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THE INEVITABLE RISE AND IMPACT OF DIGITAL ENGINEERING

JULY 2023



Foreword

The year 2022 was rife with geopolitical tensions, recessionary pressures, government protectionism, and supply chain constraints – across geographies. Despite these headwinds, the global Digital Engineering spend, which is a subset of the global overall Engineering R&D spend, grew. The pandemic-induced digitalization initiatives continued unabated, with technologies such as Cloud, Artificial Intelligence, Metaverse, 5G, Digital Thread, etc., leading the charge. These technologies not only garnered significant investments, but also became sandboxes for exploring newer use cases and business models.

With the Digital Engineering spend estimated to double and touch a massive USD 1.6 Tn by 2026, these technologies will be instrumental in shaping enterprise digital priorities and spends. This dynamic landscape offers unprecedented opportunities for Service Providers to collaborate and innovate alongside enterprises. Service Providers are not only building in-house capabilities in Generative AI, Metaverse, Digital Thread, etc., but are also focusing on winning large deals as a growth strategy. Across verticals, SPs are tapping into significant opportunities to enable and further enterprises' Digital Engineering needs.

Additionally, sustainability remains a key enterprise priority area, which Service Providers can actively capitalize on. Carbon Reduction, Clean Energy, Circular Economy, and Energy Management are the four key sustainability themes that enterprises are doubling down on. From asset-heavy industries investing in electrification to driving operational excellence to meet carbon neutral targets, Service Providers are partnering with enterprises across the sustainability value chain.

In this Zinnov marquee report, "**The Inevitable Rise and Impact of Digital Engineering**," we explore the key trends driving Digital Engineering spend and investments within enterprises, the technologies shaping the landscape, and opportunities that Service Providers can capitalize on. It also delves into what is driving growth and spend in key verticals such as Software & Internet, Automotive, Telecom, Aerospace & Defense, BFSI, Healthcare, and Industrial. From the rise of agile methodologies to the increasing importance of sustainability and environmental considerations, we highlight the trends shaping the global technology landscape.

Source: Zinnov Research and Analysis, Zinnov Z1000 database

Executive Summary

01 The global Digital Engineering spend is pegged at USD 810 Bn and is expected to grow at a CAGR of 18% to touch a massive USD 1.6 Tn by 2026.

02 Hi-tech-led verticals are the largest contributors to the Digital Engineering spend and are growing at a faster rate of 20% CAGR than Services and Manufacturing-led verticals.

03 Services-led verticals (especially consumer-facing ones) are experiencing a softened Digital Engineering spend owing to macro factors; however, they are still expected to grow at 18+% CAGR and account for 27% of the overall DE spend by 2026.

04 Manufacturing-led verticals contribute to 15% of the global DE spend and are expected to grow at 15% CAGR through 2026.

05 Despite recessionary pressures, geopolitical tensions, government protectionism, supply chain constraints, rising cost of debt and other macro-economic headwinds, Digital Engineering spend continues to grow unabated.

06 Four key themes are driving the global Digital Engineering spend – Generative AI, Metaverse, Digital Thread, and Hyperscalers.

07 Sustainability remains a priority for enterprises across industry verticals. Across both products & services, clean and green alternatives remain the primary initiative.

08 ER&D market addressed by engineering service providers is pegged at USD 35-45 Bn in 2022. S&I and Automotive verticals dominate ER&D addressed market, contributing ~57%.

09 India's higher density of Digital Engineering talent has helped it grow faster than Western Europe. Big Data, Cloud Computing, and AI/ML continue to be the major areas of investment for Service Providers.

Source: Zinnov Research and Analysis, Zinnov Z1000 database

The report helps ER&D enterprises and Service Providers understand macro and tech trends that drive enterprise R&D priorities

Objective

- To analyze the current state of the Digital Engineering market
- To gain insights from dynamically evolving macro and tech trends in a post-pandemic world. The report contains:
  - An analysis of Digital Engineering spending
    - Despite macro trends (evolving business fundamentals, complex geopolitical landscape, supply chain constraints etc.) R&D priorities continues its upward trajectory
    - Tech Trends (generative AI, industrial metaverse, hyperscalers etc.) that is accelerating digital engineering spend
  - An analysis of Digital Engineering spending and priorities across key verticals
  - The market addressed by Service Providers
  - An assessment of 75+ global Service Providers for their Digital Engineering prowess, to help enterprises make informed purchasing decisions for strategic sourcing initiatives

IP and Data Assets

Z1000 Database	GCC Database	Zinnov Zones	Service Provider Database	ER&D deals Database
Zinnov's database of top 1,000 global ER&D Spenders across 20+ verticals	Database of 5,000+ ER&D Global Capability Centers (GCCs) analyzed across verticals	Database of 75+ global Service Providers rated as part of the Zones ER&D 2022 Ratings	Database of 2000+ ER&D Service Providers tracked across the globe	Database of ~3,000+ ER&D deals signed across the globe across verticals

Top 1,000 global ER&D Spenders

20+ verticals

5,000+ GCCs

2,000+ Service Providers

3,000+ ER&D Deals

Source: Zinnov Research and Analysis, Zinnov Z1000 database

AGENDA

A The Rise of Digital Engineering

B Technology Pillars of Digital Engineering

C Sustainability – A Priority

D Industry Deep Dives and Digital Engineering Spend Trends and Priorities

E Market Addressed by Service Providers

F Growth Levers for Service Providers

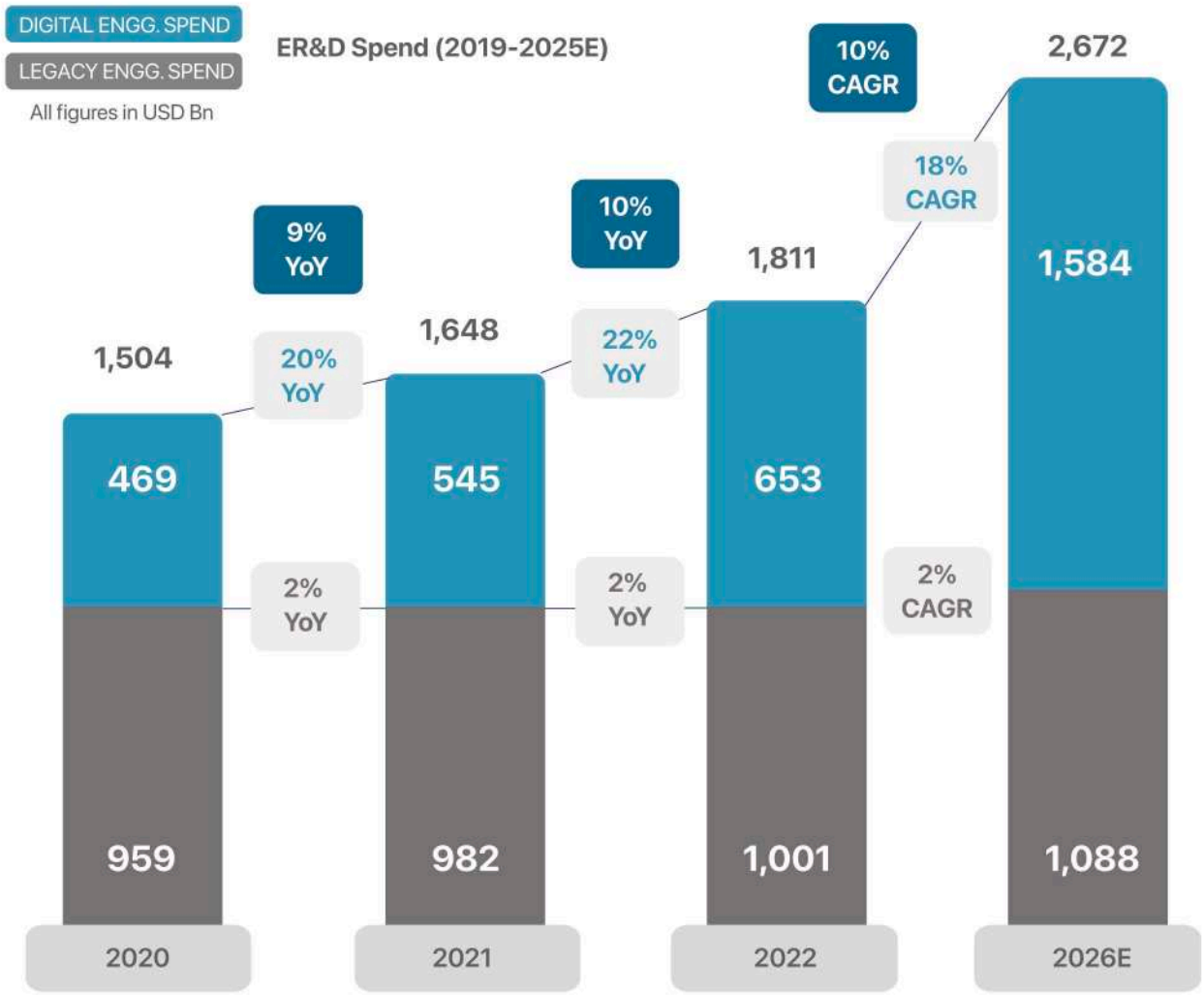
G Zinnov Zones for ER&D Services Ratings 2022

Source: Zinnov Research and Analysis, Zinnov Z1000 database

The current macro-economic environment is impacting different verticals to varying degrees; certain consumer-facing industries will be more impacted than others

Source: Zinnov Research and Analysis, Zinnov Z1000 database

Digital Engineering will continue to grow and is expected to reach USD 1.6 Tn by 2026, even with adjusted macro-economic headwinds



CXOs are committed to innovation despite the volatile macro-economic environment, funding it with cost optimization and productivity gains.

Enterprises' relentless focus on digital tech and engineering initiatives on technologies such as 5G, Cloud, and Generative AI continues.

Digital transformation and pervasive consumption of Cloud, chips, and data will further accelerate Digital Engineering spending.

Data Engineering and Analytics, Cybersecurity, and IOT are among the most sought-after capabilities.

SPs have witnessed substantial growth in the last 12 months, driven by strong demand from the US and Europe. But there was deceleration in the last quarter of 2022.

Source: Zinnov Research and Analysis, Zinnov Z1000 database

By 2026, Hi-tech-led verticals will account for 58% of the overall Digital Engineering spend, followed by Services-led verticals

DE Spend 2022
DE Spend 2026E
DE CAGR%

USD 810 Bn
DIGITAL ENGINEERING SPEND (2022)

18% CAGR

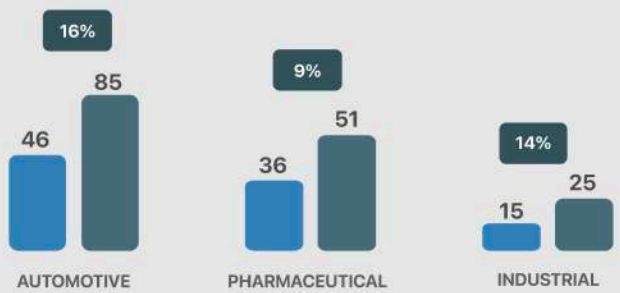
USD 1,584 Bn
DIGITAL ENGINEERING SPEND (2026E)

~1.9X Digital Engineering spending is set to increase by 2x in the next 4 years, crossing USD 1.6 Tn by 2025

MANUFACTURING

Manufacturing-led verticals will account for **15%** of the overall Digital Engineering spend by 2026

15% CAGR

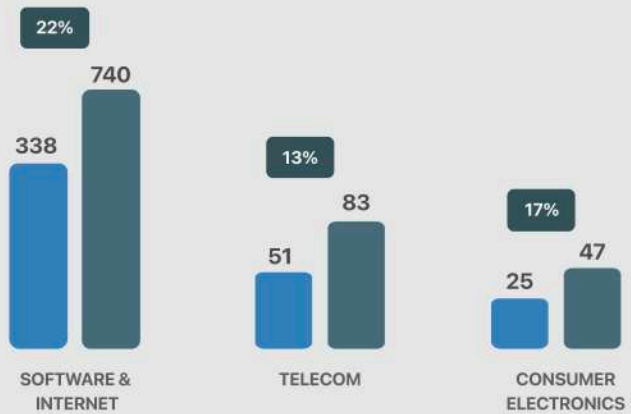


Connected Vehicles	Wearables	Industry 4.0
Autonomous	Remote Patient Monitoring	Smart Service

