

The Zinnov logo consists of the word "zinnov" in a white, lowercase, sans-serif font, positioned to the left of a blue rounded rectangle containing a white curved line that suggests a stylized 'Z' or a digital path. The background of the entire slide is a photograph of a worker in a hard hat and work clothes standing in a large industrial facility, looking at a massive, circular, ribbed metal structure that resembles a turbine or a large pipe. The lighting is dramatic, with strong highlights and deep shadows, creating a sense of scale and industrial complexity.

zinnov

ZINNOV ZONES

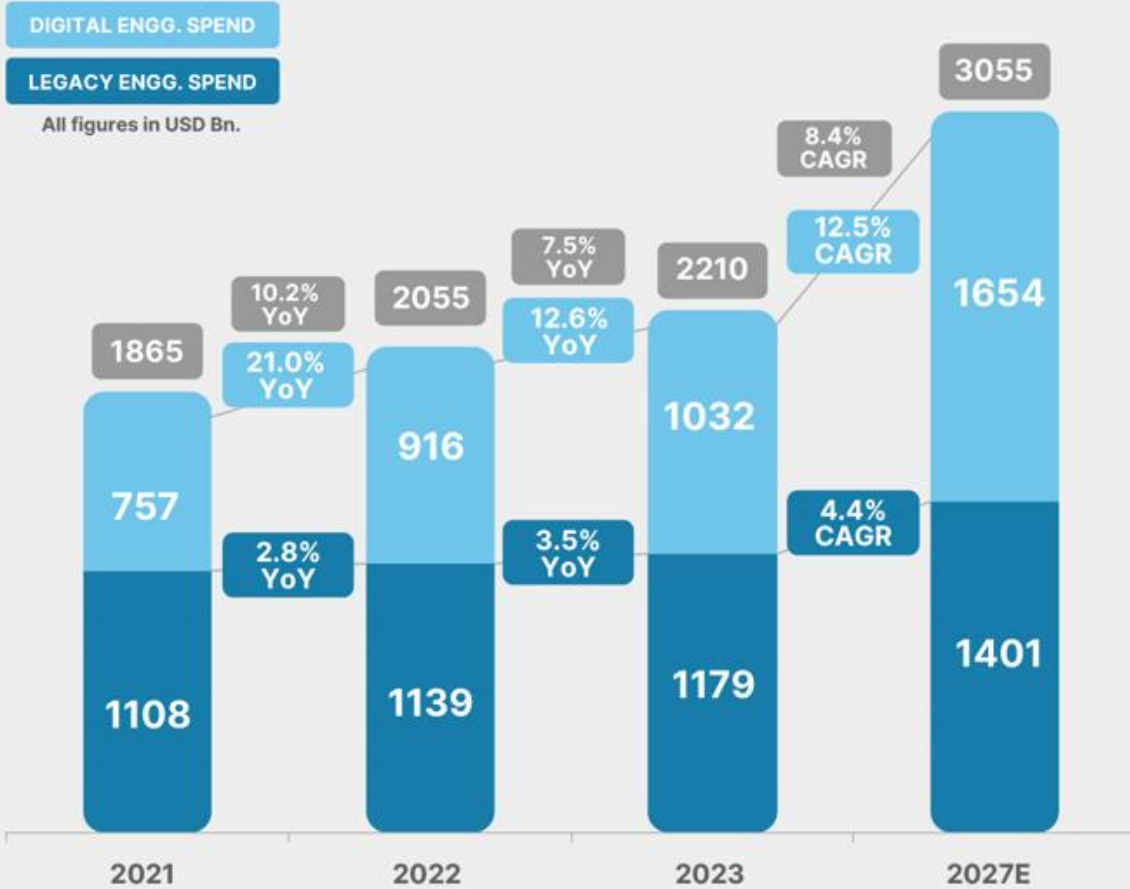
DIGITAL ENGINEERING

REPORT 2024

Digital Engineering Surges Amid Global Economic Downturn: Manufacturing Sectors Embrace Digital Transformation

The DE spends by Enterprises has been resilient, currently pegged at USD 2.21 Tn, and continues to grow despite macroeconomic headwinds

GLOBAL ER&D SPEND* (2021 – 2027E)



