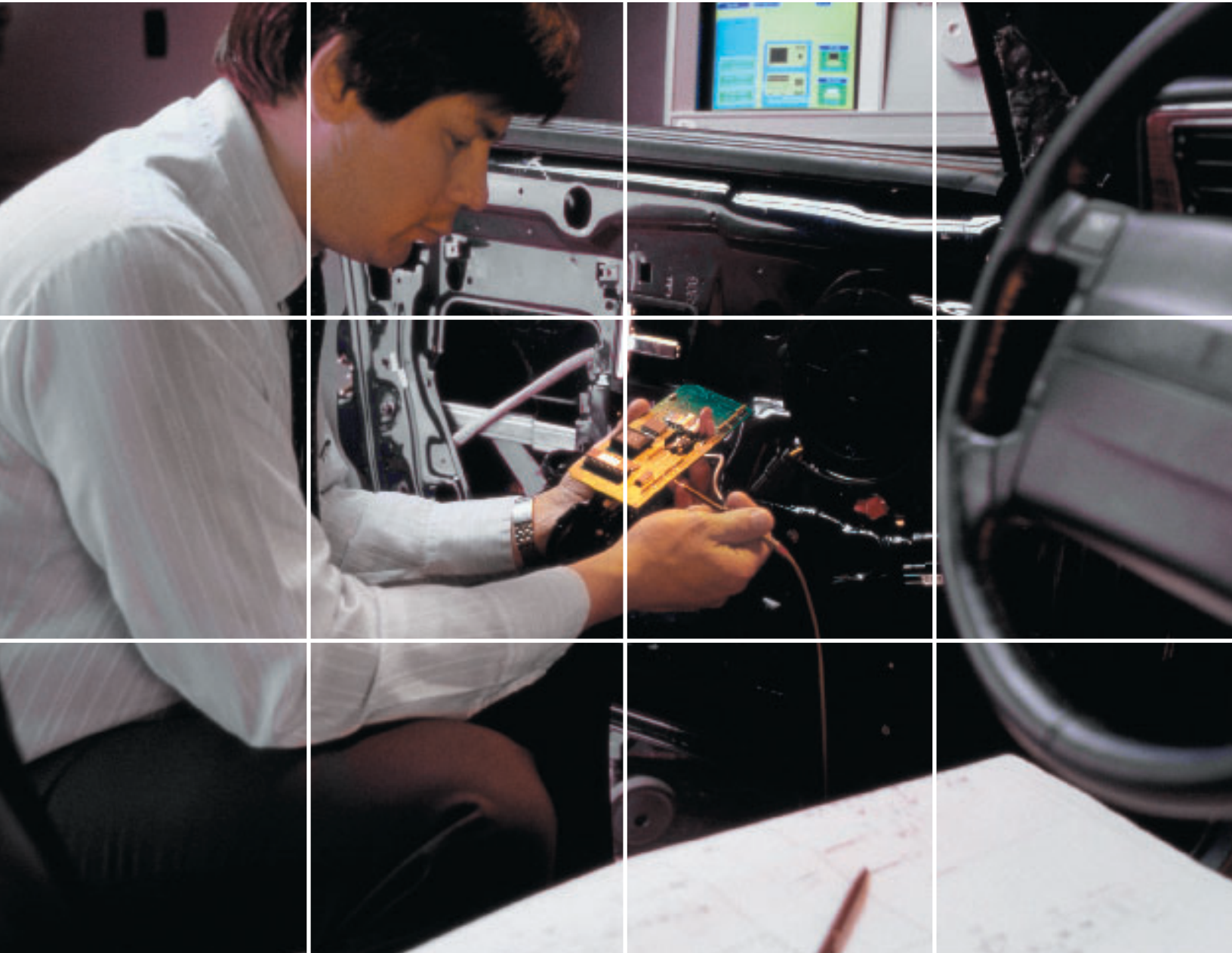IBM

Building market advantage through excellence in embedded systems

IBM Embedded Systems Lifecycle Management

More innovation. Fewer risks.

In-vehicle software and electronics are becoming the automotive industry's linchpins for innovation. The impact of these embedded systems is as pervasive for suppliers as it is for manufacturers. By the end of the decade it is expected that automotive suppliers may be responsible for almost 60 per cent of the industry's research and development, an increase from the current levels of 40 per cent.[1] The process of optimizing embedded systems development, synchronizing with multiple suppliers and verifying that software and hardware work well together as a system grows only more complex and risky.

To fully realize the technology's promise, leaders in the automotive industry are looking to make embedded systems a core competency. To that end, a best practices roadmap can serve to standardize processes, platforms, development and testing. The goal: deliver compelling and reliable innovative products to the market — in a timely manner with reduced risk to the business.

Taking the long view on innovation

Automotive companies understand that innovative, reliable embedded software and electronics systems drive both competitive advantage and brand differentiation. When well-executed and managed with a long-term perspective, embedded systems can feature shorter, more flexible development cycles and provide greater reliability in the field.

The pressure is intense as the industry attempts to understand and address the operational and financial impacts of innovating embedded technologies. The electronics content of a typical car is expected to exceed 40 per cent by 2010.[2] Quality and time to value matter as never before. Manufacturers and suppliers are working together to find the right processes and tools — and the right collaborative strategies to make business and organizational decisions about embedded systems.

IBM's embedded systems experience

IBM has patented and built innovative software and electronics products. With decades of automotive experience, we have proven expertise in managing the business implications of innovation. For manufacturers and suppliers, IBM can engage at any point in the development of embedded systems — and understands how to manage the business and operational impacts of an embedded systems portfolio throughout its entire lifecycle.

As worldwide pioneers in systems engineering, IBM brings to embedded systems its expertise in open-standards architecture, systems integration and business process management. With IBM Embedded Systems Lifecycle Management, you can:

- Enable product innovation while mitigating risks

- Reduce product lifecycle costs while increasing quality levels

- Accelerate time to market and time to value

- Optimize the portfolio mix

- Increase agility throughout the product development process

- Respond more quickly to new legislation and systems requirements.

A flexible approach from strategy to deployment

IBM's solutions and services span the automotive product lifecycle, but they can be utilized to answer the supplier's or manufacturer's immediate needs or objectives. The continuum of offerings ranges from strategy consulting to system development, engineering and technical services and software through deployment and lifecycle management.

A major manufacturer builds competitive advantage with IBM Embedded Systems Lifecycle Management

IBM has recently worked closely with a leading automotive company's electrical engineering and product development organization to jointly develop internal standards for software and systems engineering excellence. The collaborative effort will develop automotive electronic architectures that are designed to facilitate software innovation and modularity. The development and implementation of these new standards will help support the automaker's strategic intent to change the way it governs and guides its electronics suppliers. Through its new ability to deliver high-quality, cutting-edge products that can provide a faster time to market, the manufacturer expects to stake out a significant competitive advantage.

About IBM

IBM is a worldwide, leading technology company, offering a wide range of services and technologies that help businesses take full advantage of emerging innovation. IBM Business Consulting Services provides clients with business process and industry expertise, and the ability to translate that expertise into integrated, adaptive, on demand business solutions that are designed to deliver bottom-line business value. A large portion of IBM software is based entirely on open standards for optimum efficiency, flexibility, speed and agility. We understand your business, and we can provide you with solutions that can help you get to market quickly — at the speed your customers demand.

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[1] Financial Times July 22, 2004 citing a Roland Berger report

[2] Ibid

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