



Breaking ground: unravelling the DeepTech potential in Indian B2B SaaS

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Foreword

Macro-economic uncertainty and the subsequent funding winter has led many tech companies to abandon the "Growth-at-all-costs" mindset and replace it with "Sustainable Growth". For most SaaS (Software-as-a-Service) companies, this manifested into a commitment to conserve cash, cut burn and turn profitable. However, *Sustainable Growth in the long haul needs to extend beyond operational efficiency and focus on unlocking growth through breakthrough innovation and invention using DeepTech.*

B2B software/SaaS as an industry is built on the foundation of commercialization of DeepTech advancements. New generation B2B SaaS companies are leveraging the power of DeepTech such as AI/ML, AR/VR, Blockchain, etc. to orchestrate transformation use-cases that deliver value to clients. The challenge, however, is that *DeepTech eventually becomes regular tech* in about a decade of its commercial debut. Therefore, it is crucial for B2B SaaS enterprises to not only embrace but also be pioneers of innovation and inventors of novel applications utilizing DeepTech. This is essential to ensure that they not only survive but thrive in the long run.

The aim of this joint nasscom-EY report is to unravel the role of DeepTech and its contribution to Indian B2B SaaS growth. Specific focus areas include understanding nature of DeepTech in Indian B2B SaaS, emerging use cases, potential opportunities, and enablement levers.

The report confirmed four crucial findings. Firstly, Indian B2B SaaS companies are inherently DeepTech and AI-centric. Secondly, Indian B2B SaaS companies can leverage DeepTech more extensively across a wide array of use cases. Thirdly, prioritizing innovative and inventive DeepTech can propel accelerated growth for Indian B2B SaaS Indian companies over the next decade and beyond. Lastly, strategic ecosystem enhancements can remove barriers to success in DeepTech endeavours.

Indian B2B SaaS enterprises are poised to seize a prominent role in the global B2B tech market, empowered by growing democratization and accessibility of deep technology. Realizing India's aspiration to become a "Product Nation" would require a collective effort from investors, entrepreneurs and industry/govt bodies etc. to foster the "Invent in India" narrative and usher in next generation of global software products from the country.



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Executive Summary

Present state overview

1 Indian B2B SaaS companies are inherently DeepTech and AI/ML centric at present

- a) 99% of Indian B2B SaaS companies are leveraging DeepTech for customer use cases
 - ▶ ~201 cos. working on 109 distinct use cases*
- b) AI/ML is the most leveraged DeepTech (54% of use cases), followed by big data/descriptive analytics (39%) and intelligent automation (7%)**

DeepTech deep-dive

2 DeepTech can be leveraged even more extensively by Indian B2B SaaS companies

- a) Top 10% of distinct use cases have an average of ~20 companies working on each of them
 - ▶ Bottom 60% of distinct use cases have less than 2 companies each working on them
- b) Majority of Indian B2B SaaS companies leverage DeepTech to serve horizontal application areas (63% of use cases), with top functional coverage across sales and marketing, HR and operations and supply chain

Potential opportunity

3 Focus on inventive DeepTech is key to future growth of Indian B2B SaaS companies

- a) Sustainable growth of B2B SaaS companies is directly proportional to scale of inventive DeepTech
 - ▶ Analysis of 20 public global B2B SaaS companies# demonstrates a positive correlation of ARR growth with scale of inventive DeepTech (number of patents filed)
- b) 25% of Indian B2B SaaS companies are presently inventive with 2,000+ filed patents
 - ▶ ~2.5x growth in number of patents filed in the past five years (2018 onwards) as compared to the prior decade (2008 to 2018)

Ecosystem enablers

4 Growth can be accelerated by a nurturing ecosystem for inventive DeepTech

- a) Availability of DeepTech talent (80%), patient capital (40%) and DeepTech infra (27%) are the top three challenges highlighted by Indian B2B SaaS companies
- b) Increased access to open data, greater collaboration with academia and government-supported DeepTech funds can potentially accelerate DeepTech in Indian B2B SaaS

The way forward:

premium valuations and M&A opportunities

- ▶ As the 'Invent in India' narrative takes shape, Indian B2B SaaS companies with inventive DeepTech focus can look forward to sustaining price competitiveness and thereby attractive valuations, especially with the rise of DeepTech focused funds
- ▶ With rising scale of inventive DeepTech, Indian B2B SaaS will become potentially even more lucrative targets for global M&A

* A total of 507 B2B SaaS use cases including overlaps analyzed for this report

** Each use case may encompass multiple DeepTech areas, thus the percentages would not add to 100%

ARR CAGR computed from IPO till 2023 based on a) IPO between 2009-2019 and b) revenues at IPO between US\$10 million to US\$400 million,

Introduction

Within the global B2B tech landscape, Indian B2B SaaS enterprises are assuming an increasingly prominent position, fuelled by the expanding accessibility and democratization of advanced technologies. DeepTech, encompassing AI/ML, AR/VR, and more, forms an integral component of the next wave of software products. Consequently, pioneering innovative applications that harness such DeepTech becomes pivotal for enhancing India's market share in the realm of global B2B SaaS.

As we embark on this trajectory of growth, the purpose of this report is to formulate a perspective on the current status and potential opportunity that can be unlocked through leveraging DeepTech in Indian B2B

SaaS. Specifically, the following four key questions served as the basis for this report:

- ▶ What is the extent of DeepTech adoption within the Indian B2B SaaS landscape?
- ▶ What are the prevailing and emerging use-cases of DeepTech in Indian B2B SaaS?
- ▶ What is the potential impact of DeepTech for Indian B2B SaaS?
- ▶ What strategic ecosystem factors can elevate the role of DeepTech in Indian B2B SaaS to the next level?

The subsequent sections of the report endeavours to delve into each of these areas with greater depth.

Key definitions used in the report

- ▶ **DeepTech B2B companies:** These are active firms that create, deploy or utilize advanced technologies in their products offerings. Advanced technologies used in B2B SaaS include AI/ML, Big Data/Analytics, Intelligent Automation, AR/VR and Decentralized/Distributed Ledgers
- ▶ **Inventive DeepTech companies:** From the pool of DeepTech B2B firms, inventive B2B SaaS firms are creating new products or solutions that are generally backed by fundamental research. The technology innovations under this category largely develop new intellectual property (IP) that involve scientific or engineering advances
- ▶ **Innovative DeepTech companies:** All B2B SaaS companies that are not inventive DeepTech are classified as Innovative B2B SaaS and further categorized as Emerging, Advanced and Scaled as defined below

	EMERGING	ADVANCED	SCALED
Innovative B2B SaaS	DeepTech team size <10	DeepTech team size 10-50	DeepTech team size 50+

- ▶ **Use case:** Business context-specific problem statement, related to a function or industry sector

Methodology

Objective

The objective of this report is to gain insights on the prevalence of DeepTech and its potential impact in unlocking future growth of B2B SaaS in India. The report delves into examination of types of DeepTech harnessed by Indian B2B SaaS enterprises, highlights prominent use-cases across diverse sectors, reveals potential growth differential achievable through inventive DeepTech, and elucidates collaborative efforts of ecosystem participants required to realize the DeepTech advantage for Indian B2B SaaS.

Data source

This report has been crafted through comprehensive primary and secondary research methodologies, involving interactions with leading Indian B2B SaaS companies and industry specialists, and through cross-referencing of existing literature on state of Indian B2B SaaS.

Detailed bottom-up analysis was conducted on a total of 201 Indian B2B SaaS companies (shortlisted based on funding >US\$ 6 million or headcount of 100+, if bootstrapped) to serve as the foundational dataset for this report. Additionally, 15 in-depth interviews were conducted with CXOs from leading Indian B2B SaaS companies, representing a diverse spectrum of companies ranging from ARR of US\$ 10 million to US\$ 500 million. This collaborative effort, combined with consultations with SaaS industry experts, served to further corroborate the research insights.

201

Indian B2B SaaS cos. shortlisted basis:

- ▶ Funding >=US\$ 6Mn
- ▶ Headcount >=100 (if bootstrapped)

15+

Indian B2B SaaS CxO interviews

Demographics of companies analyzed for the report

Founding year period	No. of cos.	Funding (US\$ million)	%age of cos.	Use cases analyzed
Pre-2000	5%	Bootstrapped	2%	507 Total DeepTech use cases analyzed
2001- 2010	18%	6 to 100	70%	
2011- 2020	73%	100-500	25%	109 Distinct DeepTech use cases analyzed
2021-2023	3%	500Mn+	3%	
Headcount	<1,000	1,000-5,000	5000-10000	10,000+
%age of cos.	82%	15%	2%	1%

Note: Use case numbers are for the sample of 201 Indian B2B SaaS companies analyzed for this report