CXOs remain focused on cost reduction and achieving operational excellence, anticipating a gradual increase in ER&D Spend by 2025

DE spend is poised to propel overall ER&D Spend as Enterprises focus on Data-driven, AI-first products

Despite challenges such as market softness and investment hesitancy in Financial Services and Hi-tech industries, the Manufacturing sector is thriving due to strong demand and improvements in operational efficiency

European companies outpaced their U.S. counterparts in Technology-enabled ER&D investments with a notable 9% growth driven mainly by advancements and investments in the Manufacturing sector

Service Providers experienced significant deceleration in the last fiscal year as customers rigorously reviewed their technology budgets and cut down on discretionary spend

European ER&D investments showcase resilience amid economic uncertainty, highlighting Europe's advancement towards a Digital and Sustainable landscape

DIGITAL ENGG. SPEND

LEGACY ENGG. SPEND

All figures in USD Bn.

NORTH AMERICA



TOP VERTICALS



North America, traditionally a leader in ER&D Spend, experienced slower growth in 2023 due to measures to control inflation and geopolitical risks

Despite businesses' conservative budgeting due to potential risks, North America remains committed to advancing technologies like AI, 5G, and Industry 4.0

EUROPE



TOP VERTICALS



In 2023, ER&D investments in Europe grew by 9.3%, recording the highest growth rate since 2020. This growth is driven by increased investments in the A&D, Pharmaceuticals, and Automotive Industry

Automotive, A&D and Industrial firms notably amplified their investments towards green energy solutions, cementing Europe's leadership in sustainable innovation

APAC



TOP VERTICALS



China contributes over 10% of global ER&D Spend, led by S&I, Telecommunications, Semiconductor, and Automotive industries, which together accounts for about half of China's expenditure

APAC companies are prioritizing Digital Technologies such as AI/ML, Robotics, Additive Manufacturing, Automation Tools, 5G, and Smart Manufacturing

By 2027, Hi-tech verticals will account for ~55% of the overall DE spend, followed by Services-led verticals

- DE Spend 2023
- DE Spend 2027E
- DE CAGR%

All figures in USD Bn.



MANUFACTURING

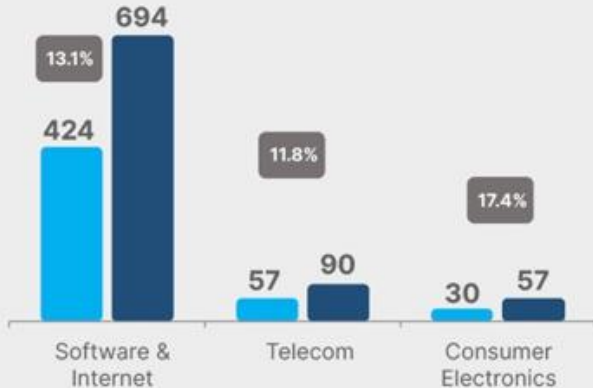
Manufacturing-led verticals will account for **21%** of the overall Digital Engineering Spend by 2027



- Connected Vehicles
- Pharma 4.0
- IIOT
- Electric Vehicles
- AI-based Drug Discovery
- Cobots

HI-TECH

Hi-tech verticals will account for **~55%** of the overall Digital Engineering Spend by 2027



- AI/ML
- Private 5G
- IOT
- Cybersecurity
- SDN/NFV
- Metaverse

SERVICES

Services-led verticals will account for **24%** of the overall Digital Engineering Spend by 2027

