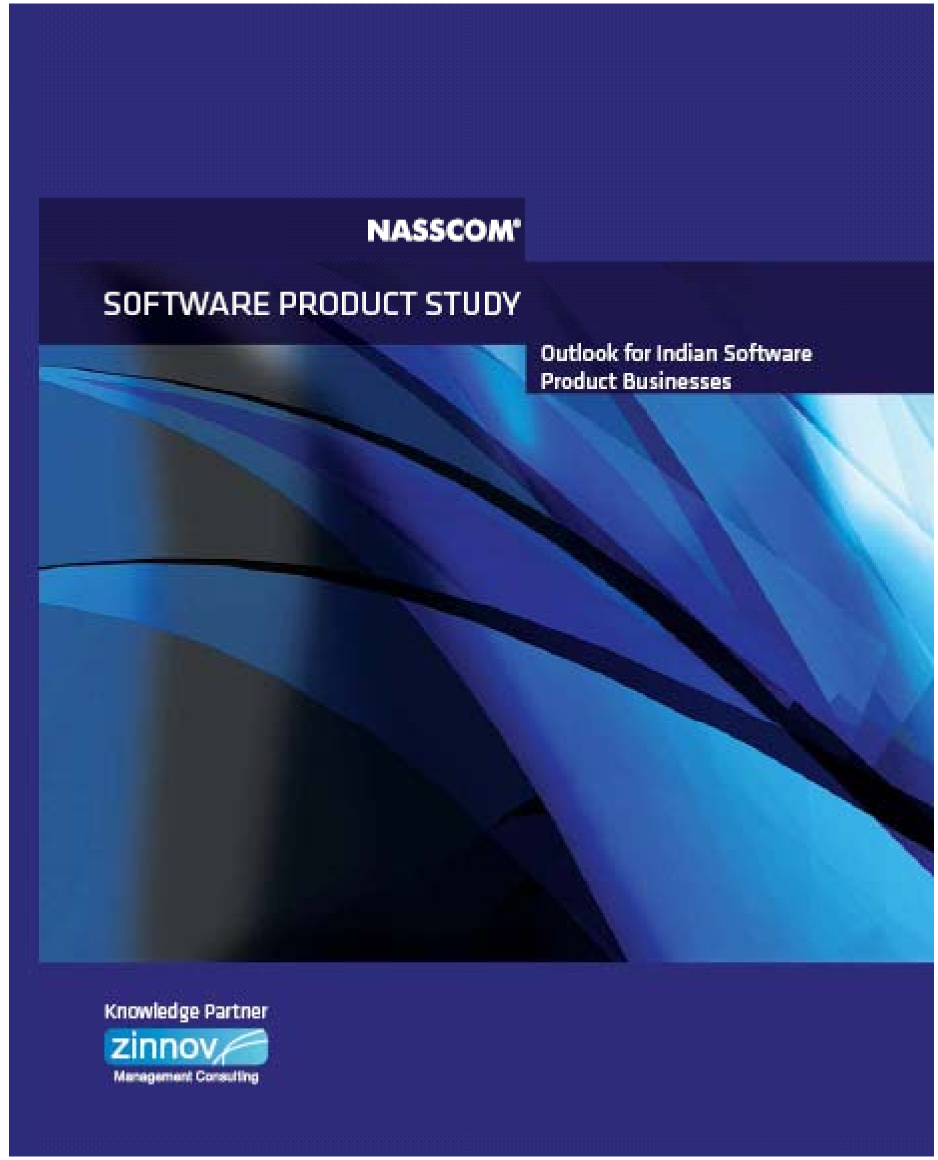
NASSCOM®

Outlook for Indian Software Product Businesses

Key Findings

2008



This study is a deep-dive analysis of the potential opportunities to build successful Indian software product business

Indian Technology IP Landscape

	MNC Companies	Indian Companies
IT Services	✓	✓
Software Products & Engineering Services	✓	✓
Business Process Outsourcing (BPO)	✓	✓

✓ Indicates IP Creation from India

Indian Software Products and Engineering Services IP Landscape

- Engineering Services/ Embedded Systems/ Software Enabled Products[1]
- Outsourced Product Development[1]
- Software Product Business[2]

An Indian Software Product Business is

- A company headquartered in India
- That has developed and/ or owns the software IP (includes software IP owned through acquisitions)
- Undertakes the packaging and selling of the software itself or through channel partners