1

DeepTech in the realm of Indian B2B SaaS

1A Indian SaaS companies are inherently DeepTech



99% of Indian B2B SaaS companies are leveraging DeepTech for customer use cases

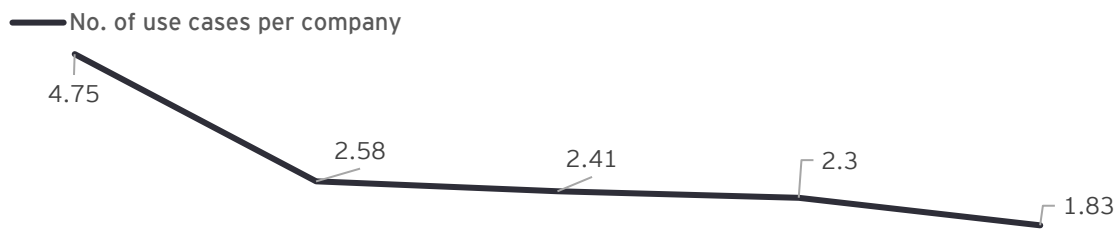


201* Indian B2B SaaS cos. are working on 109 distinct use cases leveraging DeepTech, implying significant overlap of use cases among the companies

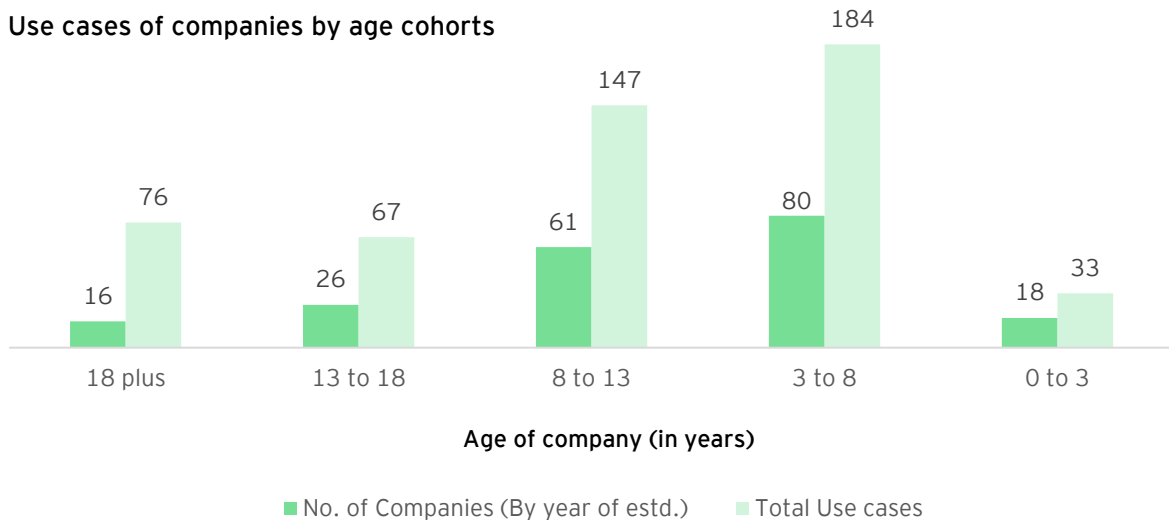
A notable trend within Indian B2B SaaS landscape is the significant adoption of deep technology solutions to cater to customer use cases. Research of 201 Indian B2B SaaS companies indicate that an impressive 99% of them have embraced DeepTech innovations as a strategic approach to address their clients' needs and challenges. As companies mature, they tend to invest even more in strategic integration of advanced technologies to serve multiple use-cases. This showcases industry's commitment to innovation and underscores the need to build more sophisticated and impactful solutions in response to evolving customer demands.

As companies mature, they tend to serve multiple use cases

No. of use cases of companies by age cohorts



Use cases of companies by age cohorts



“Our approach to DeepTech development begins with empathy towards customers and strong intent to solve for them - our users are main street people not wall street people. We identify the problems that we can solve for them first and then choose the most optimum way to solve it e.g., RPA, ML or Generative AI”

Founder and CEO - Healthtech B2B SaaS company (funding > US\$ 50 million)

*201 is the sample set of Indian B2B SaaS companies identified for the purpose of report
Refer to Appendix D for distinct use cases by age cohort

1B DeepTech in Indian B2B SaaS is AI/ML centric



AI/ML is the predominant DeepTech leveraged by Indian B2B SaaS companies



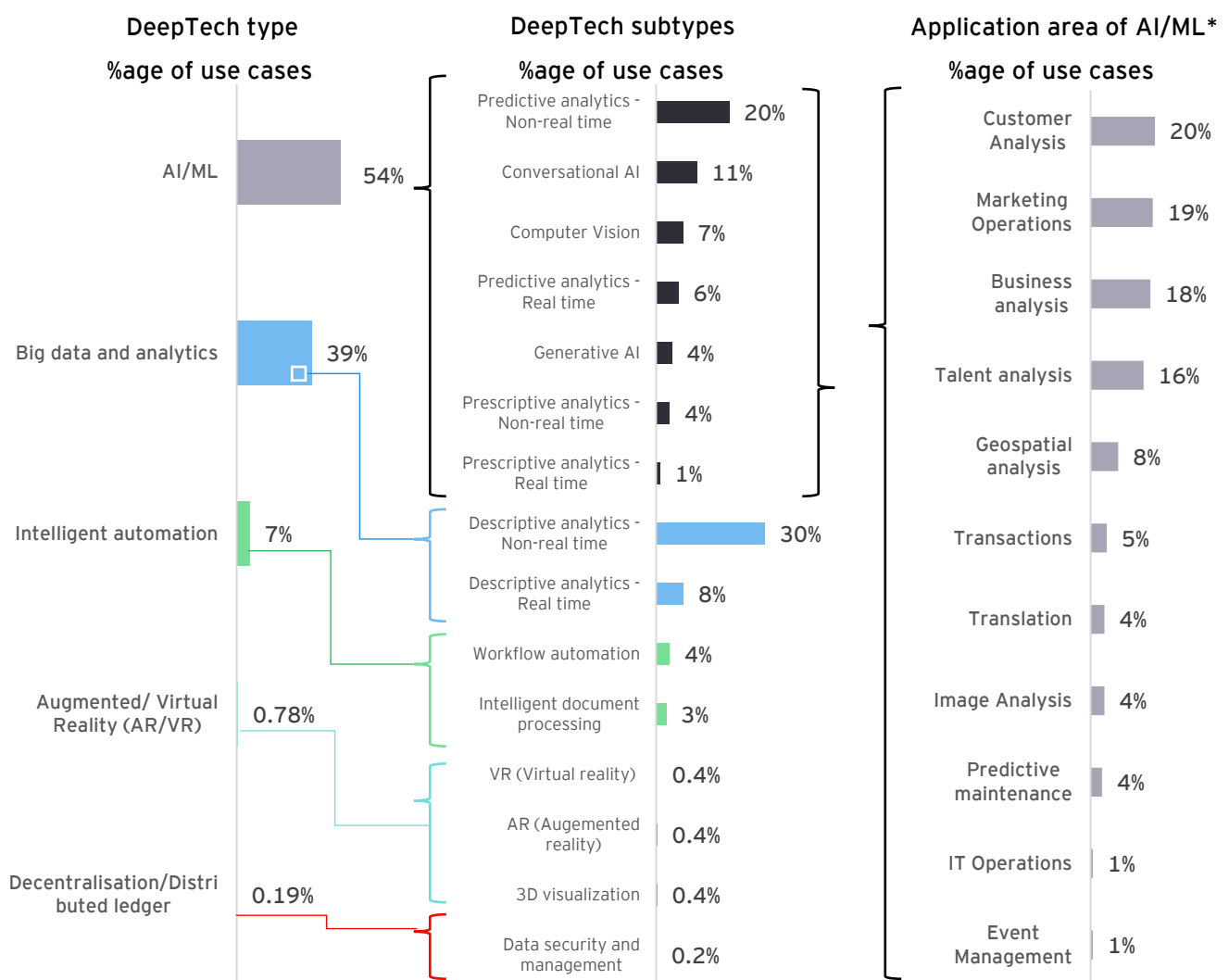
Predictive analytics is the prevailing category of AI/ML DeepTech, particularly in non-real-time scenarios, followed by Conversational AI



Within AI/ML, 70% of use cases are directed towards customer analysis, marketing operations, business analysis, and talent analysis