HI-TECH

Hi-tech-led verticals will account for **58%** of the overall Digital Engineering spend by 2026

20% CAGR



AI/ML	5G	IoT
Cybersecurity	SDN/NFV	Metaverse

SERVICES-LED

Services-led verticals will account for **27%** of the overall Digital Engineering spend by 2026

18% CAGR



Robot advisory	Contactless	Telemedicine
Fraud Detection	AR/VR	Remote Monitoring

Source: Zinnov Research and Analysis, Zinnov Z1000 database

APAC surpassed Western Europe in ER&D spending, driven by a heightened focus on Digital Engineering by Hi-tech-led verticals in the region

USD 2,672 Bn

ER&D Spend, 2026E

YOY CAGR

NORTH AMERICA



TOP VERTICALS

WESTERN EUROPE



TOP VERTICALS

APAC



TOP VERTICALS

~55%

North American enterprises contribute to the largest share of the Digital Engineering spend. The region also has the highest growth rate and will account for ~55% of the global ER&D spending by 2026

RISE OF APAC

APAC surpassed Western Europe marginally in terms of spend, owing to the heightened focus on Digital Engineering by Hi-tech firms in the region

Source: Zinnov Research and Analysis, Zinnov Z1000 database

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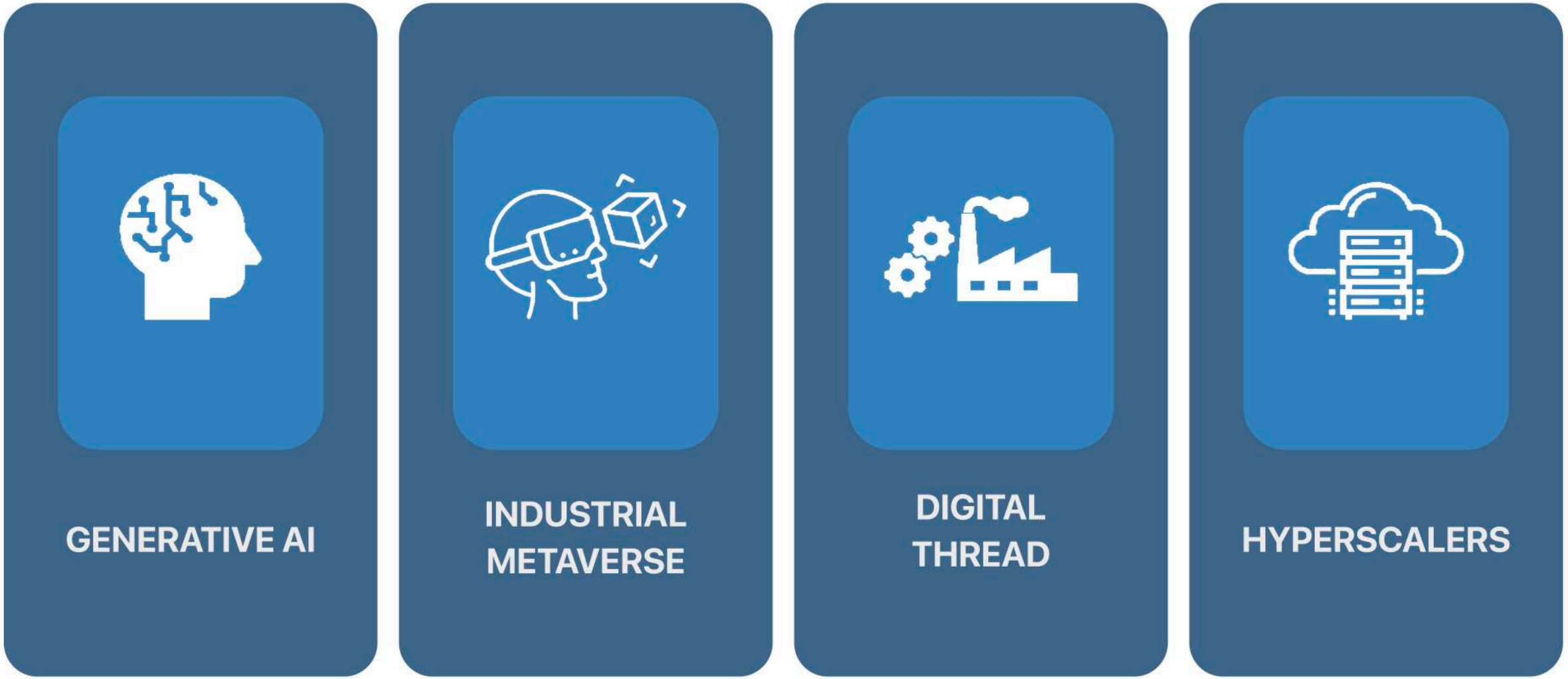
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Source: Zinnov Research and Analysis, Zinnov Z1000 database

Technology Pillars of Digital Engineering



Source: Zinnov Research and Analysis, Zinnov Z1000 database

Generative AI



Generative AI, although still in its infancy, has the potential to revolutionize the future of AI and transforming the way businesses operate

The growing interest and investment from venture capital firms is driving innovation across various Generative AI landscape, especially in text, image & video platforms

Data-rich companies will be at the forefront of Generative AI adoption and may prioritize its horizontal use cases over vertical use cases

Service Providers are focusing on collaboration with hardware, software, Cloud, and data providers to commercialize their Generative AI offerings for significant financial returns

Source: Zinnov Research and Analysis, Zinnov Z1000 database

Industrial Metaverse



Industrial Metaverse is at the forefront of Industry 5.0, and attracting an influx of investments across technology firms

Companies in Hi-Tech and Services industry are driving innovation, creating new avenues mainly in four areas – connectivity, customer experience, digital training, and workplace safety & assistance

Manufacturing companies are making strategic investments to capitalize on the potential of Metaverse by forming strategic alliances with technology players and enabling successful implementation of their use cases

Service Providers are proactively dedicating resources to develop capabilities that specifically address the distinct requirements of the Metaverse

Source: Zinnov Research and Analysis, Zinnov Z1000 database

Digital Thread



Connected Supply Chain (CSC) refers to the seamless integration of information, physical goods & services across the five identified stages of the supply chain, enabling end-to-end connectivity and optimized operations

More than a third of the investments made in CSC services are being outsourced and the US enterprises account for around 44% of the overall outsourcing market

Zinnov has identified an initial list of approximately 55 high-level use cases spanning five interconnected stages of the supply chain, encompassing 17 capability areas

To drive innovation and meet client demands, top Service Providers are actively building a robust collection of in-house intellectual property (IP) and accelerators

Source: Zinnov Research and Analysis, Zinnov Z1000 database

Hyperscalers



The growing demand for hyperscalers is accelerated by rising Digital Transformation, especially in services industries, and is projected to grow at an impressive rate of 16% CAGR between 2021 and 2030

BFSI, Telecommunications, Media, Retail, and Healthcare are among the top industries strategically investing in multiple use cases such as digital wallet, Cloud-based content management system, Digital Signage, and e-appointments

AWS, Azure, and GCP have established themselves as market leaders with a wide range of products and services, collectively capturing a significant 58% market share

Hyperscalers are creating a more collaborative ecosystem for Service Providers by offering three different channels – Sell-To, Sell-With, and Sell-Through – for mutual growth and success

Source: Zinnov Research and Analysis, Zinnov Z1000 database


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SUSTAINABILITY

The growing enterprise focus on sustainability is creating significant opportunities for Service Providers

- Sustainability has emerged as a top strategic priority for CXOs, with sustainable investments expected to reach record highs by 2030
- Z1000 enterprises spend areas are emerging along four sustainability themes – Carbon Reduction, Clean Energy, Circular Economy, and Energy Management
- Asset-heavy verticals are investing in areas like product electrification, manufacturing digitization, and cutting down of emissions from overall operations
- The carbon neutral and net zero targets are being met through both operational excellence and product innovation across different products & services
- Service Providers are bringing innovation and expertise in the form of a suite of engineering services to help clients accelerate their sustainability transformation

Source: Zinnov Research and Analysis, Zinnov Z1000 database

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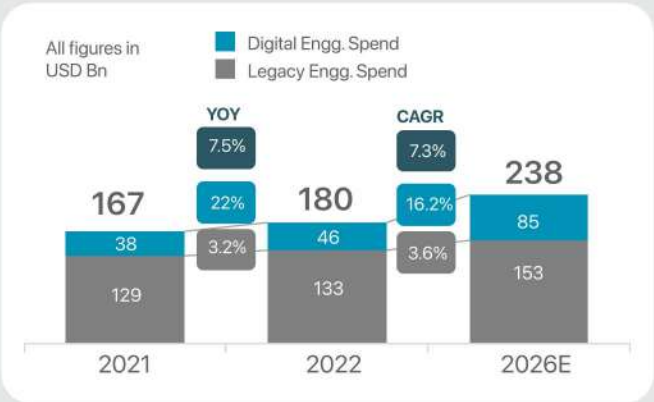
G Zinnov Zones for ER&D Services Ratings 2022

Source: Zinnov Research and Analysis, Zinnov Z1000 database

Manufacturing-led Verticals Summary – Automotive, Industrial, Aerospace & Defense

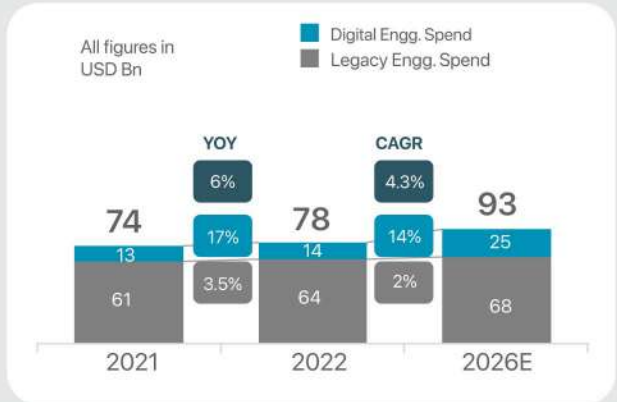
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MANUFACTURING

AUTOMOTIVE



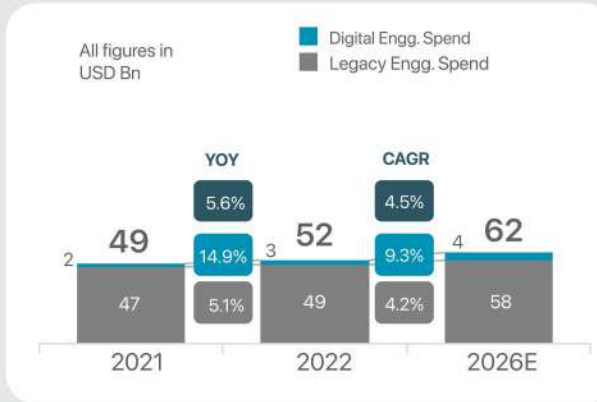
- The Digital Engineering spend in the Automotive space will exceed USD 85 Bn by 2026 growing at a 16.2% CAGR between 2022 and 2026
- Top car makers prioritize Connected and Electrification aspects, as they strive to enhance their CASE capabilities
- Europe dominates the EV R&D market with 40% of the total spend due to favorable regulations and the presence of major auto manufacturers
- Leading OEMs are in a race to develop centralized in-house software for modular operating systems and Cloud platforms

INDUSTRIAL



- In the Industrial sector, the Digital Engineering spend is expected to cross USD 25 Bn, growing at a 14% CAGR between 2022 and 2026
- Enterprises are increasing their adoption of advanced AI technologies to drive process innovation and enhance operational efficiencies
- Industry 5.0 is the next phase of industrial transformation that focuses on human-robot co-working dynamics
- The Industrial sector encounters significant challenges as it contends with rising inflation, supply chain limitations, and labor shortages