Objective of the Study

- To review of the market landscape
- Highlight the key opportunity areas in the domestic and global markets
- Suggest targeted actions that key stakeholders should undertake to enable the next phase of growth for Indian software product businesses

Note: [1]Discussed in Appendix; [2]Includes exports and domestic sales
Source: Stakeholder Interviews; Zinnov Analysis

Zinnov reached out to various software product business stakeholders to gather specific insights

Stakeholders

MNC Business

10 Interviews with sales and marketing heads of MNC product business

Role Models / Serial Entrepreneur

10 Interviews with serial entrepreneurs to understand the challenges they faced during there ventures and there recommendations o budding entrepreneurs

Incubators / Institutions

3 Interviews with top management of Stake holding government agencies i.e. SINE, NSRCEL and CIIE

Indian Product Business

16 interviews with Indian product businesses to understand their experience doing business in India and the challenges they faced

NASSCOM stakeholders

7 interviews with the Product business stakeholders

Government Agencies

Interviews with key contacts of CSI and CII

Startup Entrepreneurs

11 Interviews with founders of software product companies started in last 3-5 years

SMB Cluster Visit

4 SMB cluster visits across India. Bangalore, Hyderabad, Tirpur, Jamshedpur, to understand the IT penetration and reasons for automation in great level of detail

Customers

Interviews with Customers of India product businesses globally

Indian CIO's

15 interviews with CIO's across verticals to understand there IT spends, perception of Indian products and there say on the industry needs

VC's

9 interviews with VC's to understand their perception of Indian idea quality, factors they analyze before funding and challenges they foresee

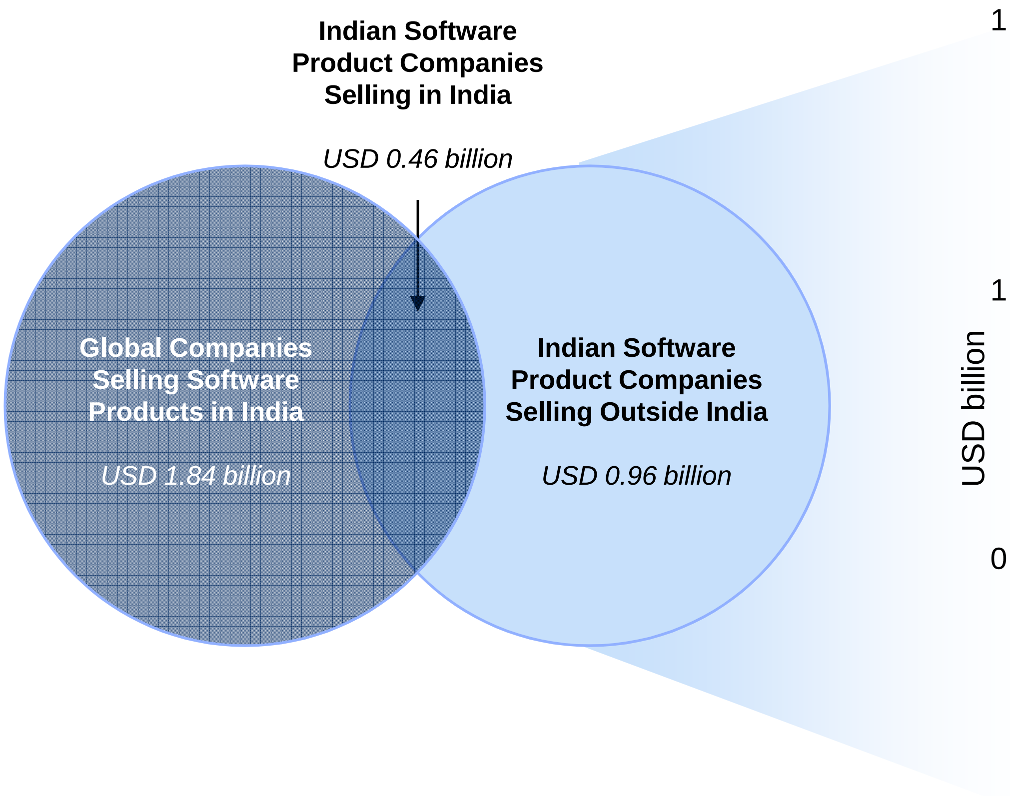
RFI's – India product businesses

Sent out RFI's to top 20 India product businesses for revenue and profiling details