More than half of total deep-tech use cases leverage AI/ML



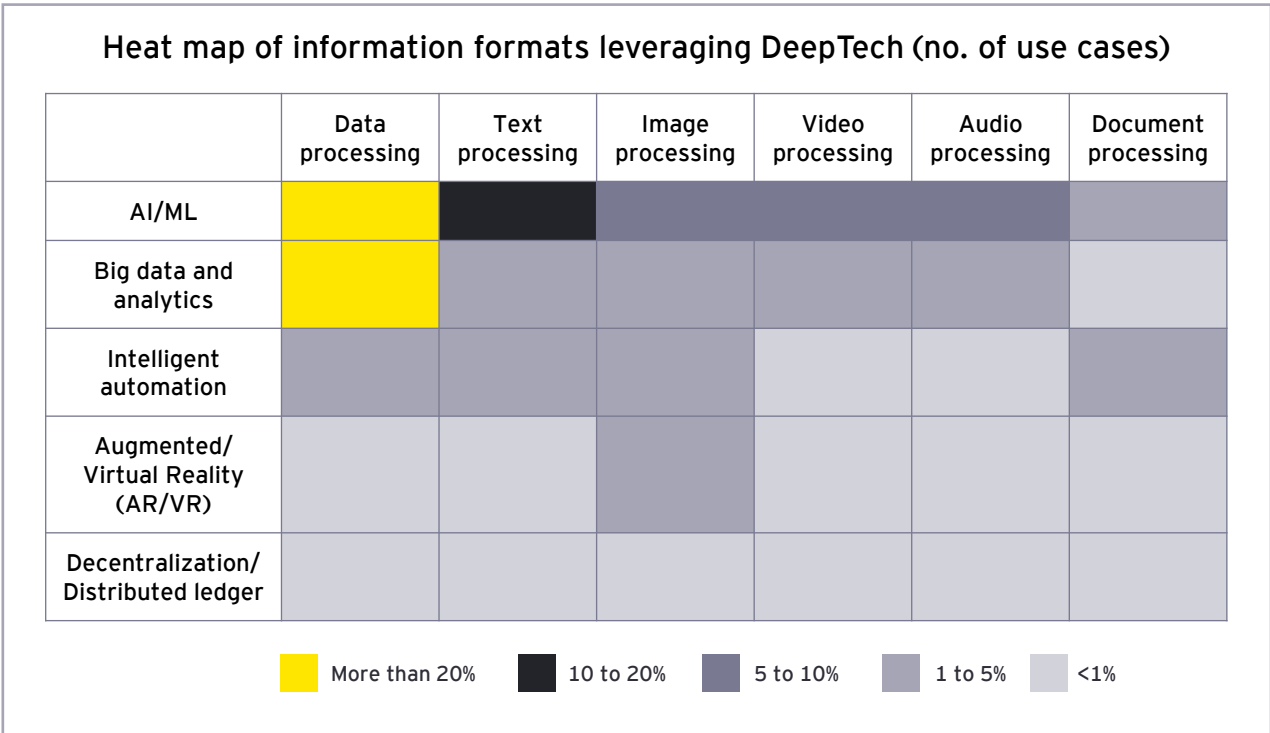
Note:

- a. The data mentioned in charts is break up of total 507 DeepTech use cases analyzed for the purpose of this report
- b. Percentages mentioned in chart will not add up to 100% because of overlapping data

Refer to Appendix A for application areas by AI/ML subtypes

1C Data and text processing serve as the foundational layer for majority of the DeepTech use cases

A significant majority of companies are actively leveraging the power of deep technology to sharpen their focus on data and text processing information formats. This underscores the transformational potential it holds in enhancing the efficiency, accuracy, and insights extracted from vast volumes of data and textual information. By harnessing advanced algorithms and computational capabilities, companies are effectively unravelling intricate patterns, deriving meaningful insights, and helping make informed decisions. This paves the way for new horizons of advancement in data-driven decision-making, predictive modelling, and transformative business strategies.



“Our platform comes with multiple pre-integrations that allow us to build the intelligence layer on top of all the data from various systems to give visibility and prescribe what can be done”

VP Product Design - Logistics B2B SaaS company (funding ~US\$ 10 million)

Case examples:

Predictive analytics for targeted marketing

CASE EXAMPLE 1



DeepTech subtype:
Predictive analytics -
real time



Input Type:
Data processing



Vertical:
Multiple

Feature Description

Utilize advanced pattern prediction to intelligently segment the customer base, identify nuanced shopping behaviours and pinpoint target consumers aligning with specific products, enhancing precise cross-selling and upselling efforts.

CASE EXAMPLE 2



DeepTech subtype:
Predictive analytics -
non-real time



Input Type:
Video and Data
processing



Vertical:
Telecom, Media, and
Technology

Feature Description

Tailored dynamic content leveraging Generative AI for engagement and customer experience while efficiently scaling mobile ad performance – with immersive video ads for awareness, conversion and monetization.



2

Deep dive of DeepTech use cases in Indian B2B SaaS



014 135 51 5 59319
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005 5135 5951
1396 9754 345 9692
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5 3221 8546 8764
0632 5527
DLN DKK LEJ
44 96 39 21 875

2A DeepTech can be leveraged even more extensively



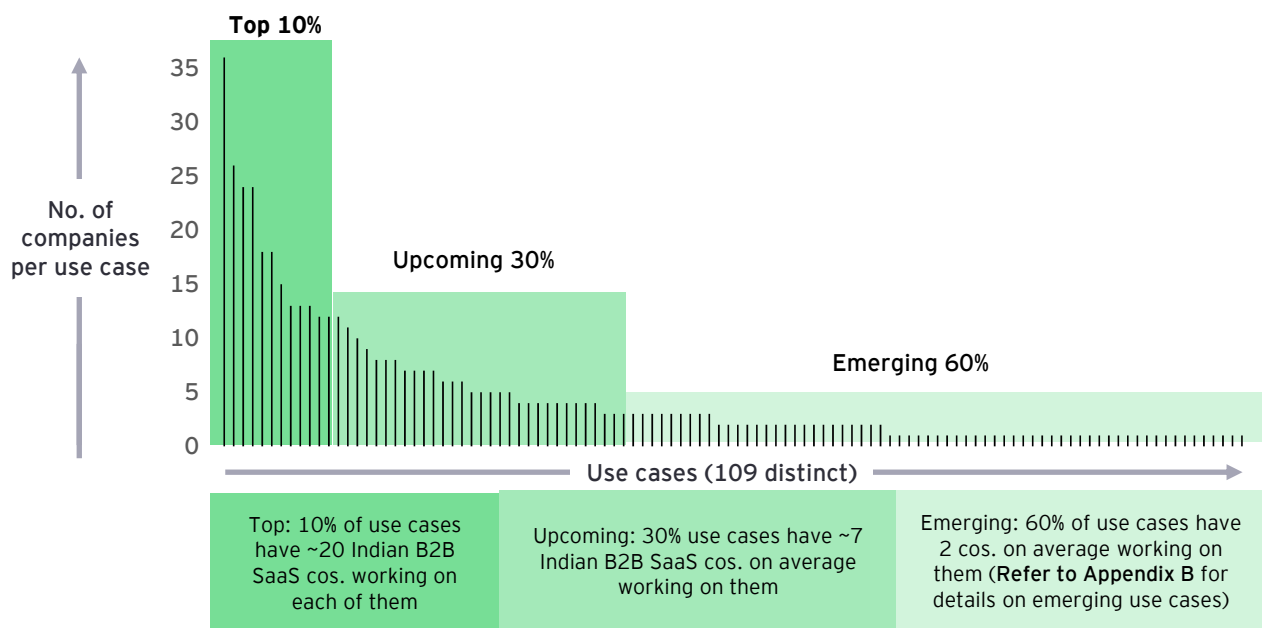
61% of Indian B2B SaaS companies are engaged in developing at least one of the top 10% DeepTech use case. This reflects a strong commitment to innovation through harnessing of cutting-edge solutions to cater to complex challenges



60% of DeepTech use cases have ~2 companies working on each of them. This signifies the strategic selectiveness that companies exercise in choosing their focus areas

Top 10% use cases

- | | |
|---|-----------------------------------|
| 01 AI-powered business intelligence | 06 AI-enabled lead generation |
| 02 AI-based conversational intelligence | 07 Intelligent routing |
| 03 Conversational AI for customers | 08 AI-based workforce analytics |
| 04 AI-driven customer segmentation | 09 AI-based recruitment system |
| 05 Targeted marketing | 10 AI-enabled campaign management |



Upcoming 30% use cases

- | | | |
|--|------------------------------------|--------------------------------------|
| ▶ Intelligent logistics | ▶ Predictive equipment maintenance | ▶ AI-powered software development |
| ▶ Intelligent inventory management | ▶ AI based pricing intelligence | ▶ AI-based supplier management |
| ▶ AI for content generation and editing | ▶ Sales enablement | ▶ AI-based social media intelligence |
| ▶ Conversational AI for employees | ▶ AI-enabled attendance system | ▶ AI-based retail store intelligence |
| ▶ Document processing | ▶ AI-enabled workflow automation | ▶ AI-enabled geospatial analytics |
| ▶ Recommendation engine for customers | ▶ AI-enabled security | ▶ Employee lifecycle management |
| ▶ Intelligent sales assistant | ▶ AI based IT operations | ▶ AI powered employee engagement |
| ▶ AI based customer service agent assist | ▶ AI-based payment routing | ▶ AI-based compliance management |
| ▶ AI-driven financial reconciliation | ▶ AI-based fraud detection | ▶ AI-based contract analytics |
| ▶ AI-based cyber threat intelligence | ▶ AI-enabled loyalty management | ▶ AI driven talent marketplace |

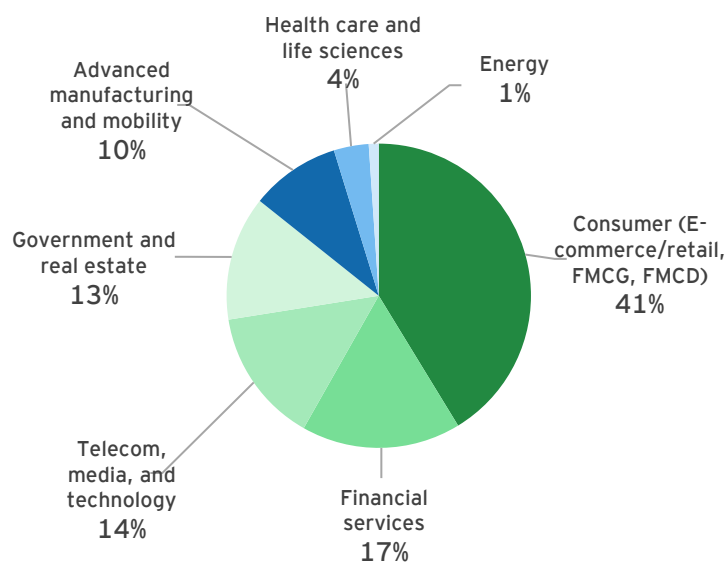
2B Majority of Indian B2B SaaS companies leverage DeepTech to serve horizontal application areas