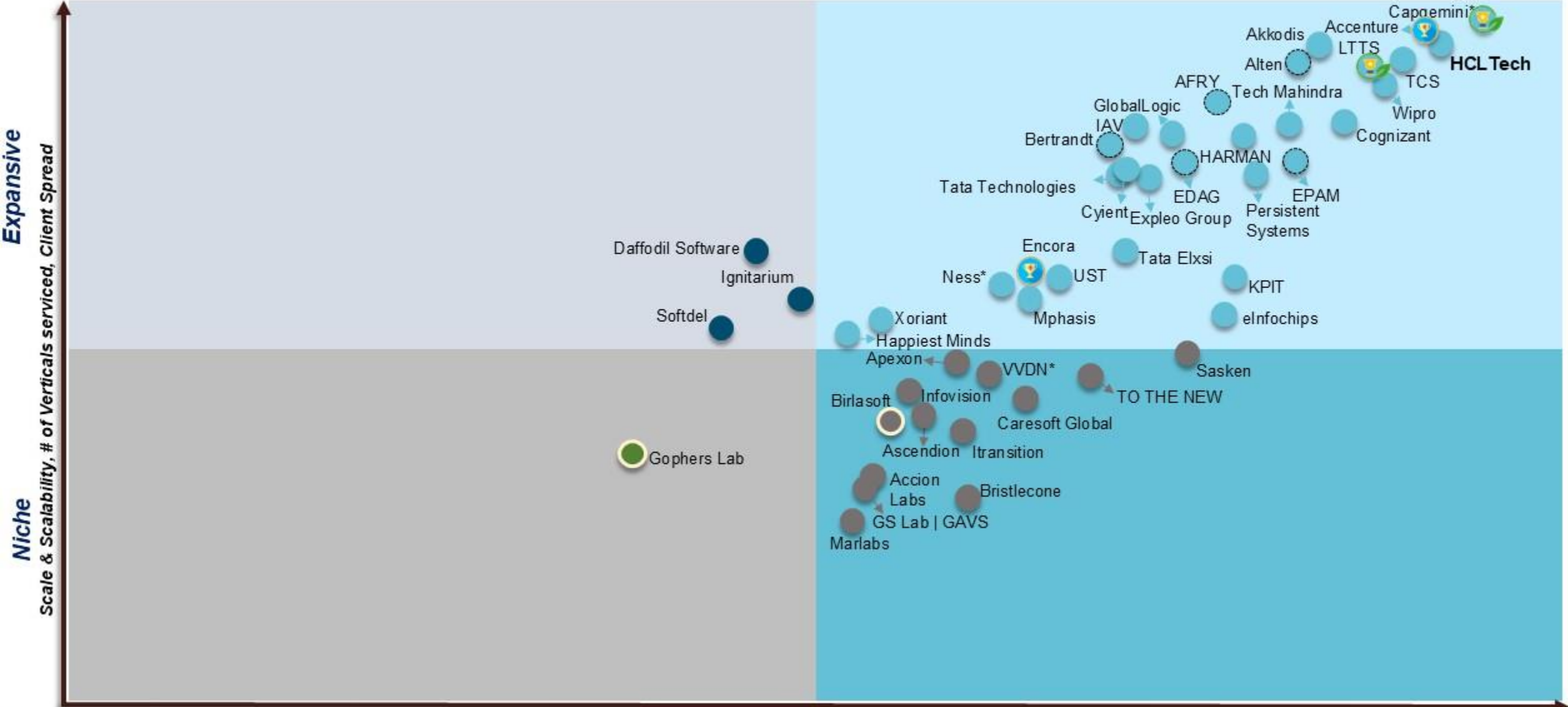


- Open Banking
- Automation
- Telehealth
- RegTech
- AR/VR
- Remote Monitoring

HCLTech recognized as a Leader in Zinnov Zones Digital Engineering and ER&D Services 2024

- HCLTech continues to be the only service provider amongst Top 2 players in Digital Engineering Services
- HCLTech recognized to be a top 3 Leaders in ER&D Services, Industry 4.0, and Semiconductor services
- In addition, HCLTech has been recognized as a leader in Aerospace, Automotive, Industrial, Telecommunication, Telehealth, Consumer software and Enterprise Software, Data & AI engineering, Generative AI Services, and Hyperscalers Services

Zinnov Zones 2024 report assessed ~60 Global ER&D Service Providers



Zinnov Zones Ratings New Entrants

Specialization, R&D practice maturity (depth and maturity of services), Innovation & IP, Ecosystem Linkages