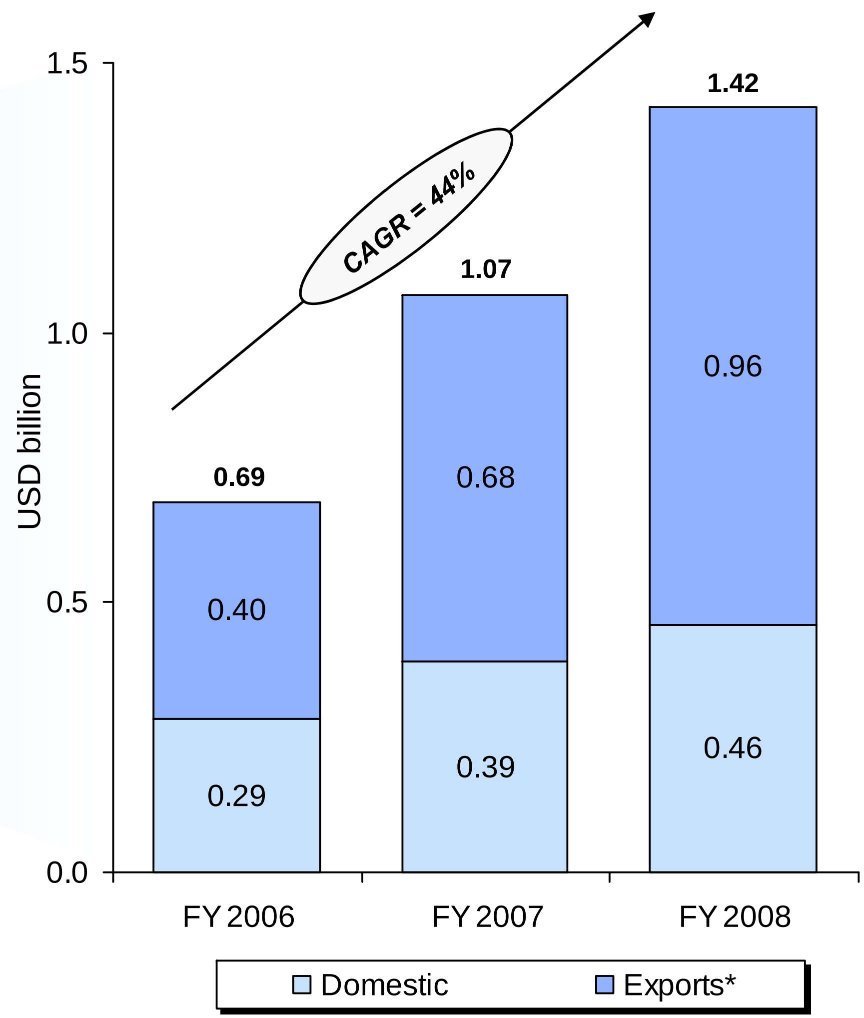
Total = ~ 100 interviews

The Indian software product industry has witnessed an accelerated growth of 44 per cent over the past three years