DeepTech solution type (by %age of use cases, N=507)



Vertical-focused solutions

By percentage of use cases



- ▶ Consumer goods and services vertical has the most B2B SaaS DeepTech use case instances followed by Financial Services

Top 3 use cases by verticals:

- ▶ Consumer vertical - Targeted marketing, AI-driven customer segmentation and intelligent inventory management
- ▶ Financial services - Conversational AI for customers, AI enabled campaign management and AI-powered debt collection

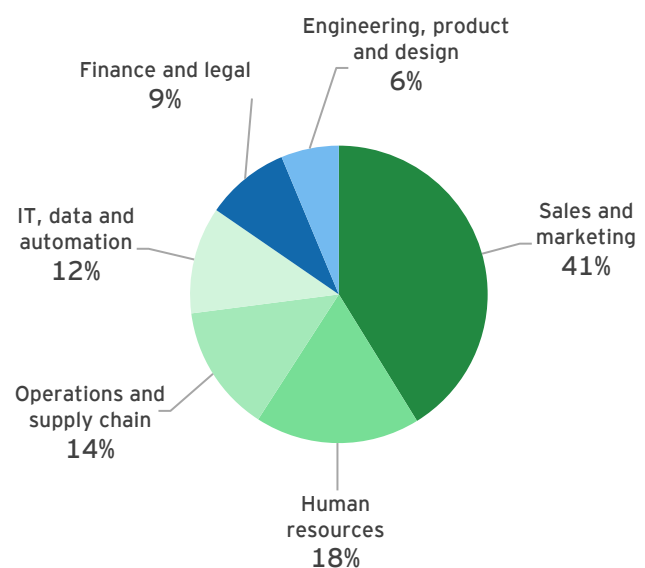
Horizontal-focused solutions

By percentage of use cases

- ▶ Sales and marketing emerged as the top function leveraging B2B SaaS DeepTech; followed by human resources and operations

Top 3 use cases by horizontals:

- ▶ Sales and marketing - AI-enabled lead generation, AI-driven customer segmentation, AI-based conversational intelligence
- ▶ HR - AI-based recruitment systems, Conversational AI for employees and AI-based workforce analytics



DeepTech use cases of horizontal Indian B2B SaaS cos. (1/2)

Sales and marketing (S&M)

% of distinct use cases in S&M: 32%

Human resources

% of distinct use cases in HR: 18%

Operations and supply chain

% of distinct use cases in operation and supply chain: 22%

Marketing and lead generation	AI-enabled lead generation
	AI-driven customer segmentation
	Targeted marketing
	AI-enabled campaign management
	AI-based conversational intelligence
	AI for content generation and editing
	AI-based social media intelligence
	Recommendation engine for customers
	AI driven personalization
	AI-enabled event management
	Sales enablement
	AI-driven omnichannel experience
	AI-powered conversational commerce
	Conversational AI for customers
	AI-based conversational intelligence
Customer experience	AI based customer service agent assist
	Recommendation engine for customers
	AI-enabled loyalty management
	AI-driven customer segmentation
	AI-powered conversational commerce
	Real-time feedback management
	AI for content translation
	AI-based ticket management
	AI for content generation and editing
	AI-enabled workflow automation
	AI-driven omnichannel experience
	Sales
Sales enablement	
AI-based conversational intelligence	
AI-driven customer segmentation	
AI-based fraud detection	
S&M Intelligence	AI-powered business intelligence
	AI-powered consumer research
Pricing	AI based pricing intelligence
	Sales enablement

Human capital management	AI-based workforce analytics
	AI-enabled attendance system
	Employee lifecycle management
	AI driven talent marketplace
	Conversational AI for employees
	AI powered employee engagement
	AI-based travel and expense management solution
	AI-based conversational intelligence
	Blockchain-based document management
	AI-based recruitment system
Recruitment	AI-based recruitment system
	AI-based recruitment system
Helpdesk support	Conversational AI for employees
	AI-based conversational intelligence
Learning and development	Intelligent Learning and Development
	AI powered employee engagement
	Conversational AI for employees
	AI-based workforce analytics
Payroll	Intelligent payroll management
	Document processing
Employee onboarding	Employee lifecycle management
	AI driven personalized user onboarding

Each use case maybe leveraged across functions. Thus the % of distinct use cases will not add up to 100%

Logistics and distribution	Intelligent routing
	Intelligent logistics
	AI based video telematics
	AI-based EV charging infrastructure
	Predictive equipment maintenance
Enterprise asset and production management	AI-based parking management
	AI-enabled geospatial analytics
	Predictive equipment maintenance
	AI-enabled geospatial analytics
Inventory management	Workforce safety automation
	AI-enabled security
	Intelligent inventory management
Supplier management	AI-powered business intelligence
	AI-based supply chain management
	AI-enabled workflow automation
	AI-based supplier management
Facility management and admin	RFP automation
	AI-based procurement analytics
	AI-based travel and expense management solution
Supply chain intelligence	Intelligent workspace management
	AI-enabled user authentication
Order management	Intelligent logistics
	AI-powered business intelligence
Order management	Intelligent order management

6% to 8%	4% to 6%	2% to 4%	1% to 2%	Less than 1%
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Use case density (% of companies addressing the use case, N=201 cos.) Refer to Appendix C for DeepTech use cases across verticals

DeepTech use cases of horizontal Indian B2B SaaS cos. (2/2)

IT, data and automation

% of distinct use cases in IT, data and automation: 22%



Finance and legal

% of distinct use cases in finance and legal: 16%



Engg., product and design

% of distinct use cases in engg., product and design: 13%

IT Security	AI-based cyber threat intelligence	Contract management	AI-based contract analytics	Software development	AI-powered software development
	AI-enabled security		AI-based contract workflow automation		AI for content generation and editing
	Data backup and recovery		Document processing		AI-based API provider
	AI-based fraud detection	Transaction management	AI-based payment routing		AR and VR based mapping
Data	AI-driven data integration		AI-driven financial reconciliation		Event-based vision systems
	Document processing		Document processing		Drone services
	Database management		AI-based fraud detection		AI marketplace for developers
	AI-enabled data extraction	Financial planning	AI-driven revenue intelligence		AI platform to build, deploy and manage ML models
AI-powered business intelligence	AI-powered business intelligence		AI-based code translator		
IT Operations	AI based IT operations	Cost management	AI enabled cost management		Software testing
	AI-powered business intelligence		AI-powered business intelligence	AI platform to build, deploy and manage ML models	
	Real-time call routing		AI-driven financial reconciliation	Compliance	Application security
Conversational AI for employees	AI-based compliance management	AI-enabled security			
Communication and Collaboration	AI-enabled workflow automation	Accounts receivables	AI-driven financial reconciliation	Engineering	AI-assisted medical analysis
	AI driven team communication				
	AI-powered business intelligence	AI-powered policy generation			
Automation	AI-enabled workflow automation	Network and infra	Network analytics		
	AI based IT operations				
Device management	AI based IT operations				
	Intelligent ADM solution				
Network and infra	AI-based cyber threat intelligence				
	Network analytics				

Each use case maybe leveraged across functions. Thus the % of distinct use cases will not add up to 100%

6% to 8%	4% to 6%	2% to 4%	1% to 2%	Less than 1%
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Case example:

DeepTech use cases for a MarTech SaaS company



Company overview

- ▶ AI-based customer engagement platform
- ▶ 500+ employees
- ▶ US\$ 200+ million in funding
- ▶ 10+ years old



DeepTech use cases

- ▶ Intelligent sales assistant
- ▶ AI-driven customer segmentation
- ▶ AI-driven omnichannel experience
- ▶ AI-enabled campaign management



DeepTech features

- ▶ AI-driven capabilities to enable insights, such as channel and time preferences, lifestyle affinities to optimize customer journeys and predict future behaviours
- ▶ Engagement strategy using predictive analytics and AI-driven segmentation
- ▶ AI-powered journey orchestration and optimization to create seamless omnichannel experiences
- ▶ Identify best-performing campaigns and optimize them in real-time using AI



