

The background of the advertisement is a composite image. At the top, a blue rearview mirror is visible, suggesting an airplane cockpit. Below it, a commercial airplane is shown in flight against a sky with a sunset or sunrise. The airplane is overlaid with a network of green dots and lines, representing digital connectivity. In the foreground, a smartphone displays a technical drawing or CAD model of a mechanical part, with the number '87' visible on the screen. The entire scene is framed by a dark blue border with a pattern of small green dots. The Siemens logo is in the top right corner.

SIEMENS

Boost collaboration and innovation with integrated electrical, network and embedded software development

Connect your E/E domains with **Capital E/E systems development solution**

[siemens.com/capital](https://www.siemens.com/capital)

Trend #1

Electrification and software integration is growing in all industries.



Trend #2

Customers' increasing demand for autonomous and connected products.



Trend #3

Growing cross-domain complexity - engineers have to track thousands of components and functions across domains and manufacturing sites.



Trend #4

Strong global competition from new, low-cost providers.



Challenging cross-industry trends

As a manufacturer of sophisticated products you have to search for a way to thrive in **very complex and dynamic markets**.

Electrification and software integration are taking all industries by storm, customers are asking more for **autonomous and connected devices**. Additionally, the **rising complexity in all engineering domains** is overburdening traditional collaboration and development processes, and the **global competition** from nimble, flexible start-up companies is driving a need to increase speed to market while reducing cost.

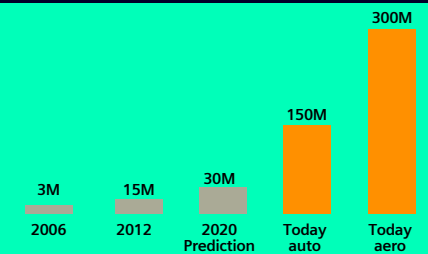
One of the biggest challenges is developing these **complex, multi-domain systems in a coherent, integrated way**.

Hence, the next generation of development approaches must **blur the boundaries between software, electrical, electronic and network development to ensure comprehensive traceability and compliance** whilst accelerating product development.

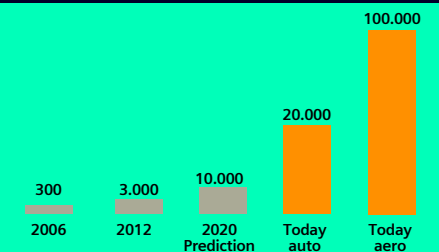
Are you prepared for the challenge?

The rapid growth in complexity, in fact, has outpaced predictions, as the following charts show:

Number of software lines of code

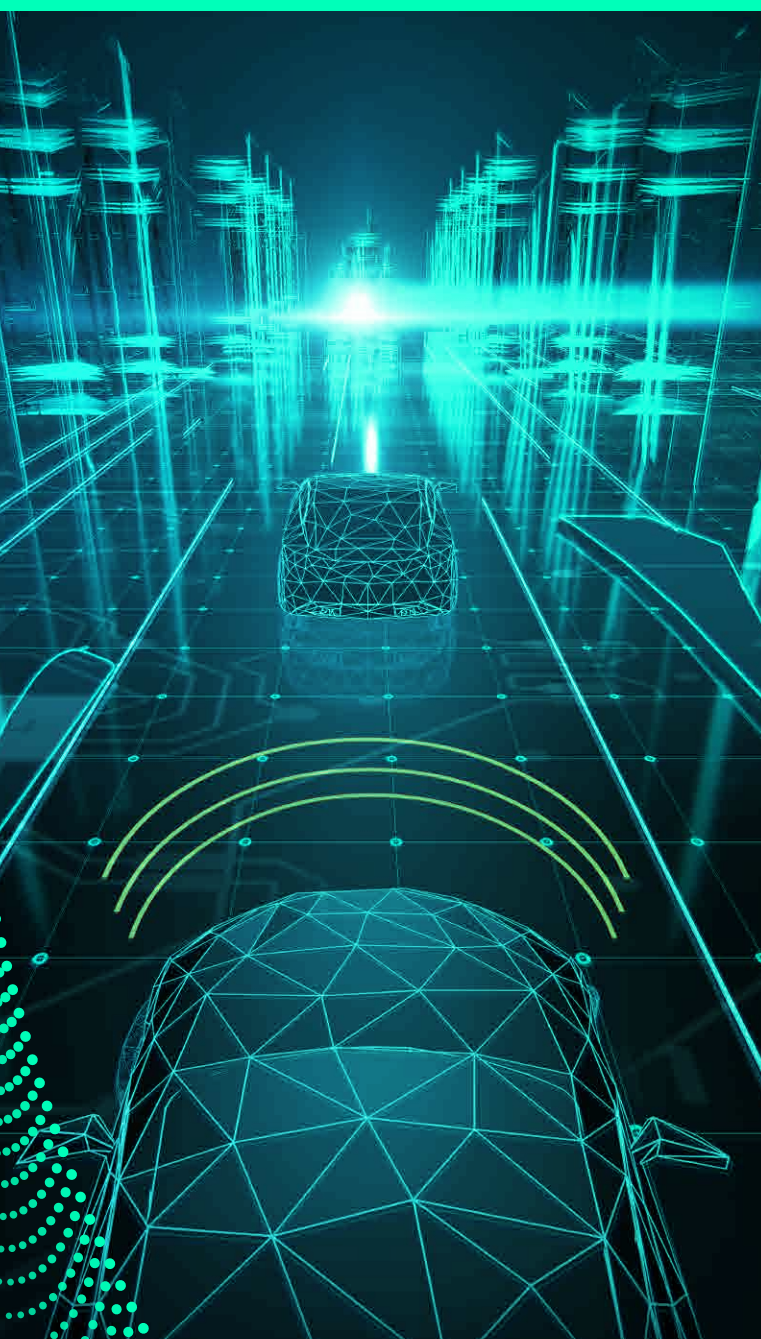


Number of network signals



Source: 2014 Deutsche Bank Global Auto Industry Conference (January 14, 2014)

Turn the growing complexity of E/E systems into a competitive advantage with Siemens E/E systems development solutions



Outdated processes and lack of integration across domains are jeopardizing your E/E systems development

The trends described above are challenging traditional methodologies for developing state-of-the-art products, causing a **significant increase in the importance and complexity of the electrical and electronic (E/E) systems** within a variety of products, from passenger cars and aircraft to marine vessels and advanced industrial machinery.

As a company in the above-mentioned industries, or any other industry that develops or manufactures sophisticated equipment, you want to **turn this growing complexity of E/E systems into a competitive advantage** through innovative designs.

Advanced E/E system design enables the most sophisticated and desirable features in modern electronic products.

Advanced E/E system design **enables the most sophisticated and desirable features**, including automation and electric propulsion.

Additionally, it allows you to **extend the value creating ability of your products well into their lifecycle** through over-the-air (OTA) updates that add new features even after the initial sale.

However, in whatever industry you are in, **you will have to deal with shorter development cycles** due to increased competition and expectations for faster time-to-market, and as a consequence, seek to **deploy new technologies and innovative designs faster than ever before**.

Accelerating development cycles with **rapidly increasing systems complexity can result in painful consequences** for you, whether you are a huge OEM or a small supplier.

Products could arrive to market later than the competition, and may lack the innovative and exciting new features that will attract customers.

72% of engineering teams say that MCAD/ECAD integration reduces delivery time up to...

-15%

Engineering.com research report

Next level E/E systems development with an end-to-end environment

The COVID-19 pandemic has forced you to **quickly develop responses to its economic impact and expand your virtual infrastructure** to support employees while working from home.

Hence, **improving the efficiency and resiliency of all stages of the product development and manufacturing flow** has suddenly become a core requirement across industries and throughout supply chains.

The combination of these factors is a **great opportunity to reevaluate your product development methods and to look for efficiency gains and greater flexibility** to secure your business.

Inefficient development caused by this growth in complexity will **increase program risk** and the potential for cost and schedule overruns.

Failing to meet internal requirements or increasingly stringent safety and environmental regulations can be even more damaging due to costly product recalls, warranty claims, fines or even legal action, and **eroded customer trust**.

In a 2019 report, McKinsey & Company noted that, “By breaking up domain silos... OEMs can speed up time to market for new E/E architecture definition and sourcing decisions.”


The solution is to **evolve your E/E system development methodologies** to meet the challenges of the markets of tomorrow.

Consistent improvements in electric powertrain technology, as well as the incorporation of sophisticated electronics devices and embedded software, will allow you **to create the smart and connected products your customers are waiting for**.

The next generation of development methodologies **must blur the boundaries between software, electrical, electronic and network development** to ensure holistic traceability and accelerate product development.

These methodologies must also **leverage automation to enable faster, more frequent design analysis and iteration and to allow engineers to focus on product innovation** instead of repetitive design tasks.

Thus, you can accelerate development cycles to bring new products to market faster than ever – a critical capability for automotive, aerospace and other companies.



Become an E/E systems innovator and create the smart products your customers demand with Siemens E/E Systems Development solutions.

Learn more at [siemens.com/capital](https://www.siemens.com/capital)

Siemens Digital Industries Software proudly presents Capital™ electrical/electronic (E/E) systems development solution

What should you do?

Evolve your development and manufacturing processes to tackle the challenges described before, in order to survive and thrive.

An integrated, end-to-end E/E systems development environment will support you to overcome complexity and reduce time to market.

Continuously verify design compliance and comply-by-construction via constraints and automation.

Enable the configuration-controlled digital twin and automated reporting based on real-time engineering design.

Our solutions for your success

Siemens expanded Capital™ electrical/electronic (E/E) systems development software portfolio can help you thrive in the highly complex engineering industry.

Building upon leading Capital capabilities for design, manufacture and service of electrical systems, the portfolio has now expanded to encompass E/E system and software architectures, network communications and embedded software development.