Indian Software Product Market Landscape, FY2008



Indian Software Product Businesses Revenue

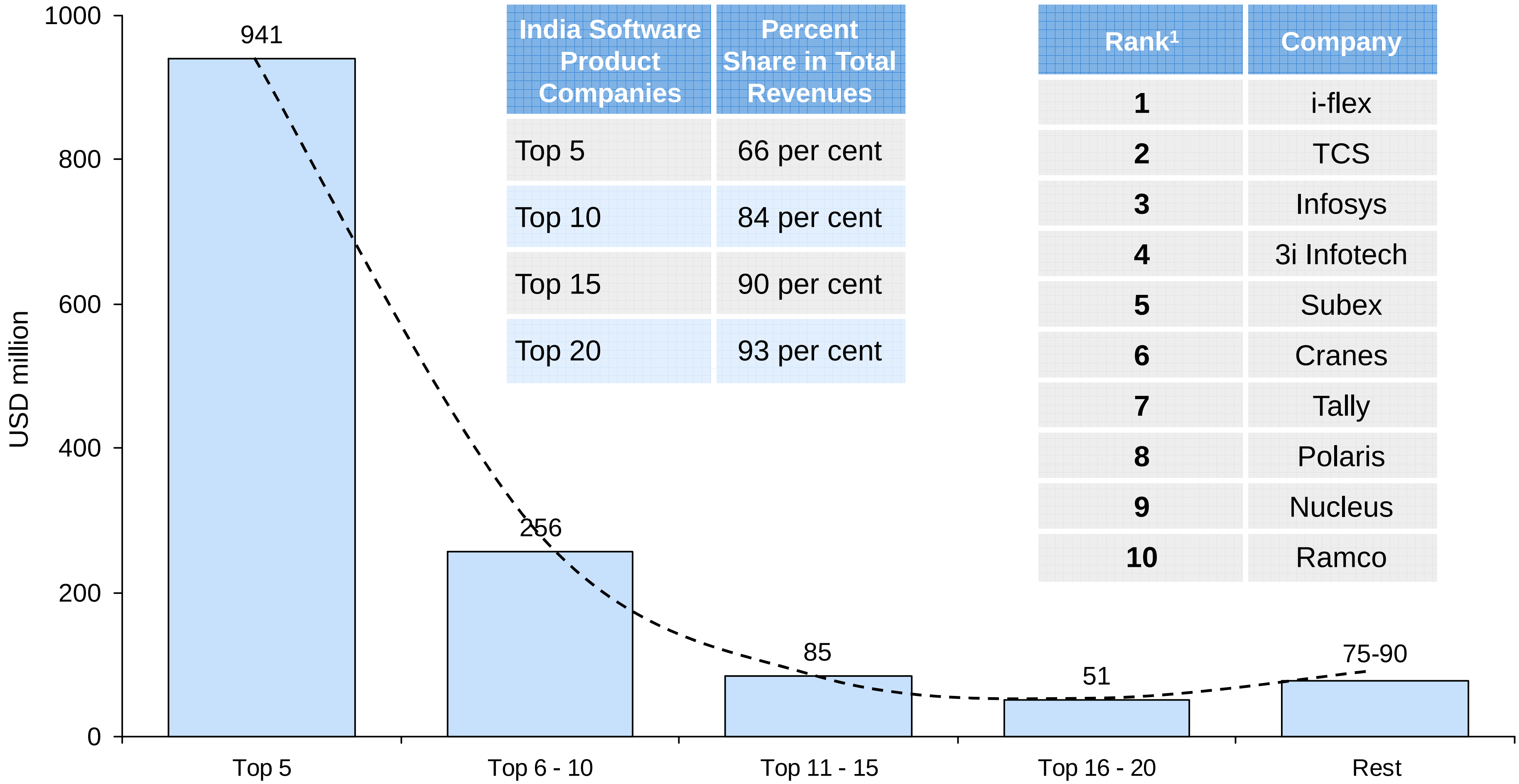


Note: * Includes overseas acquisition led revenue growth

Source: Zinnov Analysis

While the top 5 players dominate, expansion in the tier-II firms and startups has helped broad-base the industry structure

Revenues of Top Indian Software Product Companies, FY2008



India Software Product Companies	Percent Share in Total Revenues
Top 5	66 per cent
Top 10	84 per cent
Top 15	90 per cent
Top 20	93 per cent