DeepTech type

- ▶ AI/ML
- ▶ Big data and analytics

DeepTech sub-types

- ▶ Descriptive analytics Non-real time
- ▶ Predictive analytics Non-real time

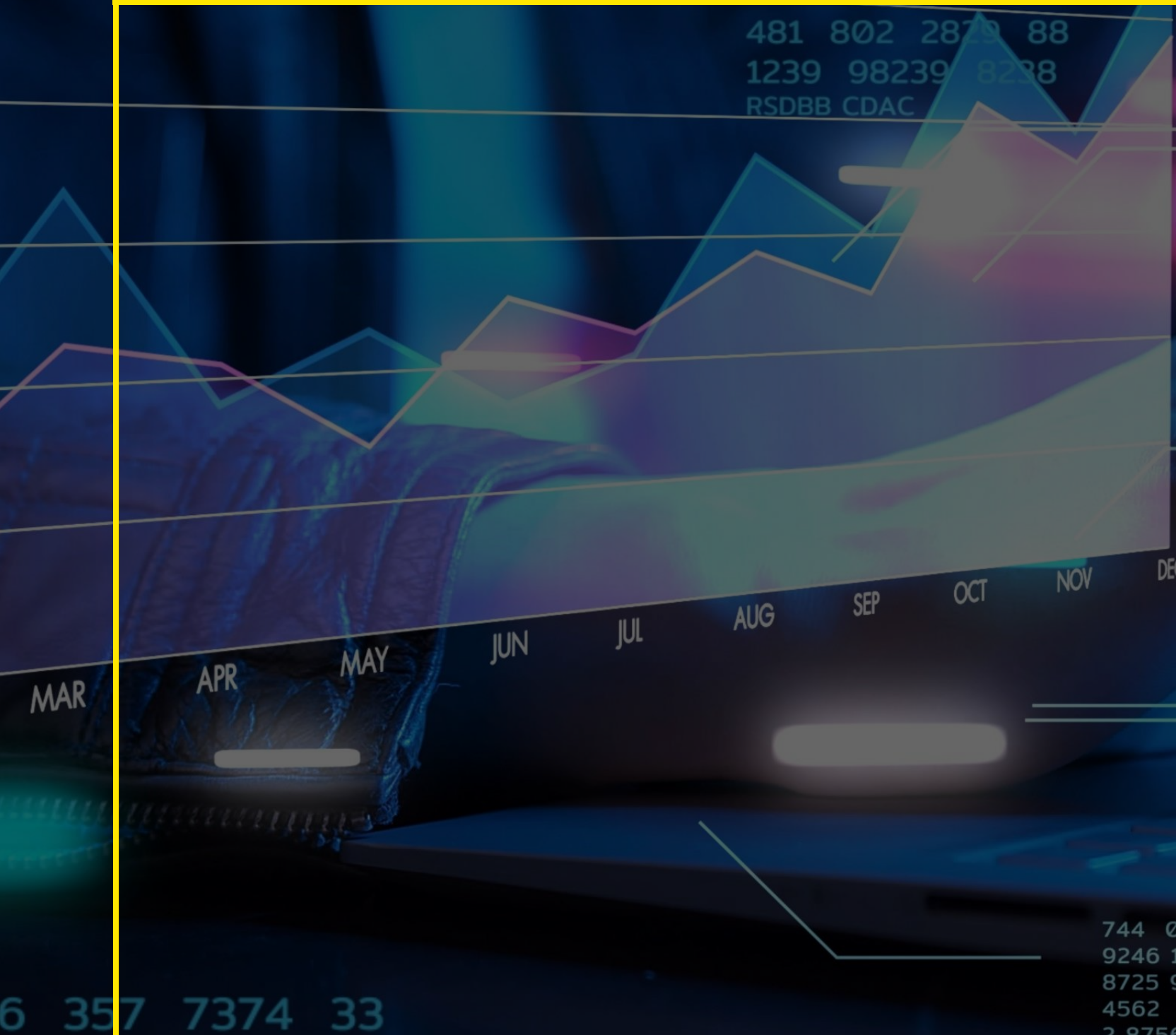


DeepTech application area

- ▶ Customer analysis
- ▶ Marketing operations

3

Accelerating Indian B2B SaaS via inventive DeepTech



3A 25% of Indian B2B SaaS companies are inventive DeepTech focused

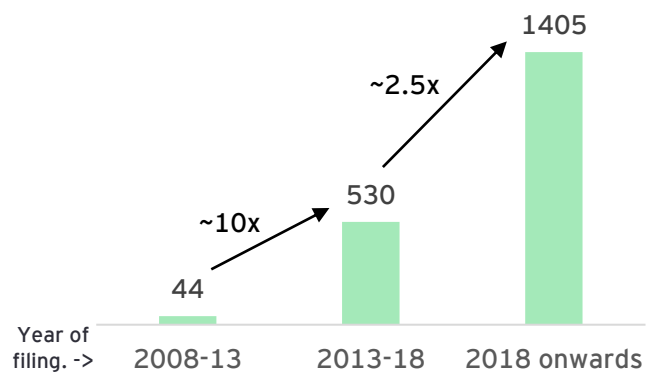
Inventive DeepTech represents the fusion of creative thinking and advanced technical acumen. By leveraging emerging technologies such as AI/ML, inventive DeepTech pioneers/forward-thinking entrepreneurs in India are devising ground-breaking solutions that address complex challenges and enhance customer experience.

~1,400 patents filed during the last five years a substantial increase compared to the preceding decade, which had 574 patent filings. This trend underscores a significant intensification in inventive efforts and intellectual property generation

Scale of inventive DeepTech	No. of Indian B2B SaaS cos.
Highly IP focused (>200 patents filed)	2
Moderately high IP focused (100-200 patents filed)	2
Regular IP focused (<100 patents filed)	45

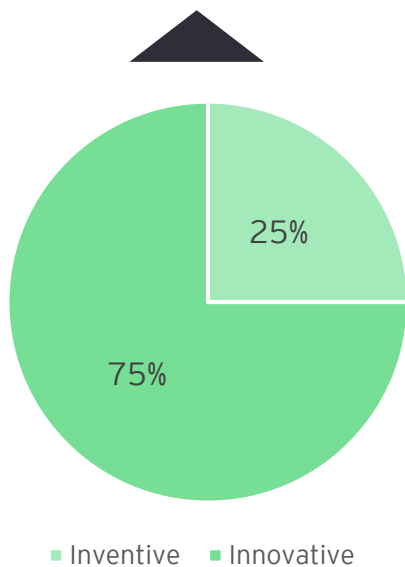
Inventive

Growth in IP (No. of Patents filed)



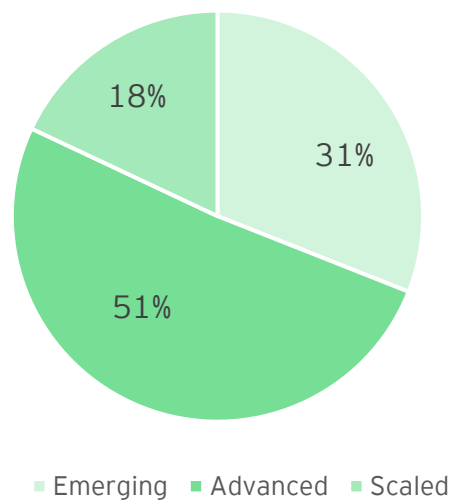
Note:

- a. Patent data for 201 DeepTech companies analyzed for this report. 49 companies found to have IP
- b. IP data sourced from WIPO (World Intellectual Property Organization), accessed July 2023



Innovative

By %age of companies



Innovative firms are poised to transition into inventive entities in the near future. They are increasingly directing their investments toward cultivating DeepTech teams, a key driver of novel IP development

DeepTech team size

1. Emerging: <10
2. Advanced: 10-50
3. Scaled : 50+

3B Breakthrough Indian B2B SaaS companies, i.e. inventive deep-tech, can potentially unlock ARR CAGR of 30-50% on a sustained basis



Higher CAGR ARR growth is correlated with scale of inventive DeepTech

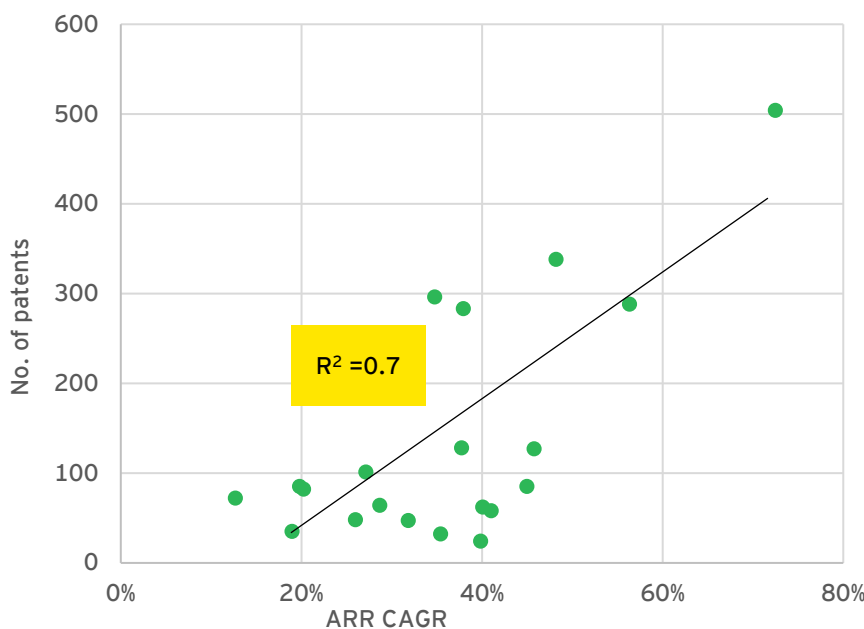


Highly IP focused inventive Global B2B SaaS cos. (>200 patents filed) have demonstrated 50% ARR CAGR growth on average, over 8-10 years