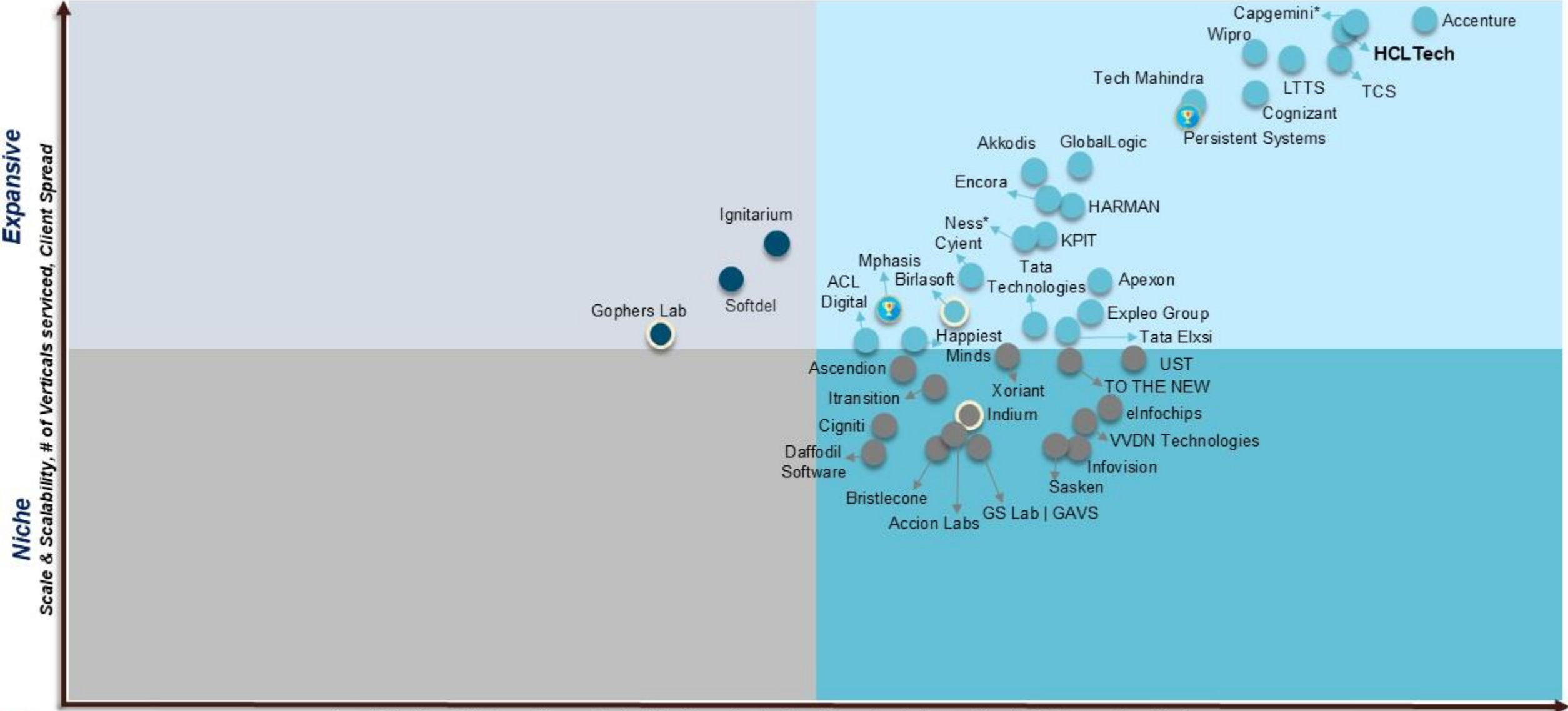
*Capgemini Engineering *Ness Digital Engineering
*VVDN Technologies



Zinnov Zones Ratings New Entrants

Specialization, R&D practice maturity (depth and maturity of services), Innovation & IP, Ecosystem Linkages