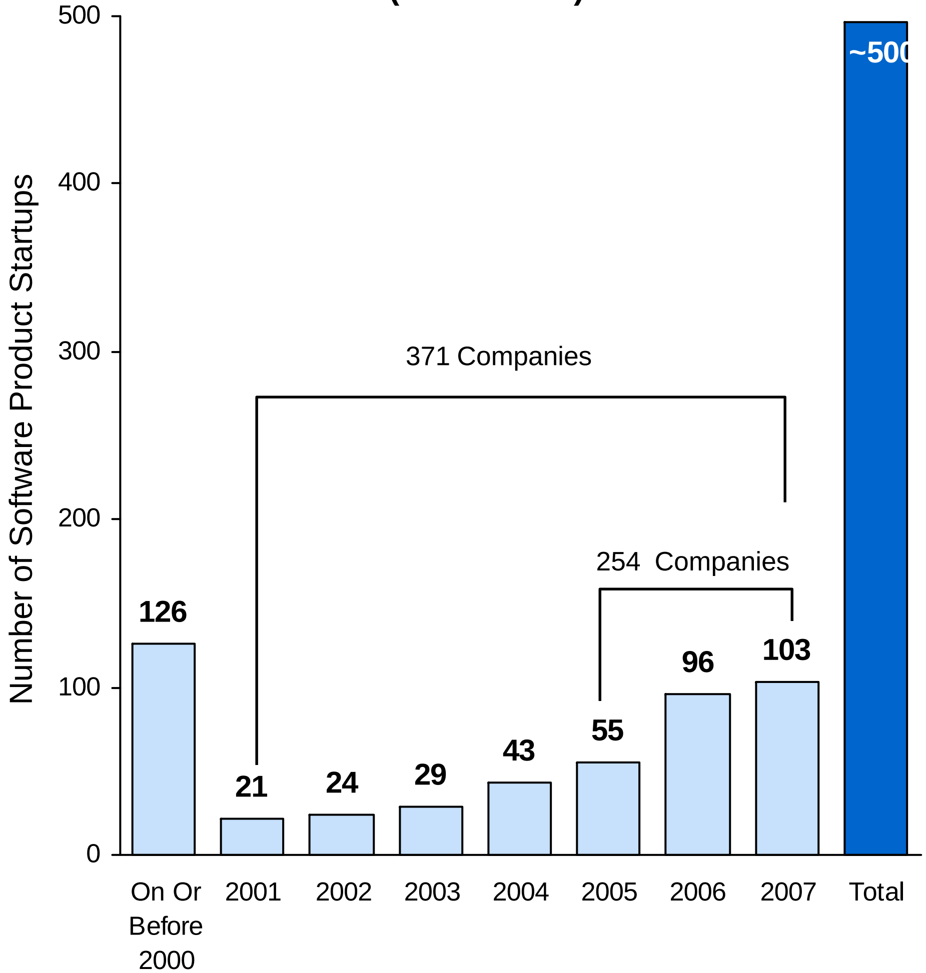
Rank[1]	Company
1	i-flex
2	TCS
3	Infosys
4	3i Infotech
5	Subex
6	Cranes
7	Tally
8	Polaris
9	Nucleus
10	Ramco

Note:[1]Ranking is based on responses from RFIs; Only software product revenues have been considered for the analysis

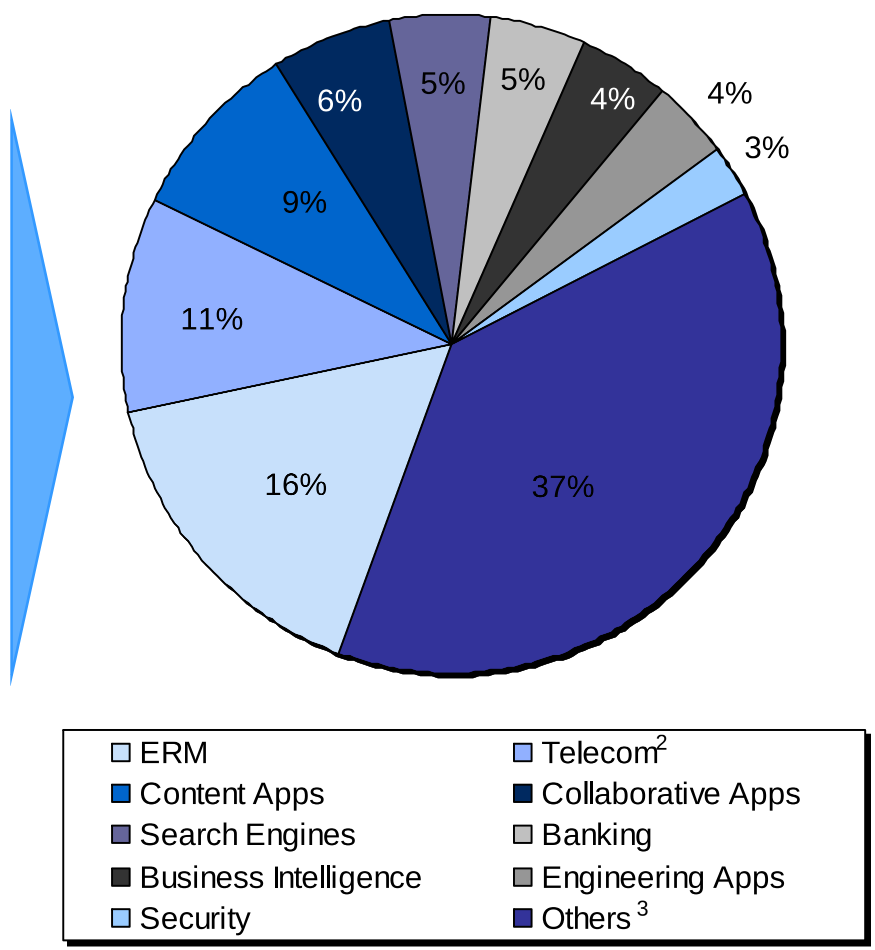
Source: Company Annual Reports; Zinnov Analysis