Analysis of 20 publicly listed B2B SaaS Global companies* revealed a positive correlation between ARR CAGR and focus on IP (no. of patents filed)

Patents filed vs ARR CAGR



Scale of inventive DeepTech	Patents filed	Avg. CAGR ARR
Highly IP focused (25% of sample)	Above 200 patents	50%
Moderately IP focused (12% of sample)	100-200 patents	37%
Regular IP focused (60% of sample)	less than 100 patents	30%

*IPO b/w 2009-2019 with revenues at IPO between US\$10 million to US\$400 million, ARR CAGR computed from IPO till 2023, or last publicly available revenue figure

R² (coefficient of determination) is a measurement used to explain how much the variability of one factor is caused by its relationship to another factor

IP data sourced from WIPO (World Intellectual Property Organization), accessed July 2023

Sample consisting of Workiva, Veeva, New Relic, Workday, Alteryx, Okta, Twilio, Shopify, Zendesk, Hubspot, Bazaarvoice, MobileIron, Coupa, Talend, Yext, MongoDB, Zuora, Domo, Cloudflare, Crowstrike, Minimum of 6 years to Maximum of 12 years CAGR for each company

Directing increased attention towards inventive DeepTech holds the potential to catalyze consistent and robust growth trajectories, projecting an CAGR of 30-50% in ARR for Indian B2B SaaS companies over the forthcoming decade. Embracing inventive DeepTech paves the way for sustained growth, characterized by demonstrated customer empathy and competitive differentiation.

“DeepTech is core to our product. We have developed multi modal emotion assessment AI – building for computer vision, then data and recently voice as well. It gives us a premium positioning with customers (in winning deals with higher margins) and investors (preferential valuations and funding amount)”

Founder - Indian B2B SaaS company focused on AI-powered consumer research



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MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

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4

Enabling the DeepTech advantage for Indian B2B SaaS

4A Growth impediments: challenges confronting DeepTech B2B SaaS enterprises

Availability of DeepTech talent (80%), patient capital (40%) and DeepTech infra (27%) are the top three challenges highlighted by Indian B2B SaaS companies.



DeepTech Talent: DeepTech requires specialized expertise, but finding and retaining skilled professionals is a challenge due to high demand and limited supply. Attracting talent necessitates creating a stimulating work environment and offering incentives to cultivate a culture of invention.



Patient Capital: DeepTech ventures involve longer development timelines and higher risks, making it tough to secure patient capital - funding that endures extended periods without instant returns. Striking a balance between investors' expectations and the need for sustained financial support is crucial for DeepTech start-ups.



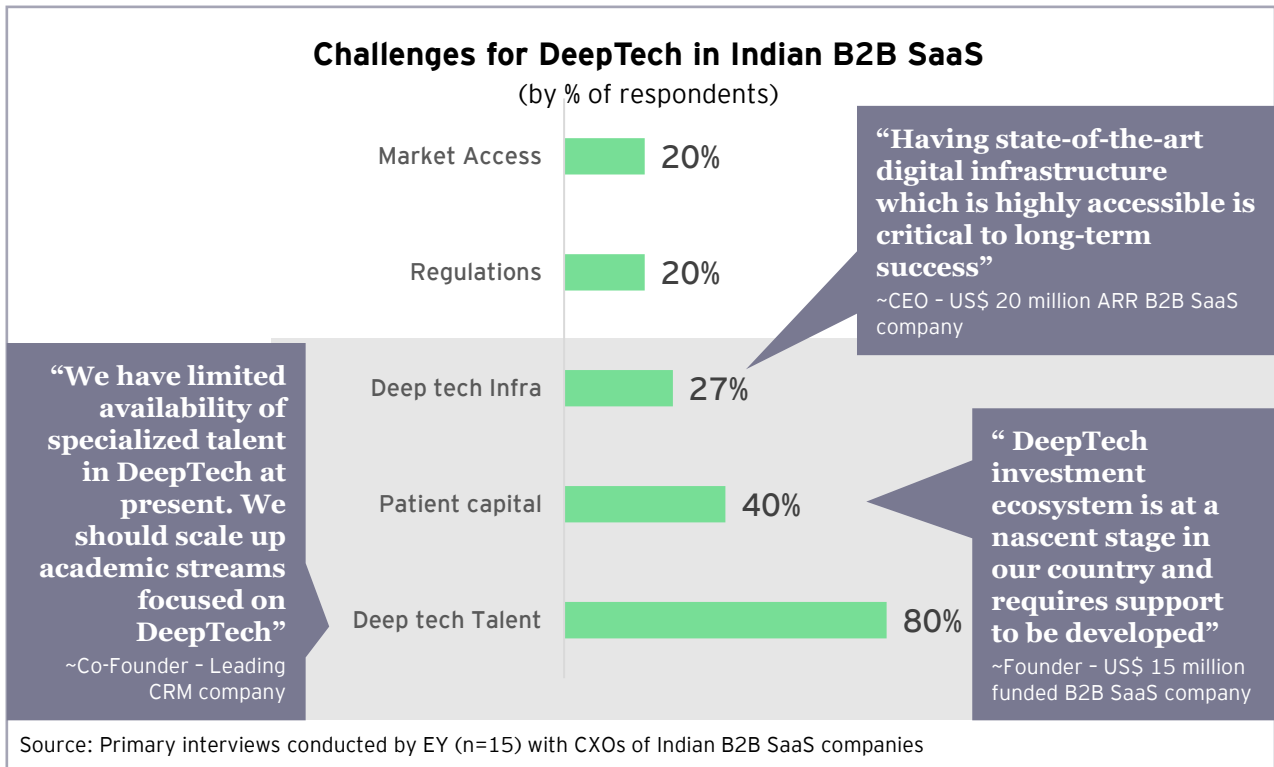
DeepTech Infra: DeepTech solutions demand advanced infrastructure like open data, computing labs and specialized equipment. However, these resources are often costly and inaccessible, hindering companies' progress. Collaborative efforts are required to provide shared access to vital infrastructure and a level playing field for all participants.



Regulations: The rapid pace of DeepTech advancements can outpace regulatory frameworks, leading to uncertainty and potential legal challenges.



Market Access: DeepTech innovations frequently face hurdles when trying to enter markets. Their complexity may lead to longer adoption cycles and require additional education for potential users.



4B Growth can be accelerated by a nurturing ecosystem for inventive DeepTech (1/2)

The enablers of DeepTech ecosystems - access to open data, collaboration with academia, and engagement with industry and government bodies - work in tandem to fuel innovation, accelerate technology development, and create a sustainable environment for transformative advancements.



Access to open data

- ▶ Developing innovative DeepTech talent at scale
- ▶ Democratizing research, design and training of AI/ML models

Access to open data as part of the underlying deep tech infrastructure plays a pivotal role in driving innovation. Open data repositories provide researchers, entrepreneurs, and developers with a vast pool of information to draw insights from. This data can be used to train advanced machine learning models, validate hypotheses, and uncover hidden patterns. By offering unrestricted access to datasets, governments and organizations foster an environment where startups and researchers can experiment, refine their ideas, and create breakthrough technologies. Open data not only accelerates the development of DeepTech solutions but also promotes transparency, collaboration, and knowledge sharing within the ecosystem.

EU Open Data Portal¹ provides access to 1 million+ datasets covering 70+ institutions, agencies, and bodies across 36 countries. Datasets across policy, economy, employment, science, etc. are available for commercial and non-commercial uses



Collaboration with academia

- ▶ Nurturing inventive DeepTech talent
- ▶ Improving accessibility to DeepTech infra

DeepTech ecosystems flourish when there is a strong collaboration between industry and academia. Universities are hubs of cutting-edge research and knowledge creation, providing a fertile ground for nurturing disruptive technologies. Collaborative initiatives between academia and industry enable the exchange of ideas, expertise, and resources. Research findings can be translated into practical applications, and industry challenges can drive focused research efforts. Such partnerships not only bridge the gap between theoretical advancements and real-world implementation but also cultivate a talent pipeline of skilled individuals ready to contribute to the DeepTech workforce.

Leading DeepTech start-ups in Europe have ~27% of their talent from top 100 universities, 51% higher than the sample average of 2,000 companies²

DeepTech companies with higher share of top researchers also receive 43% higher valuations²

¹[**winning-formula-how-europes-top-tech-start-ups-get-it-right-vf.pdf \(mckinsey.com\)](#)



Collaboration with industry and government bodies

- ▶ Regulatory framework for empowering DeepTech start-ups
- ▶ Patient seed capital for inventive DeepTech

A thriving DeepTech ecosystem requires a symphony of stakeholders, including industry players and government bodies. Industry engagement brings practical insights into market needs and technical requirements. Startups and researchers can benefit from industry mentorship, investment, and access to potential customers. On the other hand, government bodies play a crucial role by creating conducive policies, funding mechanisms, and regulatory frameworks.