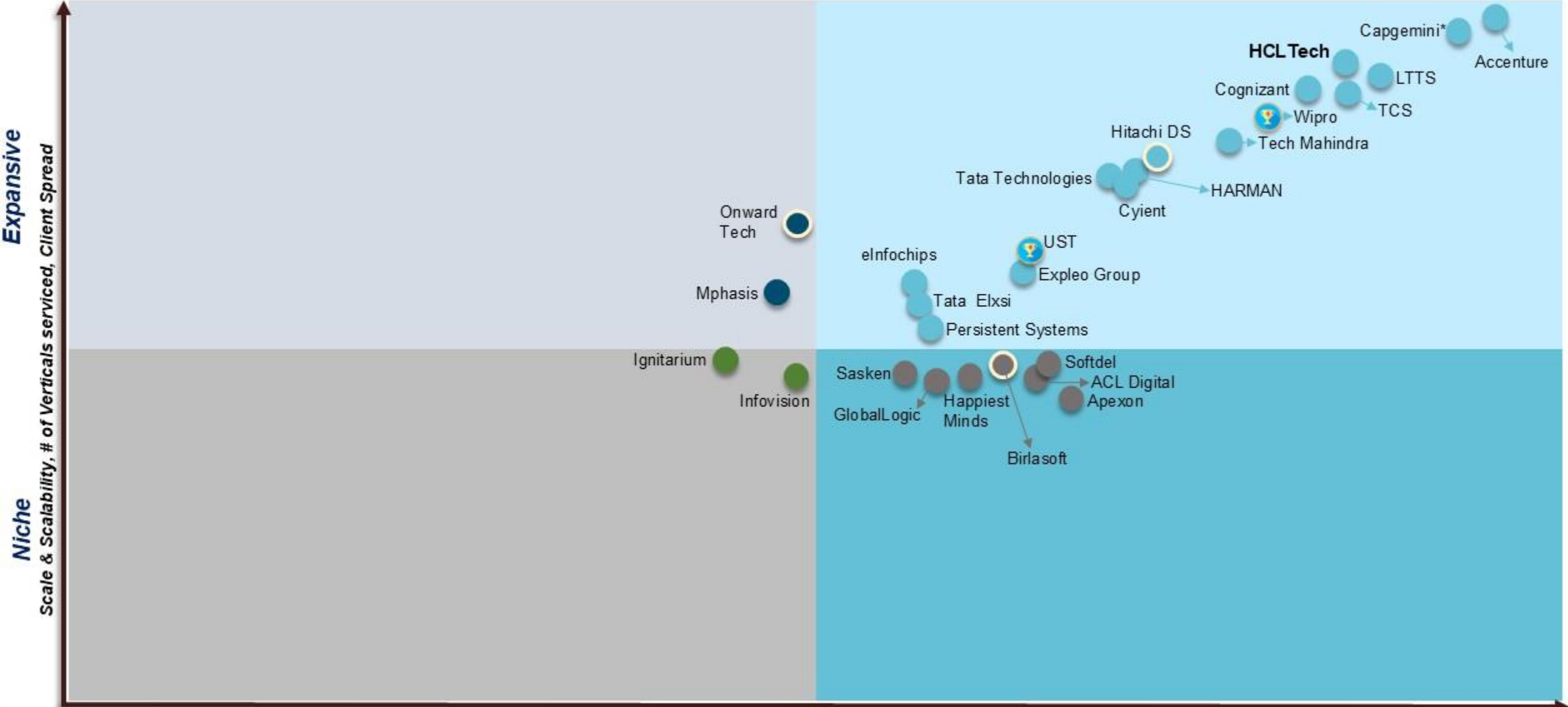
*Capgemini Engineering



Zinnov Zones Ratings New Entrants

Specialization, R&D practice maturity (depth and maturity of services), Innovation & IP, Ecosystem Linkages
Emerging **Established**

*Capgemini Engineering
*Ness Digital Engineering



Zinnov Zones Ratings New Entrants

Specialization, R&D practice maturity (depth and maturity of services), Innovation & IP, Ecosystem Linkages
Emerging **Established**

*Capgemini Engineering



Analyst Quote

[Sidhant Rastogi](#), President, Zinnov, said, “HCLTech has cemented its position among global leaders in Digital Engineering through strategic initiatives and partnerships. The firm’s investments in building industry-specific solutions, coupled with AI Force and AI Foundry platform, are helping accelerate Generative AI-led transformation across business value chains. Its AI competency, collaborations with AWS, Google Cloud, Azure, and Intel Foundry highlight its focus on advancing AI and global semiconductor innovation. With an expanded presence in the US and Europe, and deeper partnerships in Financial Services and Retail, HCLTech is shaping the future of Digital Engineering, securing its leadership position in the 2024 Zinnov Zones for ER&D and Digital Engineering.



NEW YORK | SANTA CLARA | BANGALORE |

HOUSTON | GURGAON | PARIS | TOKYO



info@zinnov.com

2023 © Zinnov. All Rights Reserved