Growth in software product startup activity over the last three years has also helped strengthen the industry product portfolio

Number of Software Product Startups[1] (2000 – 2007)



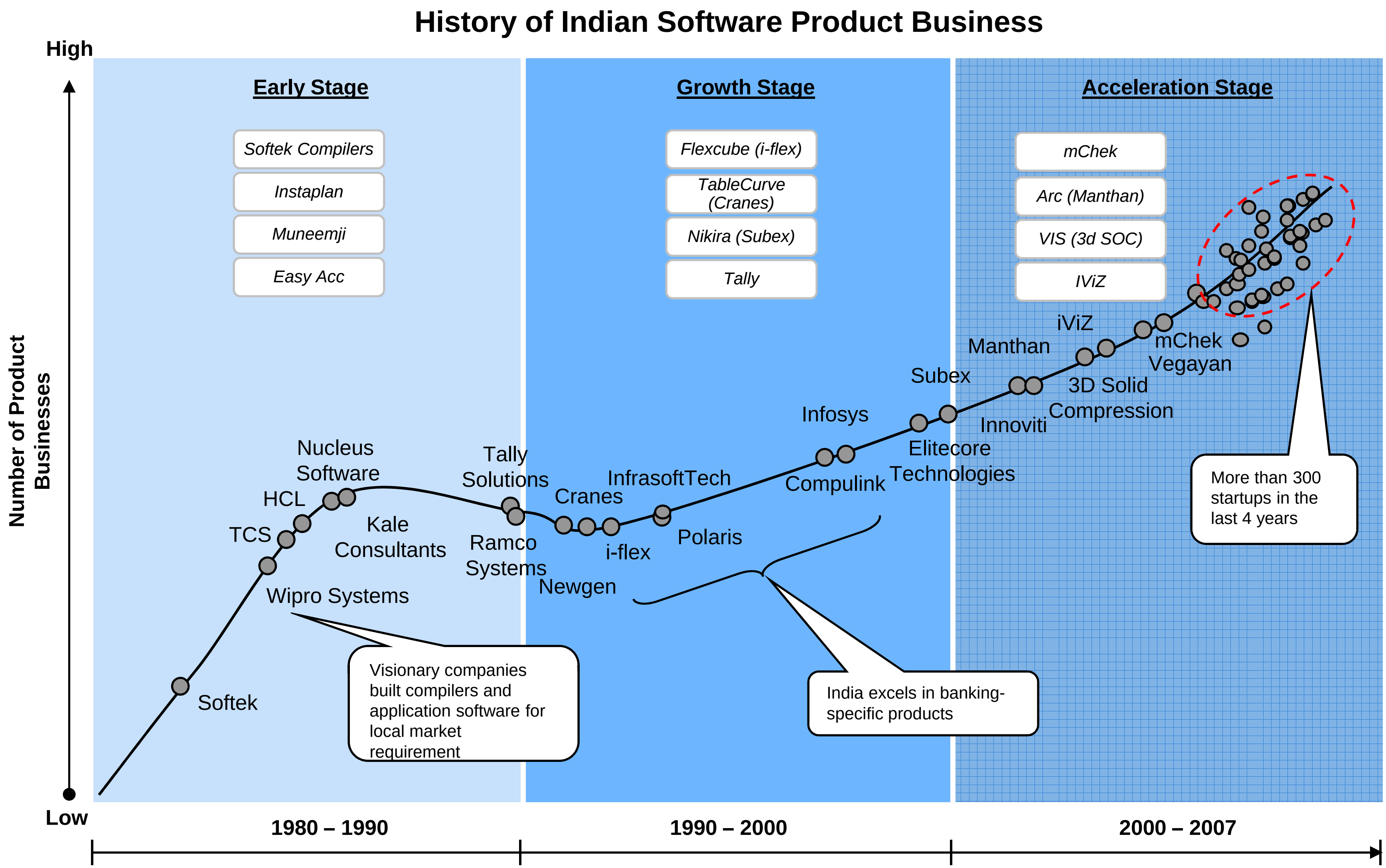
Categorical Distribution of Indian Software Product Businesses (2007)



Note: [1]The number is net of mortality rate; [2]Telecom includes mobile application software product companies; [3] includes system, Information & data management, application development tools, SCM, System & Network Management, Retail, Gaming, Storage, Advertising, e-Governance, Healthcare, Media and Entertainment, Application Deployment, and Quality Life Cycle tools etc.