Examples of govt. initiatives across countries

Deep tech-focused govt. funds: Earlier this year (2023) Germany and France launched DeepTech-focused funds of € 1 billion³ and € 500 million⁴ respectively

Special visa for specialized talent: Israel which is a leader in DeepTech innovation provides High-Tech Work Visa (HIT)⁵, allowing foreigners to work in Israel for five years

R&D tax credits: UK government allows ~18% tax rebate⁶ on R&D expenditure incurred by small and medium size companies



Conclusion

Conclusion

Indian B2B SaaS is on the right path to becoming a "Product Nation", powered by efforts of the entire ecosystem over the past 15+ years. In the past 3 years we have witnessed multiple landmark events in Indian B2B SaaS history, notable among them:

- 1 First US\$ 1 billion ARR Indian B2B SaaS company
- 2 First Indian B2B SaaS company listed on NASDAQ, crossing US\$ 0.5 billion in ARR in 2023
- 3 12+ Centaurs (B2B SaaS cos. with ARR > US\$ 100 million)
- 4 75+ B2B SaaS companies with ARR >US\$ 10 million

The way forward:
premium valuations and M&A opportunities

- ▶ As the 'Invent in India' narrative takes shape, Indian B2B SaaS companies with inventive DeepTech focus can look forward to sustaining price competitiveness and thereby attractive valuations, especially with rise of DeepTech focused funds
- ▶ With rising scale of inventive DeepTech, Indian B2B SaaS will become potentially even more lucrative targets for global M&A

As we look forward to the next decade, the Indian B2B SaaS ecosystem has the potential to develop breakthrough software products leveraging DeepTech. Currently, Indian B2B SaaS enterprises demonstrate an innate focus on DeepTech and AI/ML. The potential for further and more comprehensive integration of DeepTech within Indian B2B SaaS operations can be further amplified. Prioritizing inventive DeepTech emerges as a pivotal factor in propelling the future growth of the Indian B2B SaaS landscape. This growth trajectory can be expedited through the establishment of a supportive ecosystem that fosters inventive DeepTech initiatives. This will enable India to further cement its position as a global "Product Nation" driven by an "Invent in India" mindset.



Appendix

Appendix

A. Top application areas within AI/ML subtypes



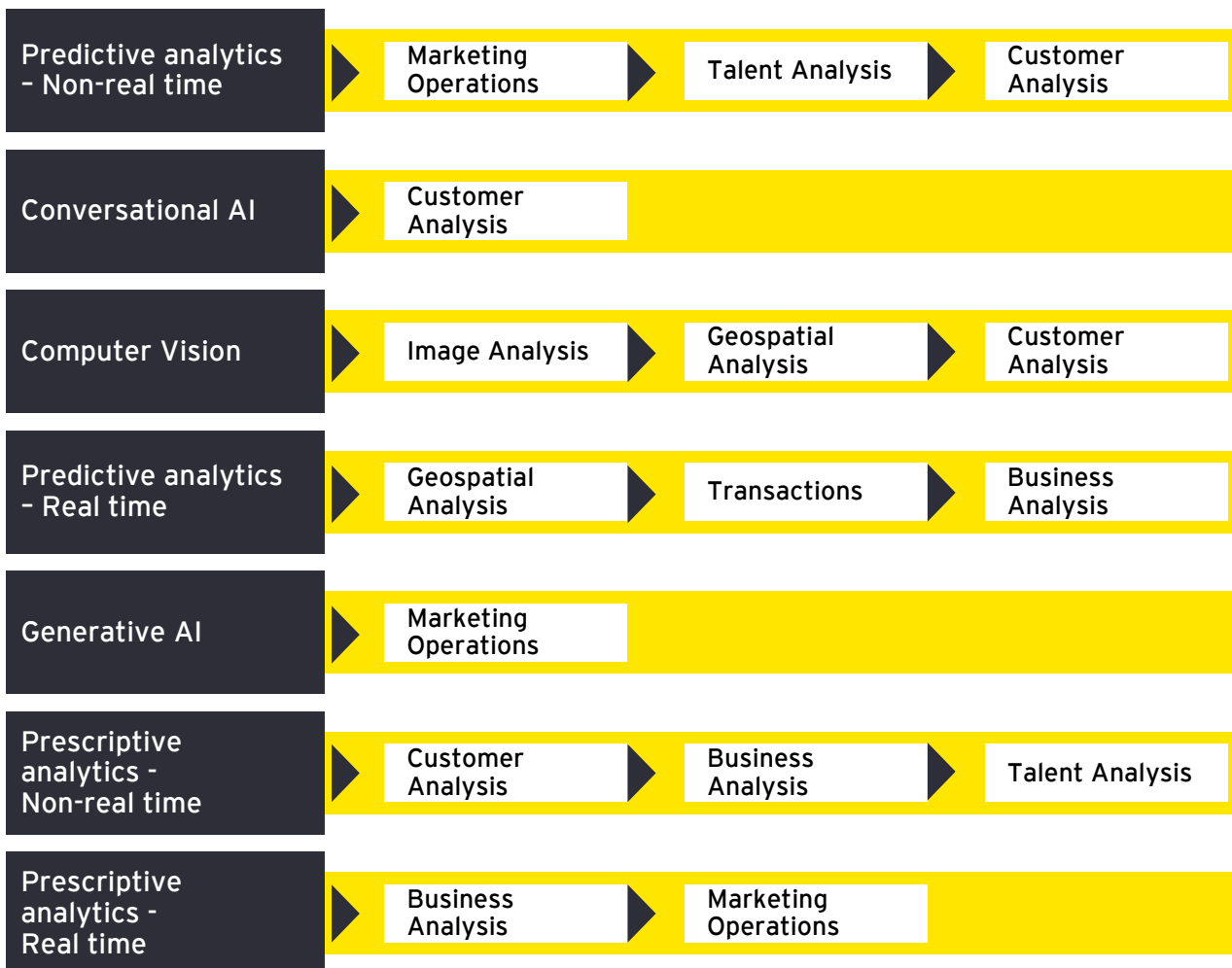
Customer analysis is the top application area being leveraged by AI/ML application types



Predictive analytics is the top application type of AI/ML use cases and majorly caters marketing operations, talent analysis and customer analysis

DeepTech subtypes

Top three application areas



Appendix

B. Emerging 60% use cases

- ▶ AI for credit rating
- ▶ AI-based staff allocation
- ▶ Intelligent payroll management
- ▶ AI-driven data integration
- ▶ AI-based API provider
- ▶ AI-driven revenue intelligence
- ▶ Intelligent Learning and Development
- ▶ AI-based contract workflow automation
- ▶ AI platform to build, deploy and manage ML models
- ▶ AI-enabled user authentication
- ▶ AI-based farm intelligence
- ▶ AI-powered testing
- ▶ AI-driven real time captioning
- ▶ AI-based real estate marketplace
- ▶ Conversational AI for students
- ▶ AI-enabled data extraction
- ▶ AI-driven omnichannel experience
- ▶ AI-based debt collection
- ▶ Return analytics for e-commerce businesses
- ▶ AI-powered conversational commerce
- ▶ AI-based parking management
- ▶ Student admission workflow automation
- ▶ AI marketplace for developers
- ▶ AI enabled KYC
- ▶ Event-based vision systems
- ▶ AI driven personalized user onboarding
- ▶ Application security intelligence
- ▶ AR and VR based mapping
- ▶ Smart interior designing
- ▶ AI enabled cost management
- ▶ AI-enabled event management
- ▶ Intelligent ADM solution
- ▶ AI based competitive insights
- ▶ AI-enabled virtual meetings
- ▶ AR and VR gaming
- ▶ Intelligent workspace management
- ▶ Workforce safety automation
- ▶ Real-time feedback management
- ▶ Blockchain-based document management
- ▶ AI-based supply chain management
- ▶ AI driven personalization
- ▶ Behaviour analysis for students
- ▶ AI-assisted medical analysis
- ▶ RFP automation
- ▶ Intelligent order management
- ▶ AI-based travel and expense management solution
- ▶ AI-driven financial planning
- ▶ Connected Asset Lifecycle management
- ▶ Account receivables management
- ▶ AI based smart packaging
- ▶ AI-based ticket management
- ▶ AI based quality control
- ▶ AI-based procurement analytics
- ▶ AI based video telematics
- ▶ AI-enabled virtual dressing room
- ▶ AI for content translation
- ▶ AI-based EV charging infrastructure
- ▶ AI-enabled claims management
- ▶ AI-powered coaching
- ▶ Data backup and recovery
- ▶ Network analytics
- ▶ Database management
- ▶ Real-time call routing
- ▶ AI-based code translator
- ▶ AI-powered consumer research
- ▶ Drone services

Appendix

C. DeepTech use cases of vertical B2B SaaS cos. (1/3) - Consumer (FMCG, FMCD, E-Commerce/Retail)

Sales and marketing (S&M)

