Engineering Research and Development (ER&D) Services

The Minds Behind the Machines That Power Modern Life

2025 CONSTELLATION SHORTLIST

The Constellation ShortList™ presents vendors in different categories of the market relevant to early adopters. In addition, products included in this document meet the threshold criteria for this category as determined by Constellation Research.

This Constellation ShortList of vendors for a market category is compiled through conversations with early adopter clients, independent analysis and briefings with vendors and partners.

ABOUT THIS SHORTLIST

Engineering Research and Development (ER&D) services serve a specialized domain of designing, developing, testing, and validating physical products, embedded systems, and industrial technologies across sectors such as automotive, aerospace, telecom, energy, medical devices, and semiconductors. Unlike product engineering services that often focus on software platforms or customer-facing applications, ER&D is grounded in deep domain engineering, applied sciences, and systems thinking.

In a world driven by electrification, autonomy, sustainability, and intelligent systems, customers rely on ER&D service providers not just to reduce cost or scale delivery, but to accelerate innovation, enable hardware-software convergence, and build resilient, compliant, and next-gen systems. Key capabilities span across digital twin and simulation, mechatronics, embedded AI, systems engineering, PLM, and manufacturing automation.

ER&D providers today are expected to blend mechanical, electronic, and software competencies—while leveraging AI, model-based systems engineering (MBSE), and domain-specific standards—to support the next wave of smart and sustainable products.

11 SOLUTIONS TO KNOW

Constellation evaluates more than 30 solutions categorized in this market. This Constellation ShortList is determined by client inquiries, partner conversations, customer references, vendor selection projects, market share and internal research.

- ACCENTURE
- CAPGEMINI
- COGNIZANT
- GLOBALLOGIC
- HCLTECH
- IBM
- INFOSYS
- LTTS
- TATA TECHNOLOGIES
- TECH MAHINDRA
- WIPRO

LIKE WHAT YOU SEE?

Consider partnering with Constellation Research on your go-to-market-strategy. Email **ShortList@ContellationR.com** for more info.

To learn more about Constellation Research Shortlists visit: **www.constellationr.com/ShortList**

THRESHOLD CRITERIA

Constellation Research evaluates HRM vendors for their ability to provide AI-powered and neuroscience-driven solutions across the following criteria:

Core Functionality

- **Core engineering expertise across mechanical, electrical, embedded, and systems domains**
  Providers must deliver deep R&D capabilities in areas like CAD/CAE, control systems, embedded firmware, and verification and validation (V&V).
- **Industry-specific regulatory and safety compliance knowledge**
  Familiarity with domain regulations such as ISO 26262 (automotive), DO-178C (aerospace), IEC 62304 (medical) is essential.
- **Global delivery with engineering labs and test facilities**
  Presence of engineering centers equipped for prototyping, simulation, and validation in key global hubs.
- **Digital engineering enablers**
  Proven experience in tools such as PLM, CAD, CAE, digital twin platforms, and MBSE methodologies.
- **Domain-specific platforms and reusable frameworks**
  IP accelerators and reference architectures tailored for sectors like EV/ADAS, smart medtech, or industrial automation.

Differentiators

- **AI/ML integration in embedded and edge systems**
  Applying AI in areas such as vision systems, predictive maintenance, adaptive control, and real-time decision-making.
- **Digital twin and virtual validation at system level**
  Leveraging simulation and virtual prototyping to reduce physical testing cycles and improve design reliability.
- **Sustainable engineering practices**
  Engineering for energy efficiency, recyclability, and carbon footprint reduction in both product and process design.

BUSINESS THEMES

- Digital Safety, Privacy and Cybersecurity
- Data to Decisions
- Next Generation Customer Experience
- Technology Optimization & Innovation
- Product-led Growth and Innovation

ABOUT CONSTELLATION RESEARCH

As an award-winning Silicon Valley-based strategic advisory and futurist analyst firm, Constellation Research serves leaders and organizations navigating the challenges of digital strategy, business-model disruption and digital transformation. Constellation works closely with solution providers, partners, C-suite executives, board of directors, and its Constellation Executive Network of buy-side leaders to lead the way in research coverage and advise clients how to achieve valuable business results.

FREQUENCY OF EVALUATION

Each Constellation ShortList is updated at least once per year. Updates may occur after six months if deemed necessary.

EVALUATION SERVICES

Constellation clients can work with the analyst and the research team to conduct a more thorough discussion of this ShortList. Constellation can also provide guidance in vendor selection and contract negotiation.

Chirag Mehta
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Chirag Mehta is Vice President and Principal Analyst focusing on cybersecurity, next-gen application development, and product-led growth. With over 25 years of experience, he has built, shipped, marketed, and sold successful enterprise SaaS products and solutions across startups, mid-size, and large companies. As a product leader overseeing engineering, product management, and design, he has consistently driven revenue growth and product innovation. He also held key leadership roles in product marketing, corporate strategy, ecosystem partnerships, and business development, leveraging his expertise to make a significant impact on various aspects of product success.