AEROSPACE & DEFENSE



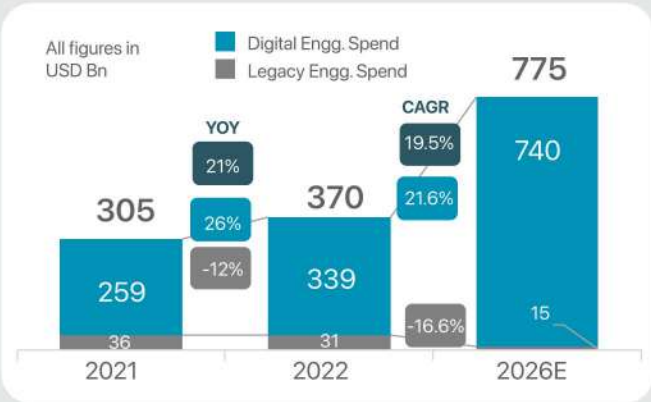
- Growing at a CAGR of 9.3%, the Digital Engineering spend in the Aerospace & Defense (A&D) sector will exceed USD 4 Bn by 2026
- The global A&D sector has been primarily focused on post-COVID recovery throughout the year 2022
- Advanced Air Mobility (AAM), Metaverse, and Space Tech are at the core of the A&D sector's transformation
- Despite an overall decline in M&A activity within the A&D sector in 2022, Defense and Space subsectors remained resilient with steady levels of activity

Source: Zinnov Research and Analysis, Zinnov Z1000 database

Hi-tech-led Verticals Summary – Software & Internet, Semiconductors, Telecommunications

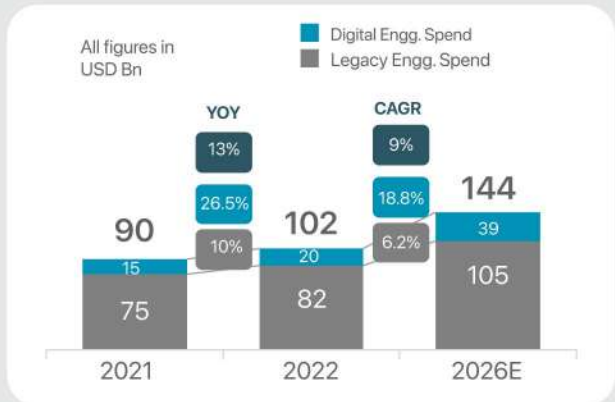
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HI-TECH

SOFTWARE & INTERNET



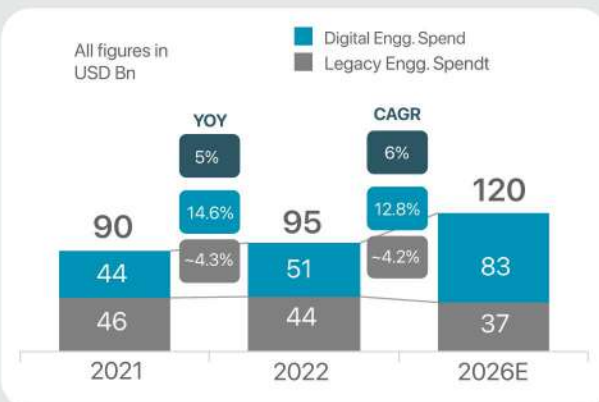
- The Digital Engineering spend in the Software & Internet vertical will exceed USD 740 Bn by 2026 growing at a 21.6% CAGR between 2022 and 2026
- S&I companies continued to invest heavily in technologies despite facing challenges such as stumbling valuations and shifting demand patterns
- Tech giants maintained substantial investments in next-generation technologies while scaling back on other capital expenditures
- Applied AI use cases are witnessing rapid adoption, while Generative AI and Software 2.0 also see growing implementation

SEMICONDUCTOR



- In the Semiconductors vertical, the Digital Engineering spend will exceed USD 39 Bn by 2026, growing at an 18.8% CAGR
- Increased use of digital ICs in the Electronics, Automotive, and Telecommunications industries is one of the major factors driving the DE spend
- Wireless Transmission, Autonomous Vehicles, 5G, AI, IOT, and AR/VR are the other major trends in the Semiconductors vertical
- Enterprises are investing in fabrication plants to expand their manufacturing capacity, global footprint, and technology portfolio

TELECOMMUNICATIONS



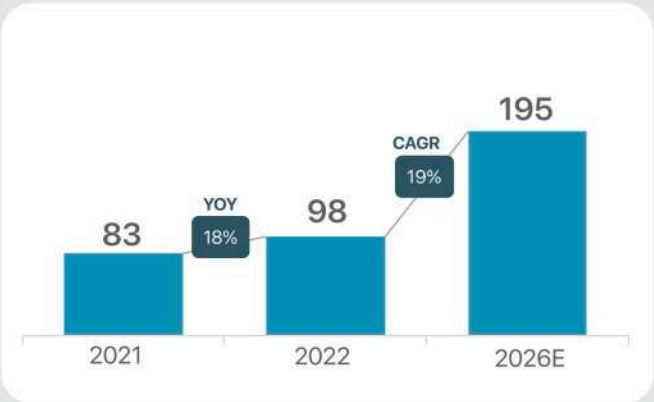
- Growing at a CAGR of 12.8%, the Telecommunications vertical will exceed USD 83 Bn in Digital Engineering spend by 2026
- 5G deployment, AI/ML integration, IOT, and Computer/Machine Vision present key opportunity areas for Service Providers
- Enhanced Mobile Broadband (eMBB) use cases will lead the way, followed by Ultra Reliable Low Latency Communications (URLLC), while Massive Machine Type Communications (mMTC) will take longer to become widespread
- Telcos aim to make substantial investments in Cloud-native deployments, targeting CAPEX and OPEX savings

Source: Zinnov Research and Analysis, Zinnov Z1000 database

Services-led Verticals Summary – BFSI, Healthcare Payers & Providers, and Media & Entertainment

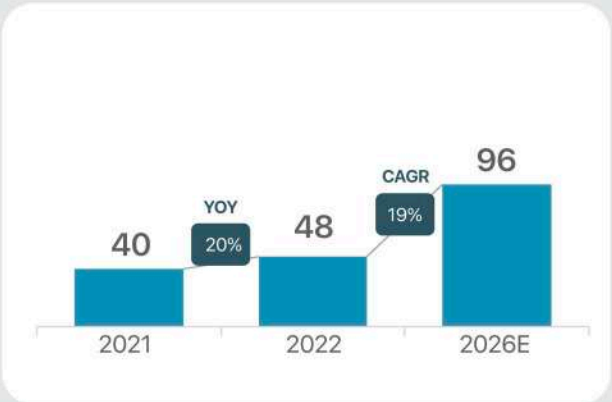
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SERVICES-LED

BFSI



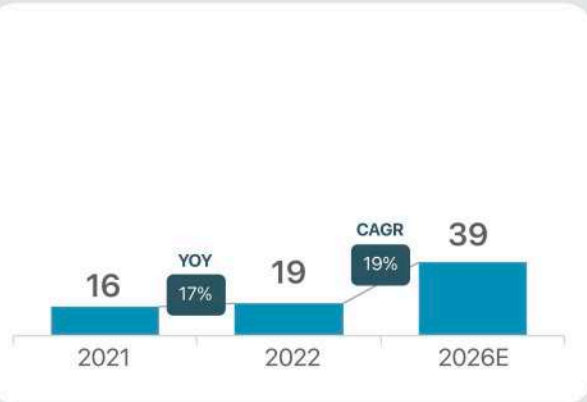
- BFSI sector's Digital Engineering spend is set to surpass USD 195 Bn by 2026, growing at a 19% CAGR
- Banks will optimize operational spend and channel it for innovation, resulting in increased DE spend
- Big Data, Digital Banking, Customer Experience, and Digital Infrastructure initiatives will drive the future of outsourcing spend
- Service Providers are leveraging their in-house platforms to win large deals

HEALTHCARE



- Growing at a 19% CAGR, the Digital Engineering spend in the Healthcare vertical will exceed USD 96 Bn by 2026
- Healthcare companies are employing key strategies such as digital adoption, investments in start-ups, and engaging in M&A to foster innovation and expand market share
- Healthcare providers are accelerating digitalization to optimize cost and drive enhanced clinical outcomes
- Rising chronic disease rates have spurred global demand for innovative drugs, propelling the growth of the drug discovery market

MEDIA & ENTERTAINMENT



- In the Media & Entertainment vertical, the Digital Engineering spend will exceed USD 39 Bn by 2026 growing at a CAGR of 19%
- 5G, AR/VR, IOT, AI, Cloud, and Blockchain are key technology trends fostering the market
- The next-generation Gaming market will focus on Cloud gaming to reduce hardware costs
- Enterprises are engaging in M&A deals, particularly acquiring gaming companies to expand their offerings with a focus on AI and Virtual Reality (VR)

Source: Zinnov Research and Analysis, Zinnov Z1000 database

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Source: Zinnov Research and Analysis, Zinnov Z1000 database

The total addressed DE market is pegged at USD 35-45 Bn in 2022

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SP ADDRESSED



Outsourced DE spend by Verticals USD 35 - 45 Bn					
Software & Internet	USD 16-18 Bn	Automotive	USD 4-6 Bn	Healthcare P&P*	USD 4-5 Bn
Telecom, Media & Technology	USD 4-5 Bn	Medical Devices	USD 1-2 Bn	Semiconductor	USD 0.5-1 Bn
Consumer Electronics	USD 0.5-1 Bn	Industrial	USD <0.5 Bn	Others**	USD 7-8 Bn

*P&P: Payers & Providers, **Others: BFSI, Retail, Pharma, T&H, FMCG, Biotechnology

Source: Zinnov Research and Analysis, Zinnov Z1000 database, Zinnov GCC database

Digital Engineering SPs have been focusing more on large deals

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SP ADDRESSED

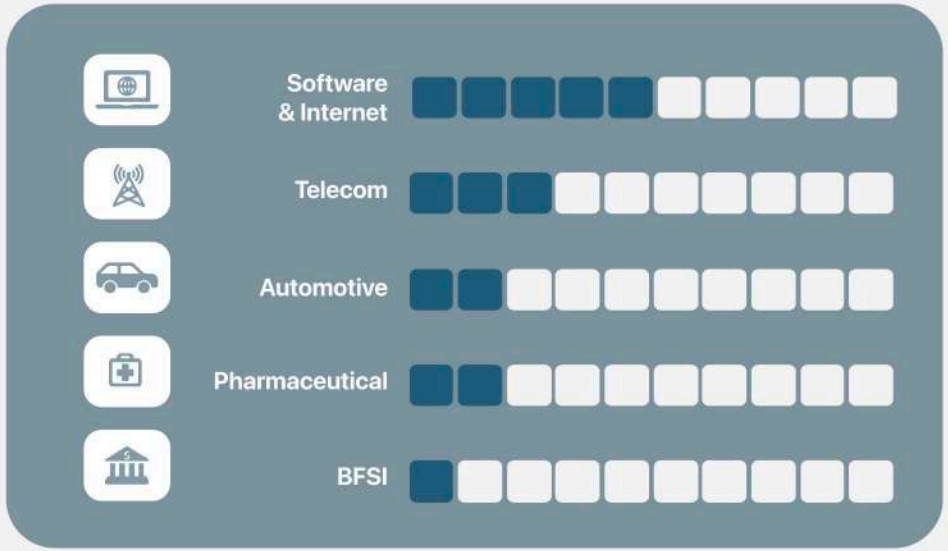
DIGITAL DEALS (2021-22)

N= ~11,000



Large deals
N=55

LARGE DEALS BY VERTICAL



Key Wins

Persistent

Created an integrated ecosystem of large deals specialists (deal directors, influencer team, industry experts, global solution architect model, etc.)

In 2023, Persistent won USD 70 Mn contract with an US online retailer

In Nov 2022, Persistent and Software AG announced partnership on building a professional services centre of excellence

cognizant

Dedicated large deal teams to drive Digital Engineering GTM efforts

In Jan 2023, Cognizant won 10-year services agreement valued at about USD 1 Bn with CoreLogic. As part of the deal, cognizant to deliver solutions and CX through digital transformation and operational excellence

Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database

Leading Service Providers are enhancing their Digital Capabilities through Acquisitions

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SP ADDRESSED

GlobalLogic



hexacta

GlobalLogic acquired Hexacta In January 2023

Focus Area: Digital Engineering

This acquisition is part of GlobalLogic's continued strategy to expand its offerings and its roster of exceptional engineering talent to meet the strong market demand for Digital Engineering services.

wipro



linecraft.ai

Wipro acquired Linecraft in December 2022

Focus Area: AI/ML

This acquisition will further help Wipro expand its digital capabilities and offer turnkey automation solutions with a bolt-on digital layer that provides deep insights and analytics to customers.

accenture



Albert

Accenture acquired Albert in November 2022

Focus Area: Big Data and AI

The acquisition will add a large team of data scientists to Accenture, which will further strengthen its data and AI capabilities for clients.