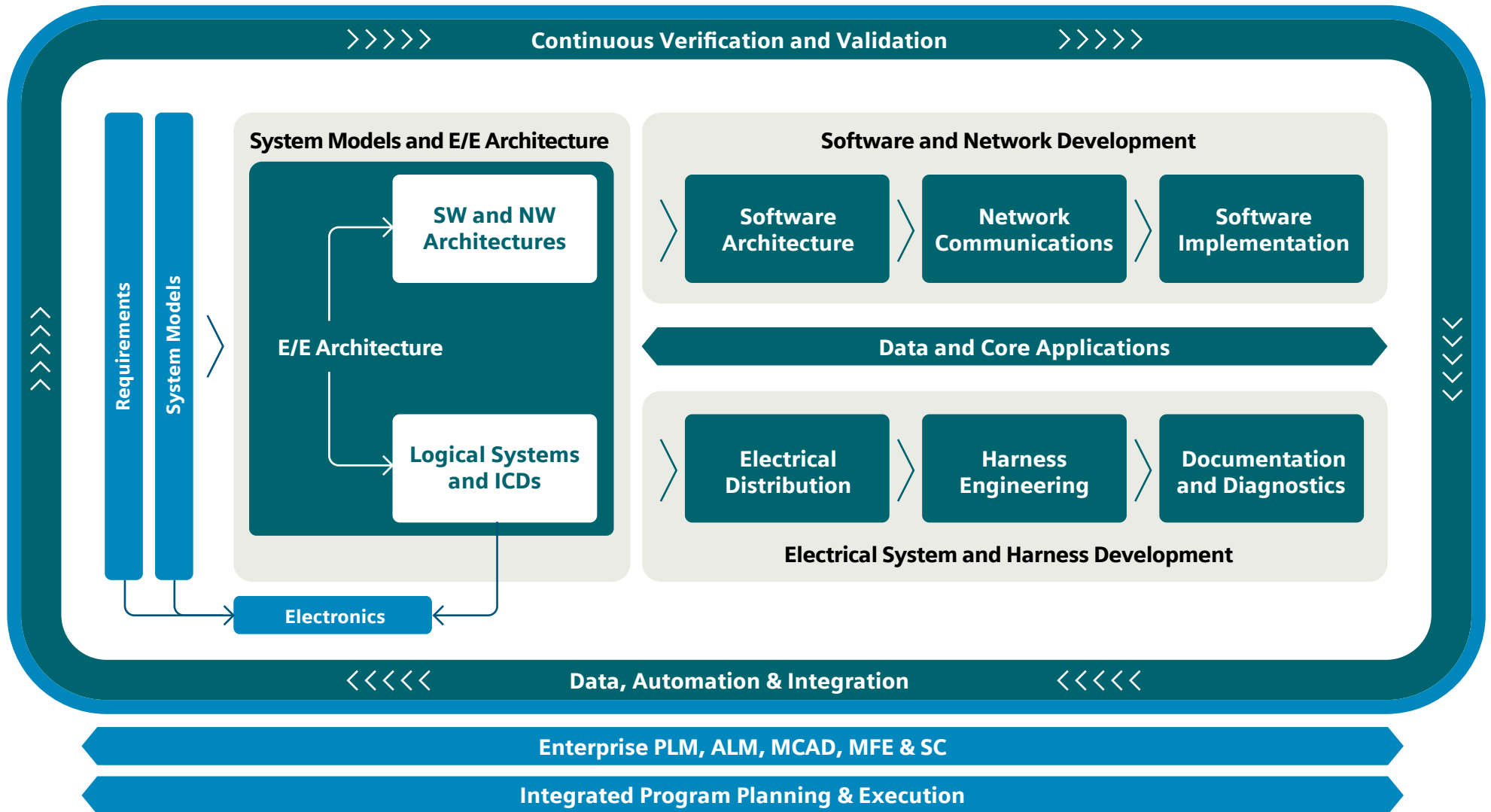
As part of the Xcelerator portfolio of software, services and application development platform, Capital is integrated with adjacent Siemens solutions, including the Teamcenter® portfolio for product lifecycle management, NX™ software for mechanical design and Mendix low code development environments, which creates the world's most comprehensive E/E systems development solution to efficiently engineer today's smart products.

A satellite development company reported a reduction of 50% in electrical design time and of 3 months in delivery schedule using Capital™ electrical/electronic (E/E) systems development software portfolio

Learn more at [siemens.com/capital](https://www.siemens.com/capital)

Capital E/E Systems Development

an evolving story of capability growth



Capital – E/E Systems Development
 Complementary Siemens solutions

About Siemens Digital Industries Software:

Siemens Digital Industries Software is driving transformation to enable a digital enterprise where engineering, manufacturing and electronics design meet tomorrow. The Xcelerator portfolio helps companies of all sizes create and leverage digital twins that provide organizations with new insights, opportunities and levels of automation to drive innovation.

For more information on Siemens E/E Systems Development solutions, visit www.siemens.com/capital or follow us on [LinkedIn](#) and [Twitter](#).

Siemens E/E Systems Development,
Where today meets tomorrow.

Americas: **+1 314 264 8499**
EMEA: **+44 (0) 1276 413200**
Asia- Pacific: **+852 2230 3333**

© Siemens 2021. A list of relevant Siemens trademarks can be found [here](#).

Other trademarks belong to their respective owners.