% of distinct use cases in S&M: 19%

Operations and supply chain

% of distinct use cases in operations and supply chain: 10%

Finance and legal

% of distinct use cases in finance and legal: 4%

Human resources

% of distinct use cases in human resources: 2%

IT, data and automation

% of distinct use cases in IT, data and automation: 3%

Category	Use Case	Category	Use Case	Category	Use Case	Category	Use Case	Category	Use Case
Marketing and lead generation	Targeted marketing	Logistics and Distribution	Intelligent routing	Transaction management	AI-powered business intelligence	Human Capital management	Conversational AI for employees	Data	AI-powered business intelligence
	AI-driven customer segmentation		Intelligent logistics		AI-driven financial reconciliation		AI-based staff allocation		Document processing
	Recommendation engine for customers		AI-powered business intelligence	Accounts receivables	AI for credit rating	AI-enabled data extraction			
	AI for content generation and editing		AI-based fraud detection	Compliance	AI-based compliance management				
	AI-enabled virtual dressing room		Return analytics for e-commerce businesses		Inventory management	Intelligent inventory management			
	AI-based social media intelligence		AI based smart packaging	Supplier management		AI-based supplier management			
	AI-based retail store intelligence		AI-enabled campaign management	Supply chain intelligence	AI-powered business intelligence				
	AI-enabled lead generation		AI-enabled financial planning		Enterprise asset and production	AI based quality control			
	AI-driven financial planning		AI-enabled loyalty management	Order management	Intelligent order management				
	AI-enabled lead generation		Conversational AI for customers						
Customer experience	AI-enabled loyalty management	Document processing							
	Conversational AI for customers								
Sales and Marketing intelligence	AI-powered business intelligence	Document processing							
	Return analytics for e-commerce businesses								
Merchandising	AI-based retail store intelligence	AI-powered business intelligence							
	AI-enabled campaign management								
Pricing	AI based pricing intelligence	AI-based retail store intelligence							
	AI based competitive insights								
Sales	Sales enablement								

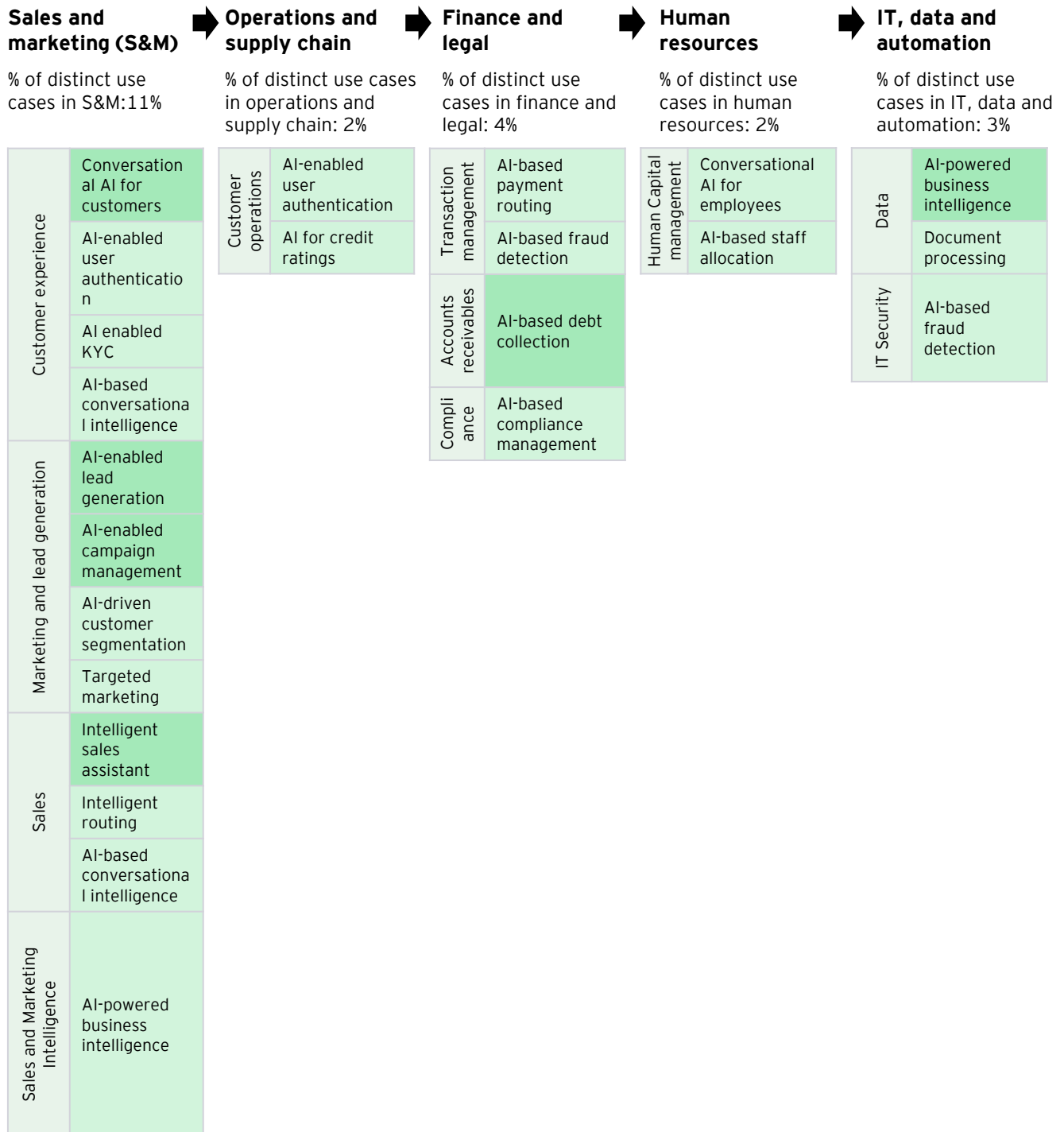
Each use case maybe leveraged across functions. Thus the % of distinct use cases will not add up to 100%

Use case density (% of companies addressing the use case, N=201 cos.)

6% to 8%	4% to 6%	2% to 4%	1% to 2%	Less than 1%
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Appendix

C. DeepTech use cases of vertical B2B SaaS cos. (2/3) - Financial Services



Each use case maybe leveraged across functions. Thus the % of distinct use cases will not add up to 100%

Use case density (% of companies addressing the use case, N=201 cos.)

6% to 8%	4% to 6%	2% to 4%	1% to 2%	Less than 1%
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Appendix

C. DeepTech use cases of vertical B2B SaaS cos. (3/3) - Technology

Sales and marketing (S&M)

% of distinct use cases in S&M: 7%

Marketing and lead generation	Targeted marketing
	AI-driven customer segmentation
	AI-enabled lead generation
	AI-enabled campaign management
Customer experience	AI for content generation and editing
	Conversational AI for customers
	AI-based conversational intelligence
Sales and Marketing Intelligence	AI-powered business intelligence

Engg, product and design

% of distinct use cases in engg. product and design: 6%

Software development	AI-powered software development
	AI platform to build, deploy and manage ML models
	AR and VR gaming
	AI-based APIs
	AI-enabled workflow automation
	AI-powered testing
Software testing	AI-powered testing

Finance and legal

% of distinct use cases in finance and legal: 3%

Transaction management	AI-based payment routing
Accounts receivables	Accounts receivables management
Financial planning	AI-powered business intelligence

Human resources

% of distinct use cases in human resources: 3%

Human Capital management	AI driven talent marketplace
Human Capital management	AI-based workforce analytics
Recruitment	AI-based recruitment system

IT, data and automation

% of distinct use cases in IT, data and automation: 3%

Automation	AI-driven real-time captioning
IT Security	AI-based cyber threat intelligence
Device management	AI-enabled claims management

Each use case maybe leveraged across functions. Thus the % of distinct use cases will not add up to 100%

Use case density

(% of companies addressing the use case, N=201 cos.)

6% to 8%	4% to 6%	2% to 4%	1% to 2%	Less than 1%
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Appendix

D. Distinct use cases

40% of distinct use cases are unique to specific cohorts by year of establishment



Indian B2B SaaS companies founded between 2015-19 are working on 21 distinct use cases unique to their cohort

Founded before 2005	Founded b/w 2005-2009	Founded b/w 2010-14	Founded b/w 2015-19	Founded b/w 2020 onwards
AR and VR based mapping	AI-driven real time captioning	Network analytics	AI-powered coaching	AI-enabled event management
AI-based EV charging infrastructure	AI-enabled virtual meetings	Account receivables management	Behaviour analysis for students	AI for content translation
Drone services	Intelligent workspace management	Real-time feedback management	Conversational AI for students	AI powered policy generation
Real-time call routing	Database management	AI-based ticket management	Application security intelligence	
Blockchain-based document management		Smart interior designing	AI-based debt collection	
		AI-enabled Healthcare management	AI marketplace for developers	
		AI enabled KYC	Workforce safety automation	
		AI based competitive insights	Intelligent ADM solution	
		Event-based vision systems	AI driven personalized user onboarding	
		AI driven personalization	AI enabled cost management	
		Data backup and recovery	AI driven team communication	
			AI based smart packaging	
			AI based quality control	
			AR and VR gaming	
			AI based video telematics	
			AI-enabled virtual dressing room	
			AI-based procurement analytics	
			RFP automation	
			AI-enabled claims management	
			AI-based code translator	
			AI-powered consumer research	

Glossary

Term	Definition
AI/ML	Artificial intelligence/Machine learning
B2B	Business to Business
Bootstrapped	Companies which rely on internal money rather than outside investments
CX	Customer experience
CXO	Denotes executive leadership level designation
GTM	Go to market
Horizontal Application SaaS	Horizontal business applications e.g., Customer Relationship Management [CRM], Enterprise Resource Planning [ERP]
M&A	Mergers and acquisitions
Product market fit	Degree to which a product satisfies a strong market demand
SaaS	Software as a service
SMB	Small and medium size business
S&M	Sales and marketing
Vertical SaaS	Vertical-specific business applications e.g., hospitality management, banking applications

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