Capgemini



Braincourt

Capgemini acquired Braincourt in October 2022

Focus Area: Data Analytics

This acquisition strengthens Capgemini's advanced business intelligence, AI, Data and Analytics capabilities in Germany and Northern Europe.

Source: Zinnov Research and Analysis, Zinnov Z1000 database

Enterprises across verticals are leaning on the Service Provider ecosystem for end-to-end management of their businesses

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SP ADDRESSED

ENTERPRISE	SERVICE PROVIDER	YEAR	FOCUS AREA	ENGAGEMENT DESCRIPTION
Large Semiconductor firm	L&T TS	2022	End-to-end Engineering Services	LTTS signed a 3-year deal with a large Semiconductor firm to offer engineering services to its entire product suite
MBDL ((Matra, BAe Dynamics and Alenia)	Persistent Systems	2022	Lifecycle Management	Persistent will support MBDL's engineering lifecycle management systems
US-based IDM firm	Capgemini	2022	Embedded Software	Capgemini plans to open centers across Europe to support the IDM firm's design and embedded software requirements. Initial centers expected to be in France and Portugal
Norway-based Fabless firm	N-iX	2022	IOT	N-iX is helping the fabless firm with design and development services of wireless connectivity for IOT systems
Highmark Health	Accenture	2022	UI/UX, Data & Cloud	Accenture is helping the firm improve personalized customer experience by leveraging Cloud and consolidating enterprise data to provide faster insights
NHG	NTT Data	2022	Platform Engineering	NTT Data develops a Digital HealthApps Platform that supports NHG's initiative for population health in Singapore
US-based CSP	HCLTech	2022	5G	HCLTech will provide VoIP, mobility, and collaboration-related services on 5G. The deal will also include network lab certification, as well as network verification services

Source: Zinnov Research and Analysis, Zinnov Z1000 database

SPs have tapped into significant opportunities across verticals

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SP ADDRESSED

ENTERPRISE	SERVICE PROVIDER	YEAR	FOCUS AREA	ENGAGEMENT DESCRIPTION
Honda	KPIT	2023	Operating System, EV powertrain & IVI	Honda and KPIT have joined forces to prioritize software development for next-generation E&E architecture, electrified powertrains, IVI, and connected technologies
Japanese Tier-1	Tata Elxsi	2022	EV Software	The establishment of a high-voltage EV system software development innovation center in Bangalore is underway
Cybereason	GlobalLogic	2022	AI-driven Cybersecurity	GlobalLogic to offer next-generation security platform & services to Cyberreason, AI-driven XDR platform provider
Unity	Capgemini	2022	Metaverse, Web3	Capgemini to collaborate with Unity to conduct joint R&D projects of metaverse/Web3, support solution development, and scale-up talent bench
Jaunt Air Mobility	L&T TS	2022	electric Vertical Takeoff and Landing (eVTOL)	L&T TS will establish an ER&D center in Québec, Canada, to deliver engineering services for Jaunt Air Mobility's air taxi
Finastra	Wipro	2022	Trade Finance Solutions	Multi-year engagement to deploy Finastra's trade finance solutions for corporate banks in the Middle East to digitally transform the trade finance process, offering automation, optimization, faster time-to-market, and improve customer response times for banks
Premium Credit	Tech Mahindra	2022	Premium Finance	Premium Credit Limited partnered with Newgen and Tech Mahindra to implement Newgen's iBPS low-code platform, aiming to enhance the premium finance process for insurance customers

Source: Zinnov Research and Analysis, Zinnov Z1000 database

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Several elements could be leveraged by SPs to create a unique growth story...

ZINNOV'S ER&D UBIQUITOUS SUCCESS FRAMEWORK



VISION/STRATEGY	BUSINESS MODEL FLEXIBILITY	CONSULTING/ DESIGN LAYER	MANUFACTURING	OFFSHORE/ NEARSHORE	MERGERS & ACQUISITIONS
ACCOUNT STRATEGY	AGILE/ POD TEAMS	ACCELERATORS/IP	HI-TECH	MULTI LOCATION STRATEGY	HYPERSCALER PARTNERSHIPS
LARGE DEALS FOCUS	CUSTOMER EXCELLENCE TEAMS	LABS/COEs	SERVICE LED	LEADERSHIP	NEXT GEN PLATFORMS
DISTINCT VALUE PROPOSITIONS		MODERN TECH PRACTICE		L&D + RESKILLING INITIATIVES	
MULTI-CHANNEL SALES STRATEGY				EMPLOYER OF CHOICE	

WESTERN EUROPEAN

Capgemini
AKKODIS
ALTEN

INDIAN

HCL
wipro
Tech Mahindra

EASTERN EUROPEAN

epam
endava
GlobalLogic

Source: Zinnov Research and Analysis, Zinnov Z1000 database

AGENDA

A The Rise of Digital Engineering

B Technology Pillars of Digital Engineering

C Sustainability – A Priority

D Industry Deep Dives and Digital Engineering Spend Trends and Priorities

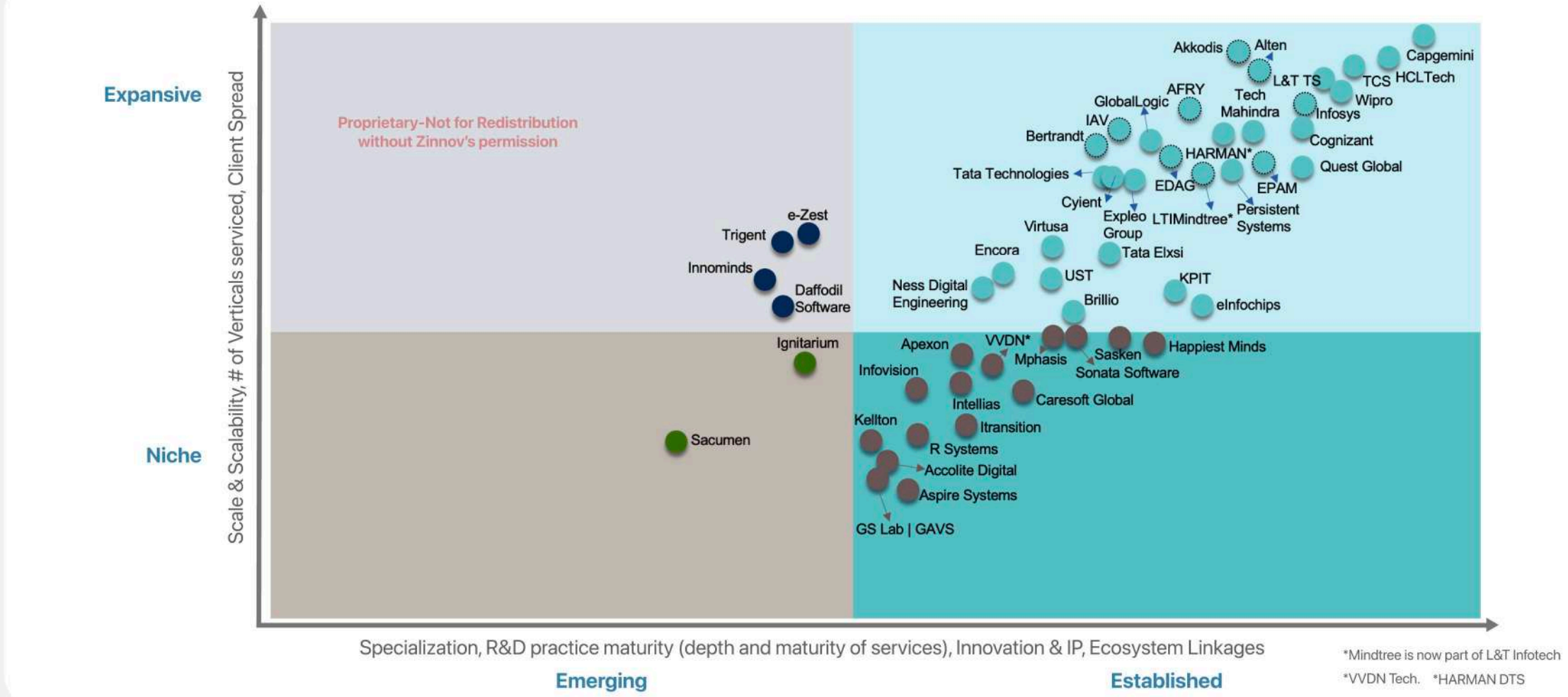
E Market Addressed by Service Providers

F Growth Levers for Service Providers

G Zinnov Zones for ER&D Services Ratings 2022

Source: Zinnov Research and Analysis, Zinnov Z1000 database

ER&D Services – Overall Ratings 2022

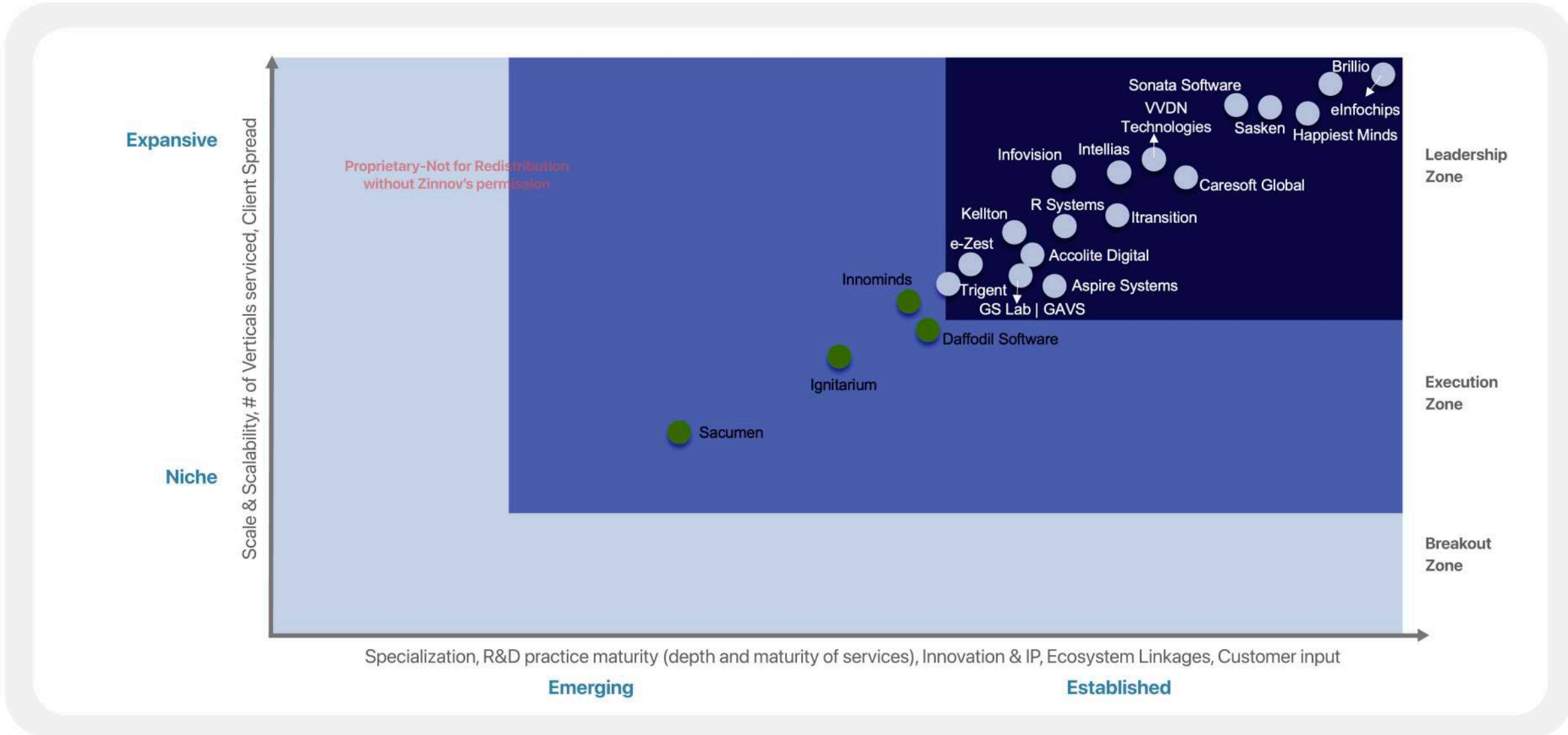


*Mindtree is now part of L&T Infotech
*VVDN Tech. *HARMAN DTS

Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database

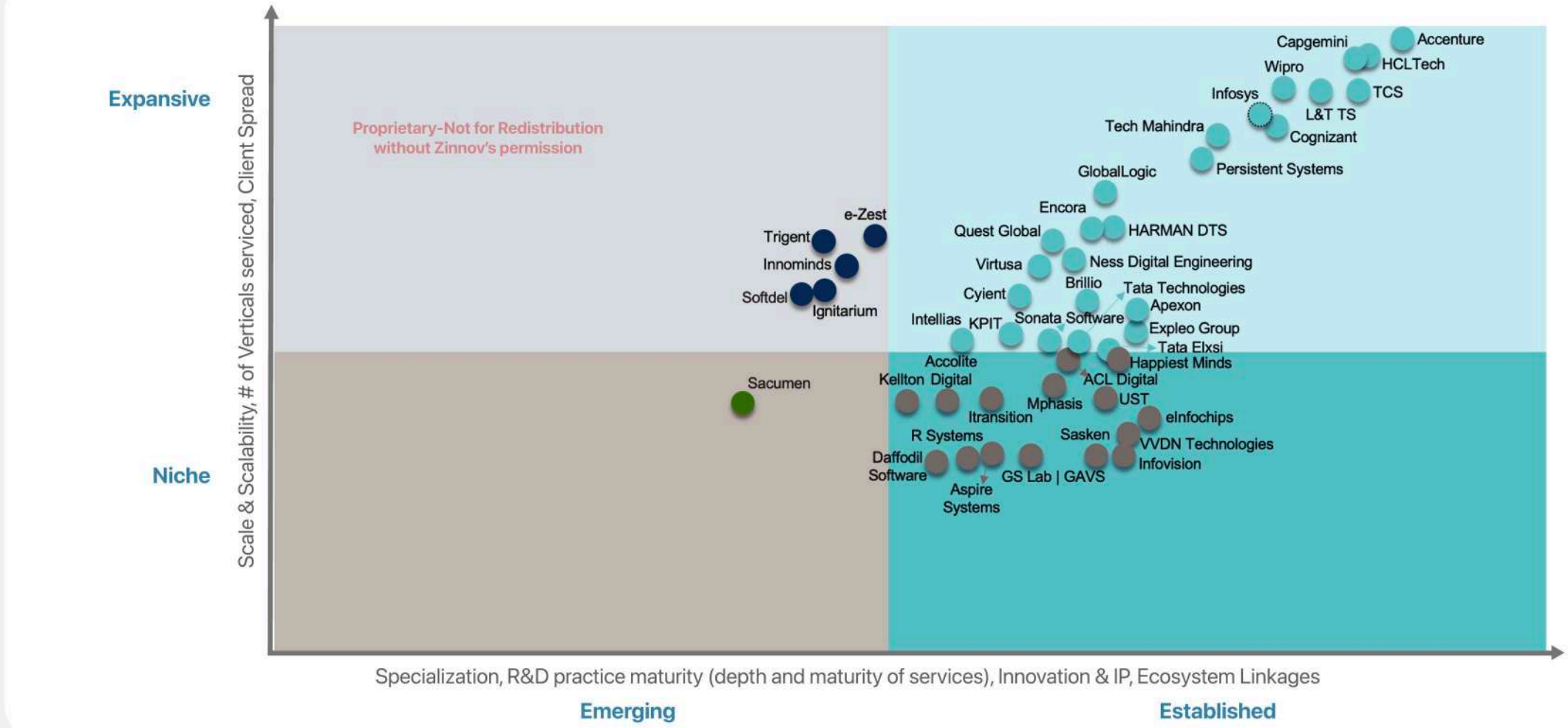
Service providers with dotted lines have been evaluated based on Zinnov's analysis and understanding

ER&D Services – Overall Ratings 2022 (Small & Medium Service Providers*)



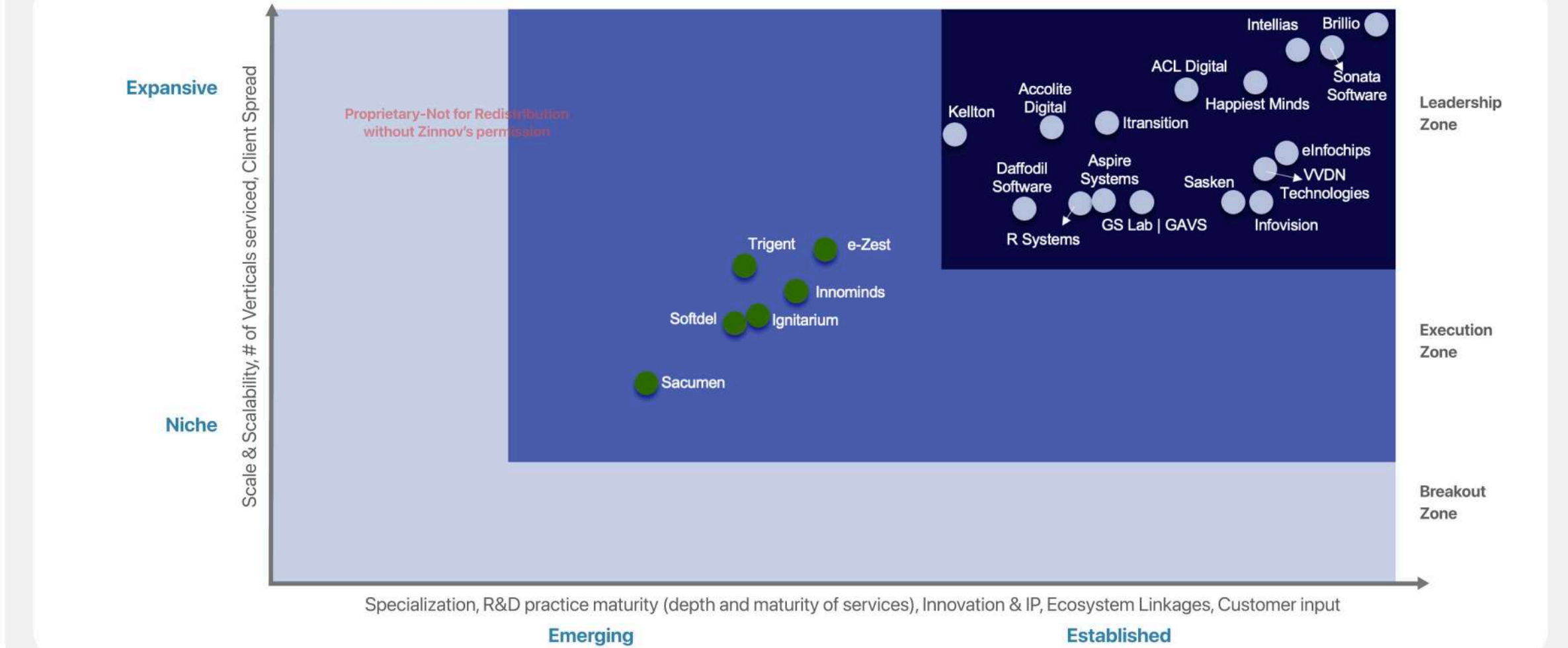
Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database *Overall ER&D services revenue <USD 250 Mn

ER&D Services – Digital Engineering Ratings 2022



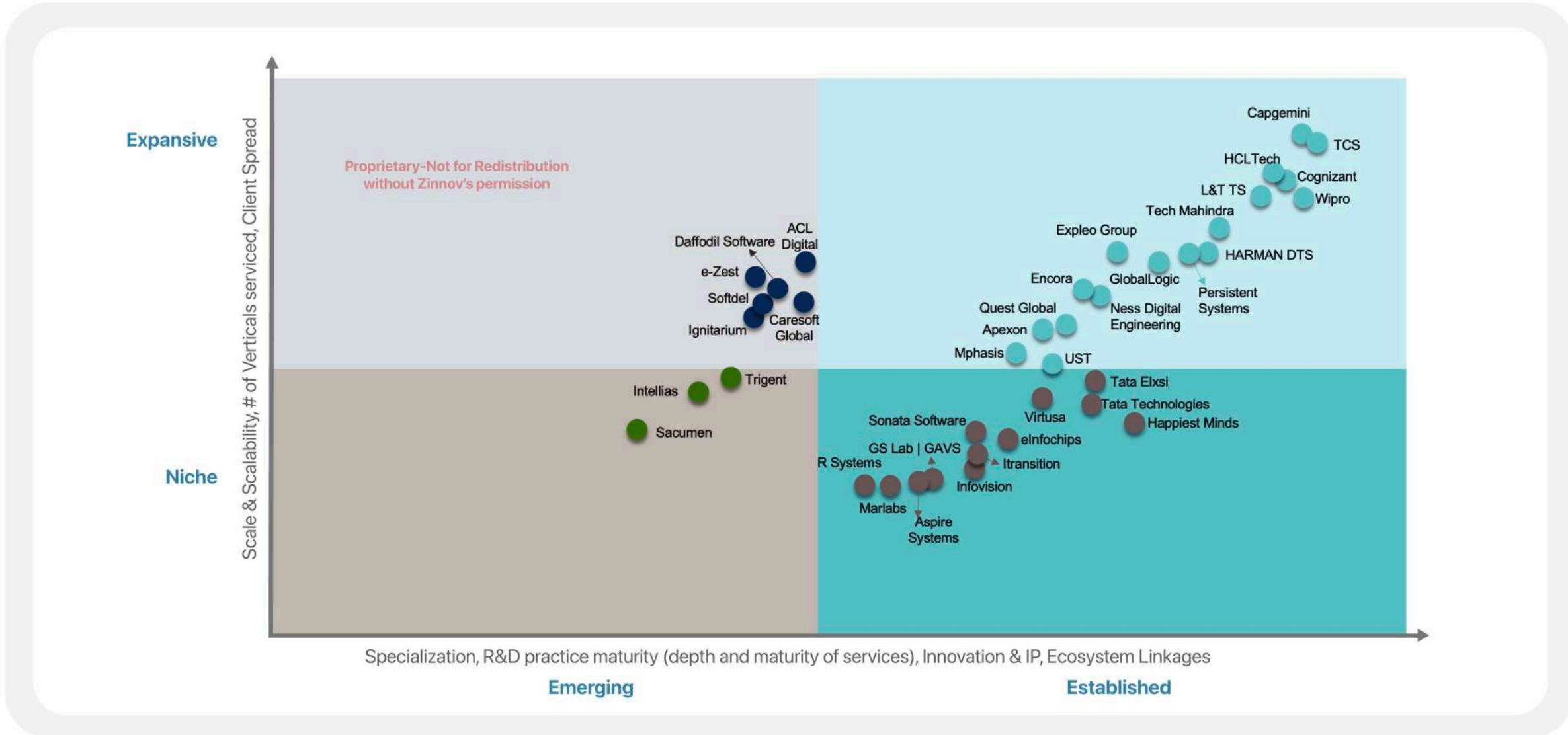
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ER&D Services – Digital Engineering Ratings 2022 (Small & Medium Service Providers*



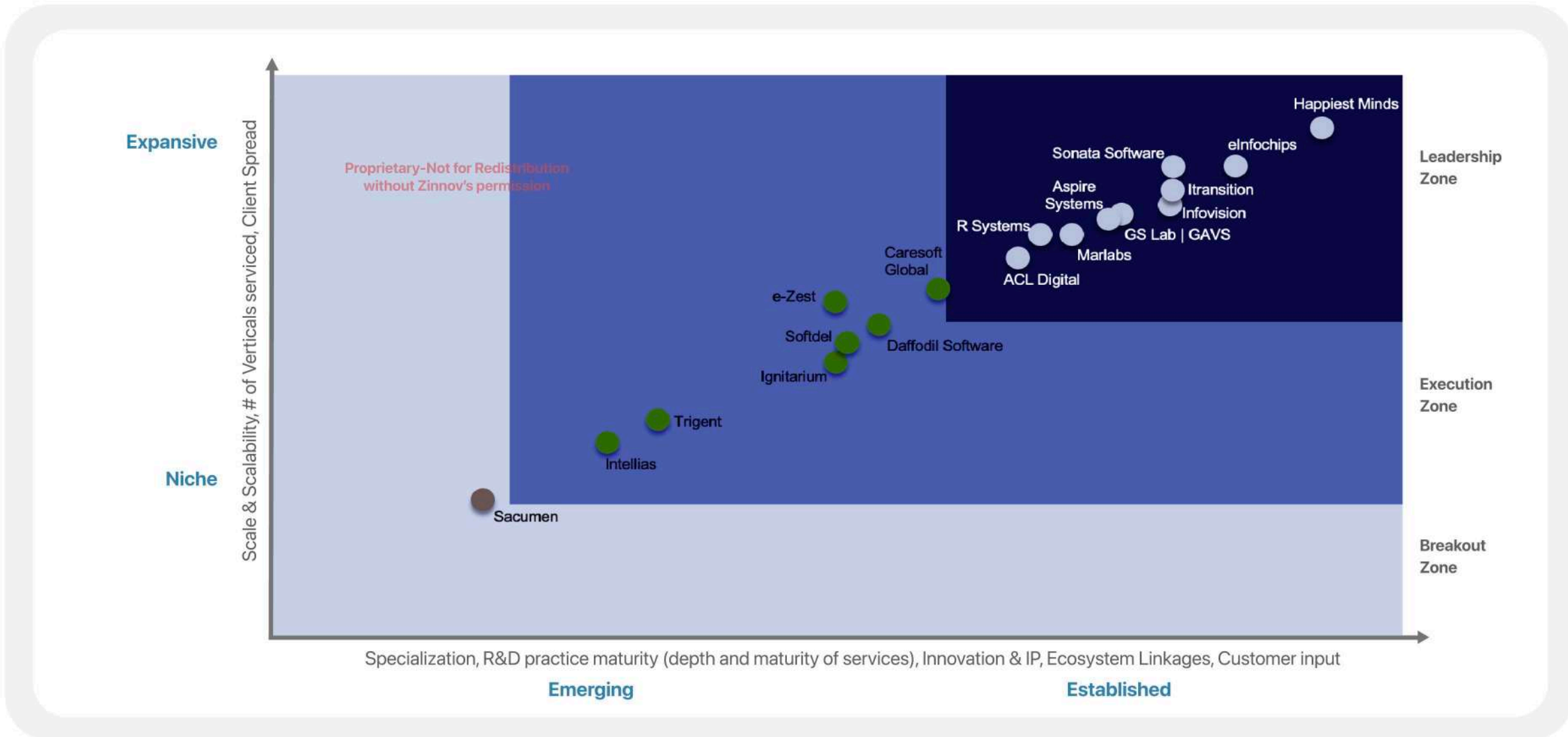
Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database *Overall ER&D services revenue <USD 250 Mn

ER&D Services – Data & AI Engineering Ratings 2022



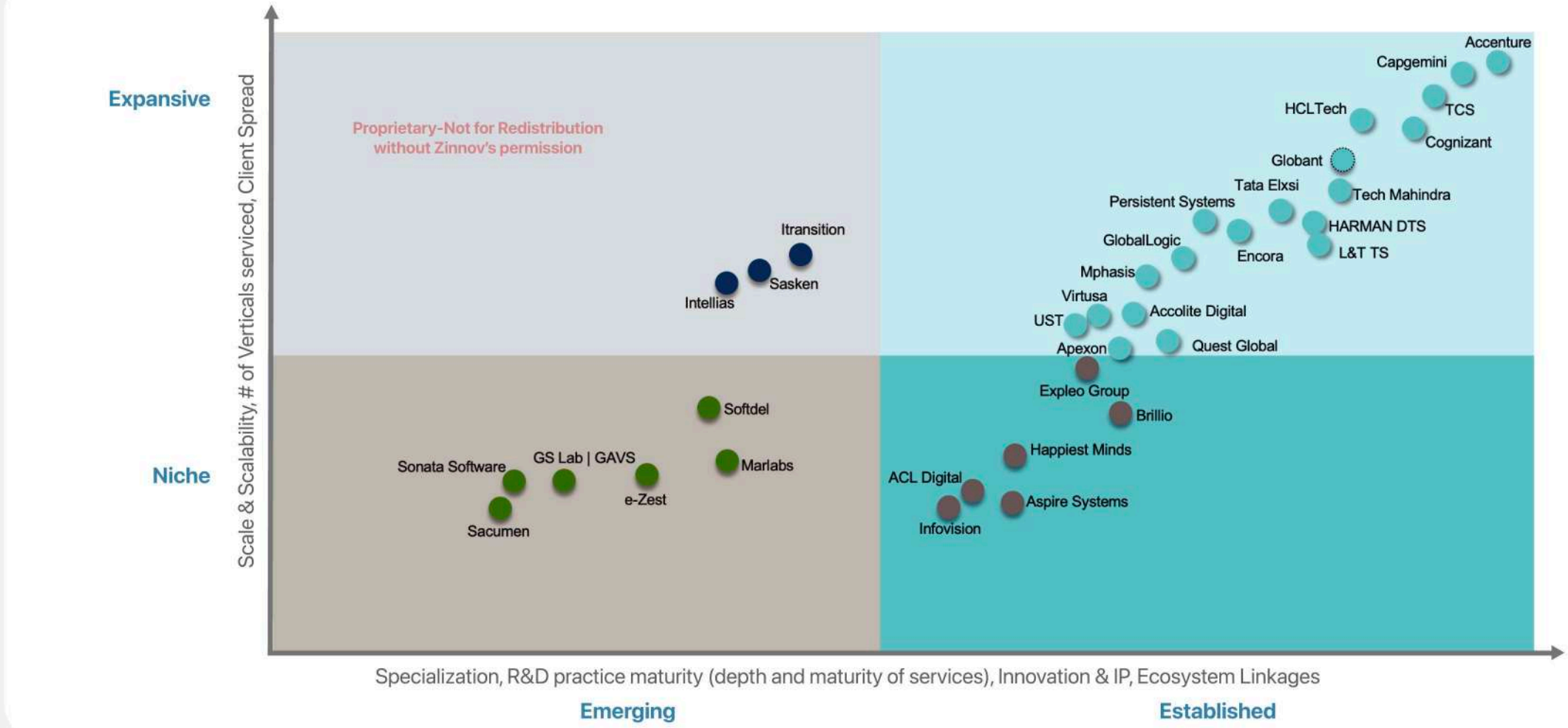
Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database

ER&D Services – Data & AI Engineering Rating 2022 (Small & Medium Service Providers*)



Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database *Overall ER&D services revenue <USD 250 Mn

ER&D Services – Experience Engineering Ratings 2022



Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database

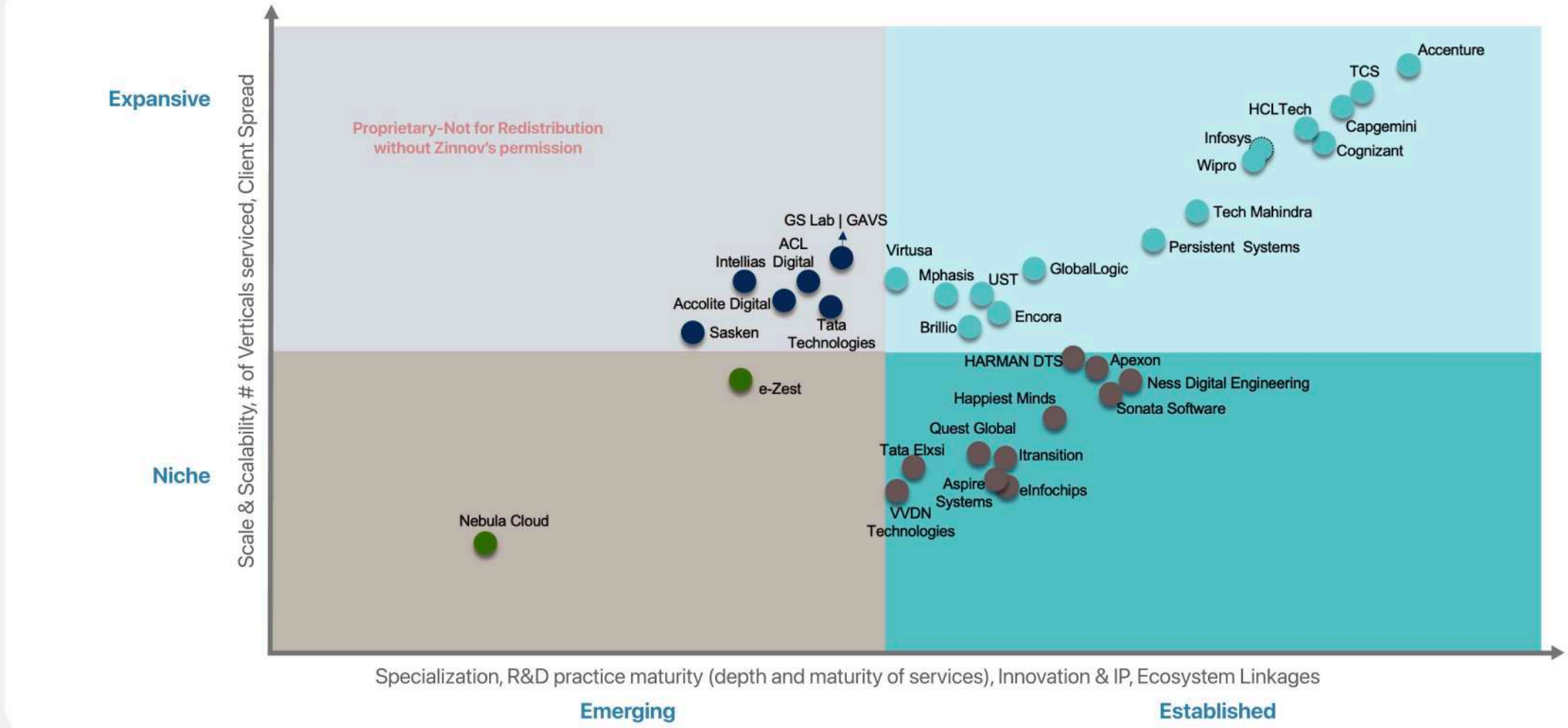
Service providers with dotted lines have been evaluated based on Zinnov's analysis and understanding

ER&D Services – Experience Engineering Ratings 2022 (Small & Medium Service Providers*)



Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database *Overall ER&D services revenue <USD 250 Mn

ER&D Services – Hyperscalers Services Ratings 2022



Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database

Note: Service providers are assessed basis their partnership depth with hyperscaler vendors. Benchmarking is based on SP's talent expertise, specializations, and breadth of offerings aligned to ER&D services

ER&D Services – Hyperscalers Services Ratings 2022 (Small & Medium Service Providers*)



Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database *Overall ER&D services revenue <USD 250 Mn

ER&D Services – Hyperscalers (AWS) Ratings 2022



Note: Service providers are assessed basis their partnership depth with hyperscaler vendors. Benchmarking is based on SP's talent expertise, specializations, and breadth of offerings aligned to ER&D services

Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database

ER&D Services – Hyperscalers (Google Cloud) Ratings 2022



Note: Service providers are assessed basis their partnership depth with hyperscaler vendors. Benchmarking is based on SP's talent expertise, specializations, and breadth of offerings aligned to ER&D services

Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database

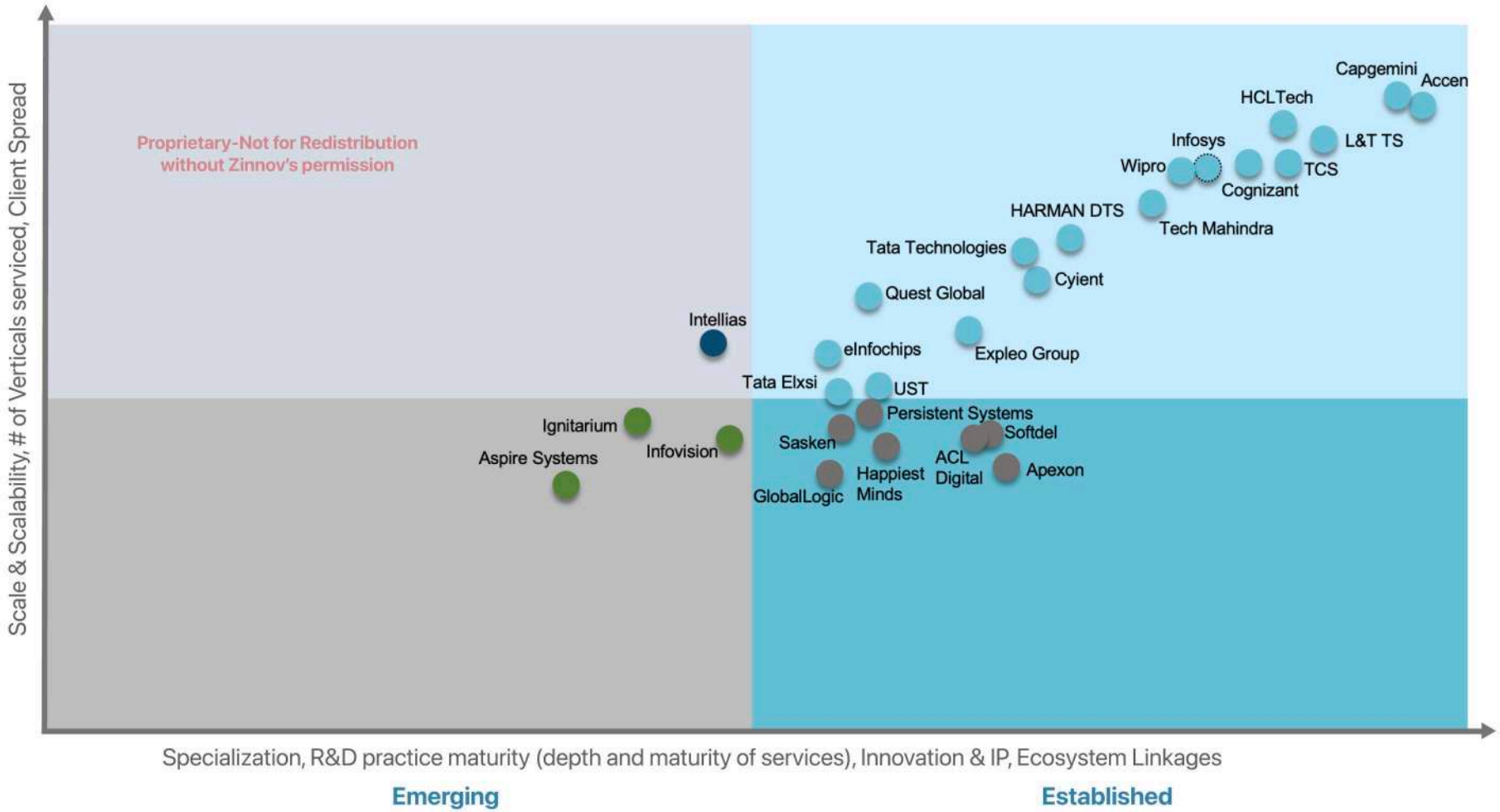
ER&D Services – Hyperscalers (Microsoft Azure) Ratings 2022



Note: Service providers are assessed basis their partnership depth with hyperscaler vendors. Benchmarking is based on SP's talent expertise, specializations, and breadth of offerings aligned to ER&D services

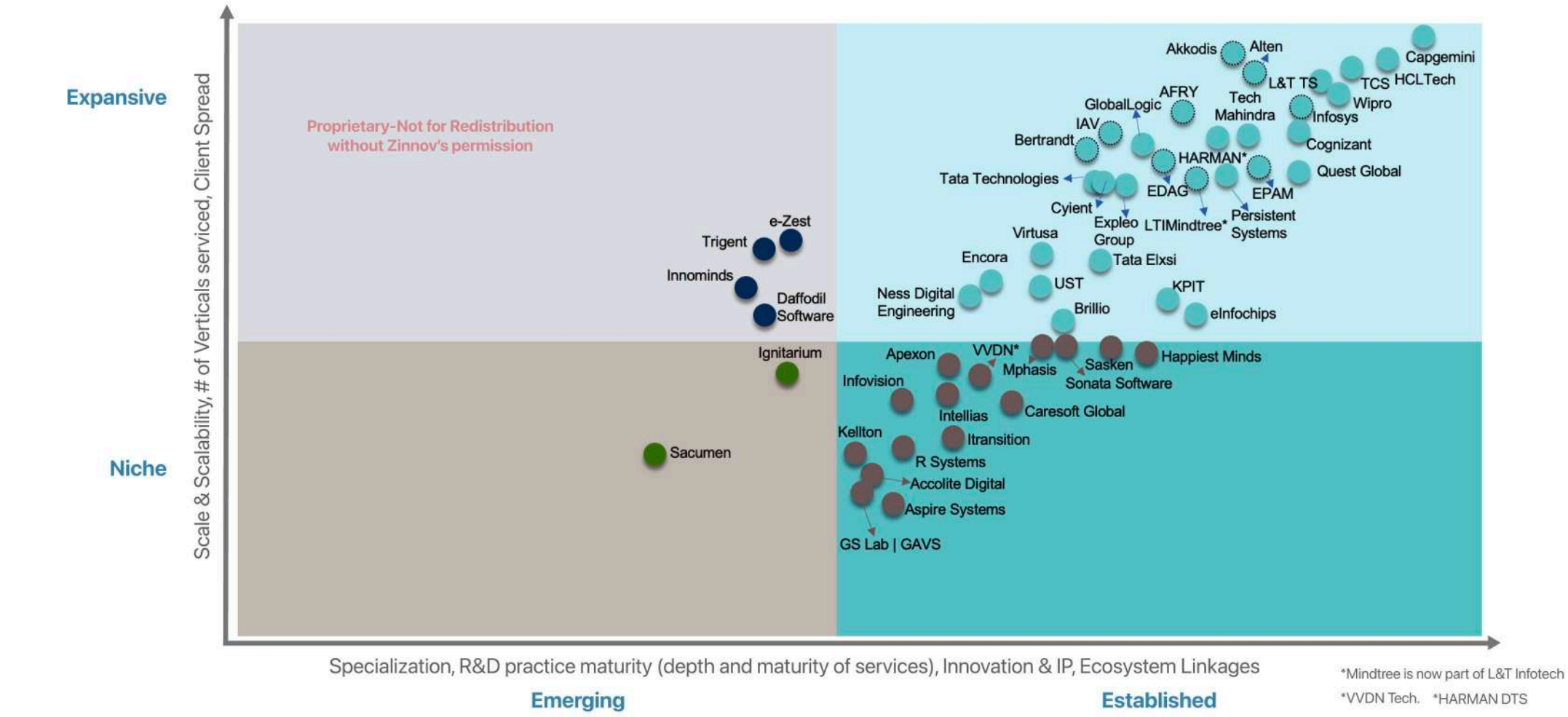
Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database

ER&D Services – Industry 4.0 Ratings 2022



Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database

ER&D Services – Overall Ratings 2022



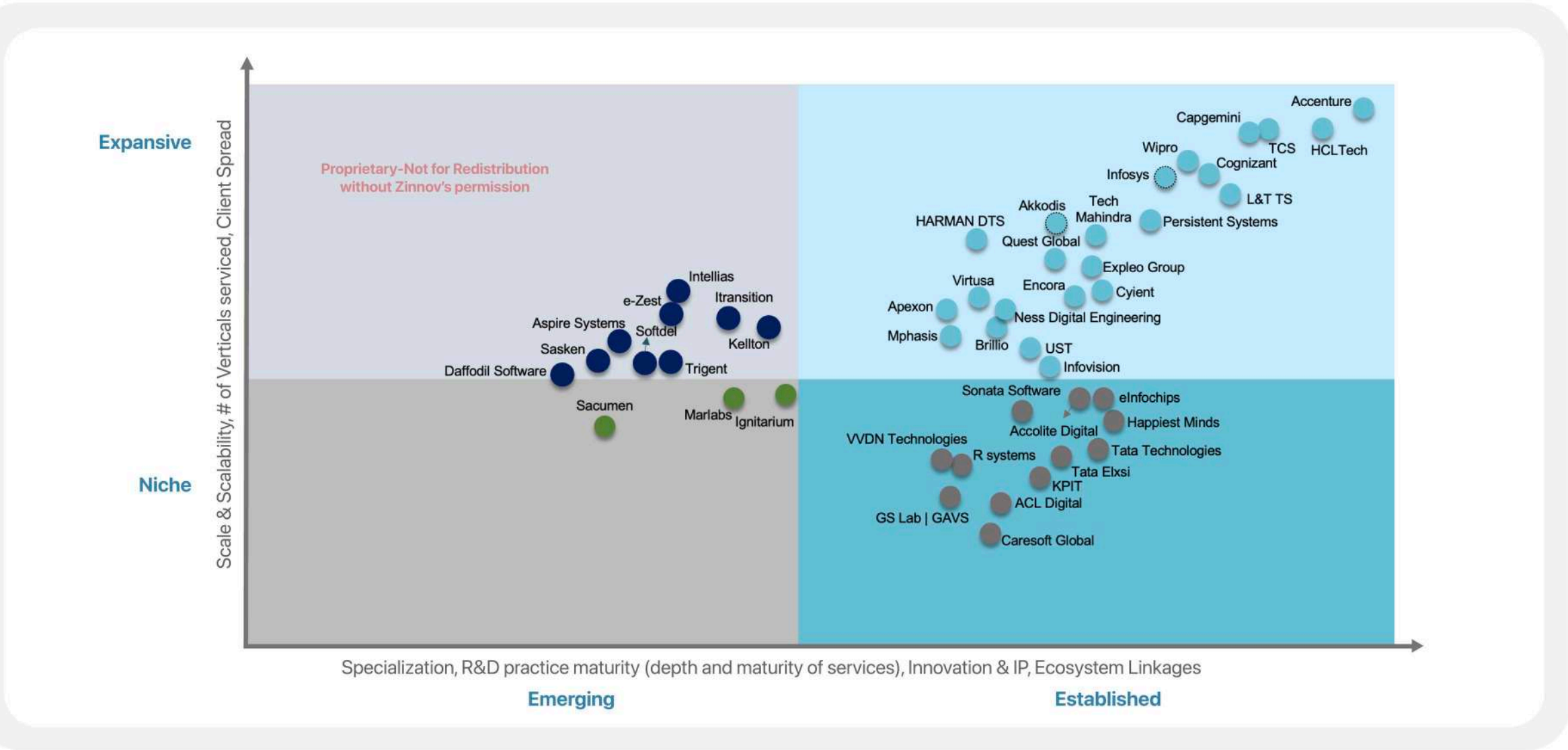
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Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database

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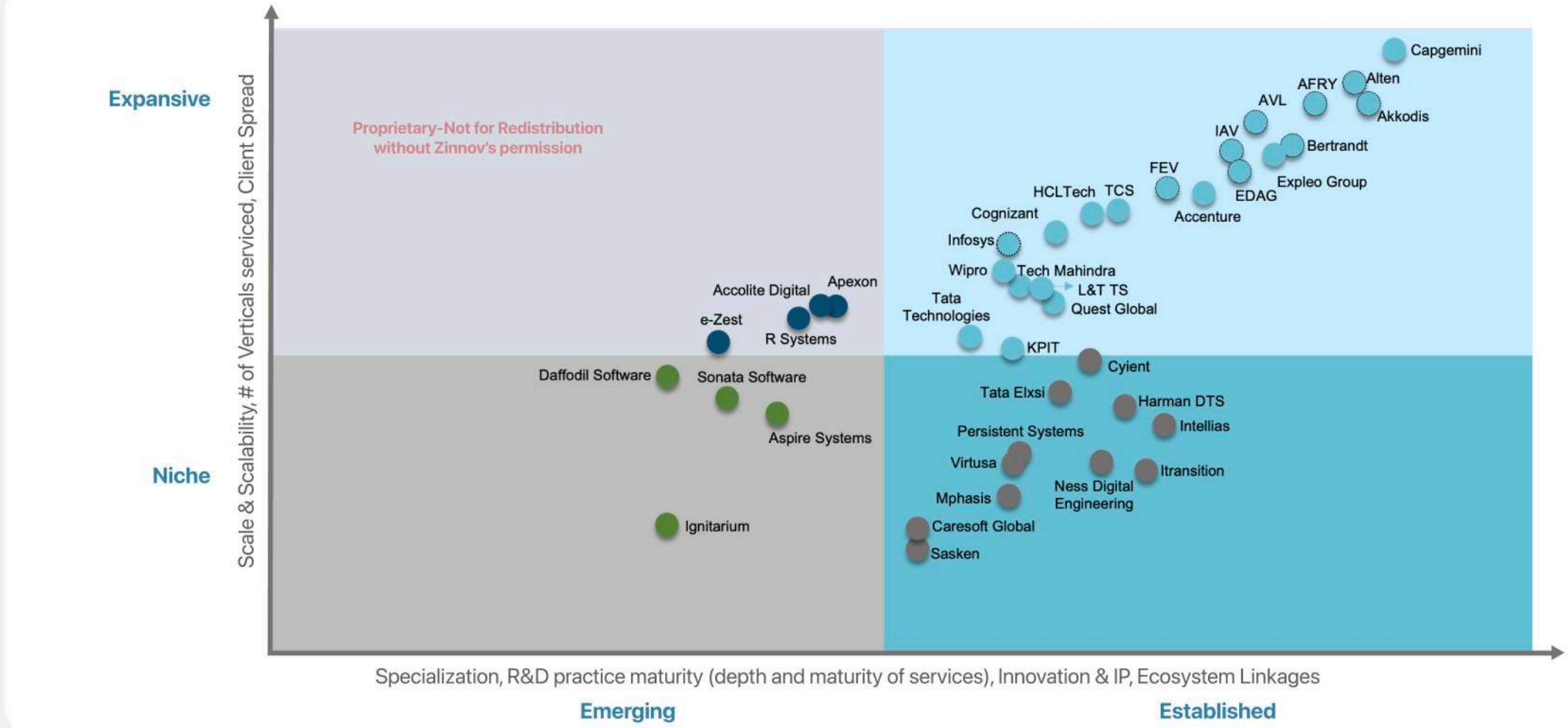
ER&D Services – US Ratings 2022



Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database

Service providers with dotted lines have been evaluated based on Zinnov's analysis and understanding

ER&D Services – Europe Ratings 2022



Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database

Service providers with dotted lines have been evaluated based on Zinnov's analysis and understanding

ER&D Services – Aerospace Ratings 2022



Service providers with dotted lines have been evaluated based on Zinnov's analysis and understanding

Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database

ER&D Services – Automotive Ratings 2022



Service providers with dotted lines have been evaluated based on Zinnov's analysis and understanding

Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database

ER&D Services – Electrification Ratings 2022



Service providers with dotted lines have been evaluated based on Zinnov's analysis and understanding

Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database

ER&D Services – Consumer Software Ratings 2022



Service providers with dotted lines have been evaluated based on Zinnov's analysis and understanding

Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database

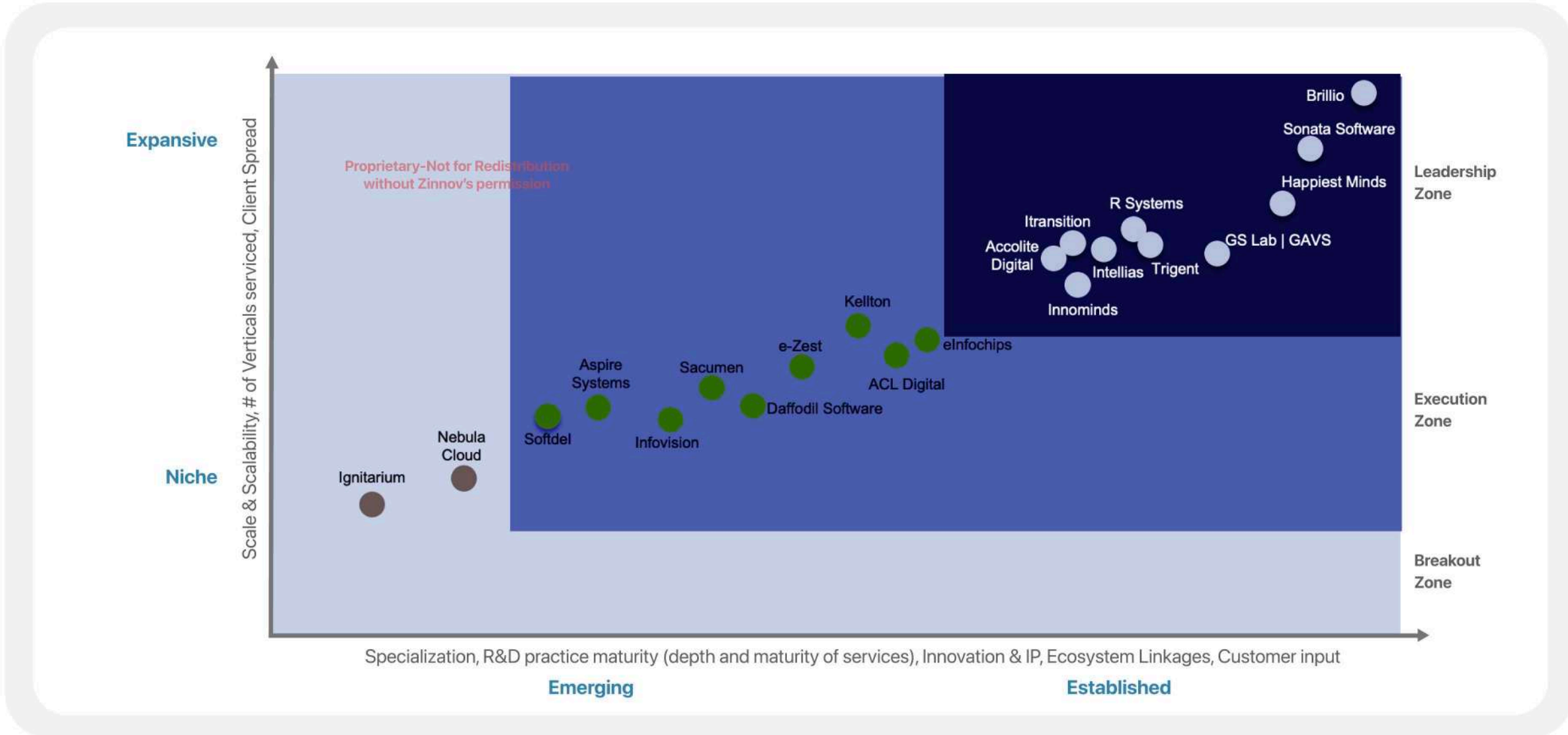
ER&D Services – Enterprise Software Ratings 2022



Service providers with dotted lines have been evaluated based on Zinnov's analysis and understanding

Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database

ER&D Services – Enterprise Software Ratings 2022 (Small & Medium Service Providers*)



Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database *Overall ER&D services revenue < USD 250 Mn

ER&D Services – Software Platform Engineering Ratings 2022



Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database

ER&D Services – Industrial Ratings 2022



Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database

ER&D Services – Semiconductors Ratings 2022



Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database

ER&D Services – Telehealth Ratings 2022



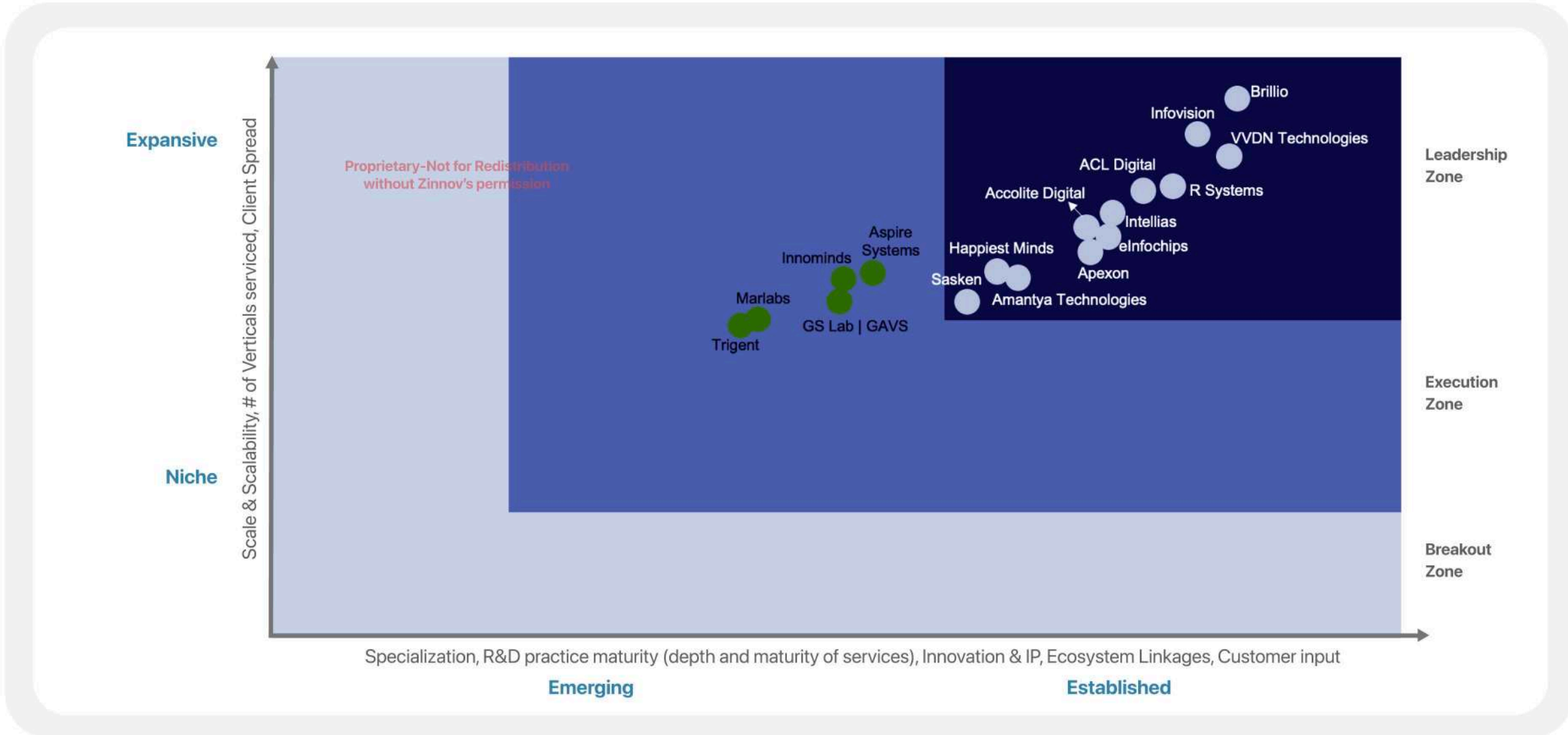
Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database

ER&D Services – Telecommunications Ratings 2022



Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database

ER&D Services – Telecommunication Ratings 2022 (Small & Medium Service Providers*)



Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database *Overall ER&D services revenue <USD 250 Mn

Meet the Team



SIDHANT RASTOGI
Managing Partner
Zinnov



Manali De Bhaumik
Engagement Manager
Zinnov



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Senior Analyst
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TUHIN SUBHRA MONDAL
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SHASHI KANT
Project Lead
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KISHORE BS
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MANISH KUMAR RAI
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JAYAVENKATESH R
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Analyst
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Kunal Agarwal
Analyst
Zinnov

Source: Zinnov Research and Analysis, Zinnov Z1000 database, DRAUP deals database



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