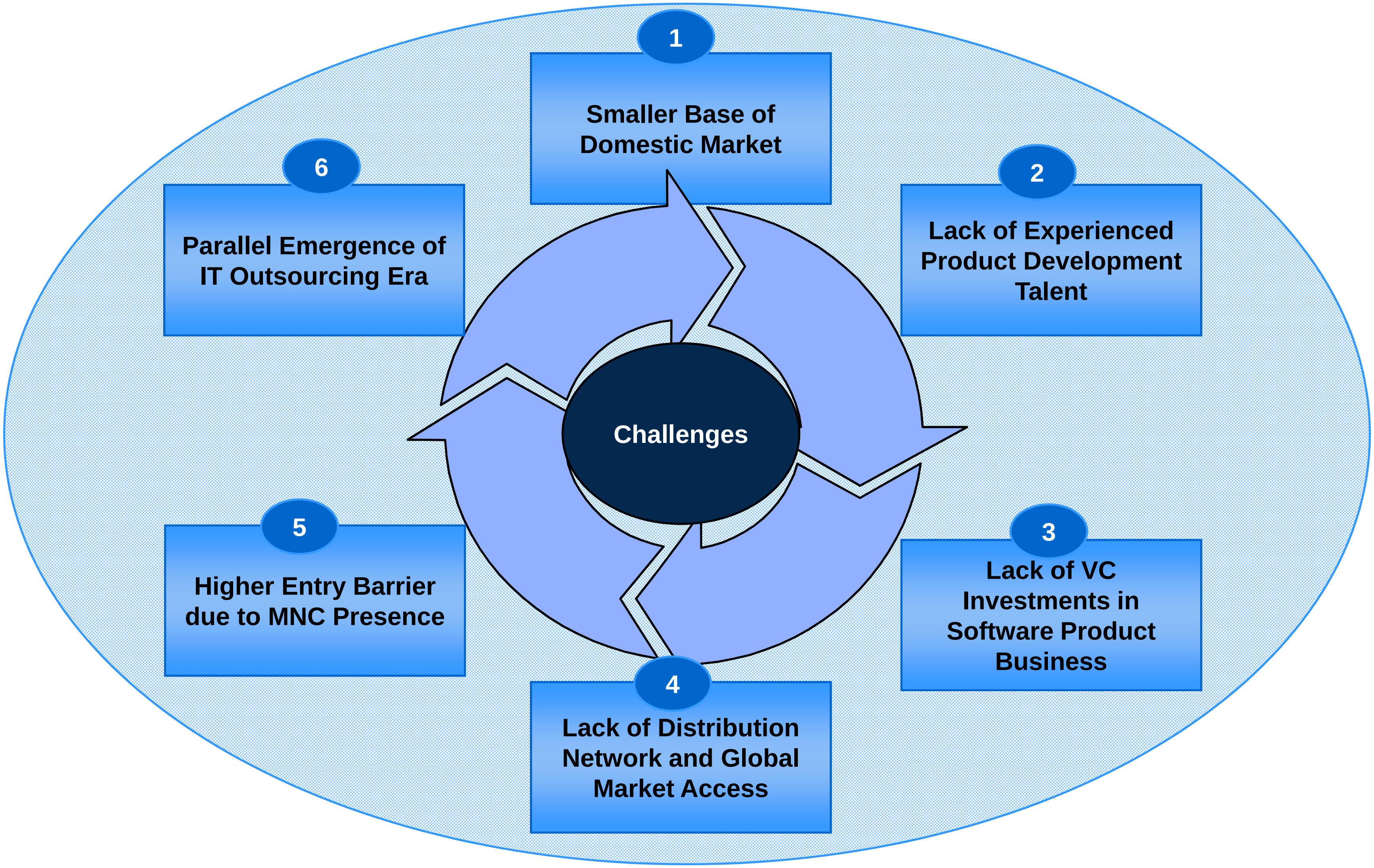
Source: Zinnov Analysis

Increased activity in the Indian software product industry is being witnessed only after three decades of its evolution



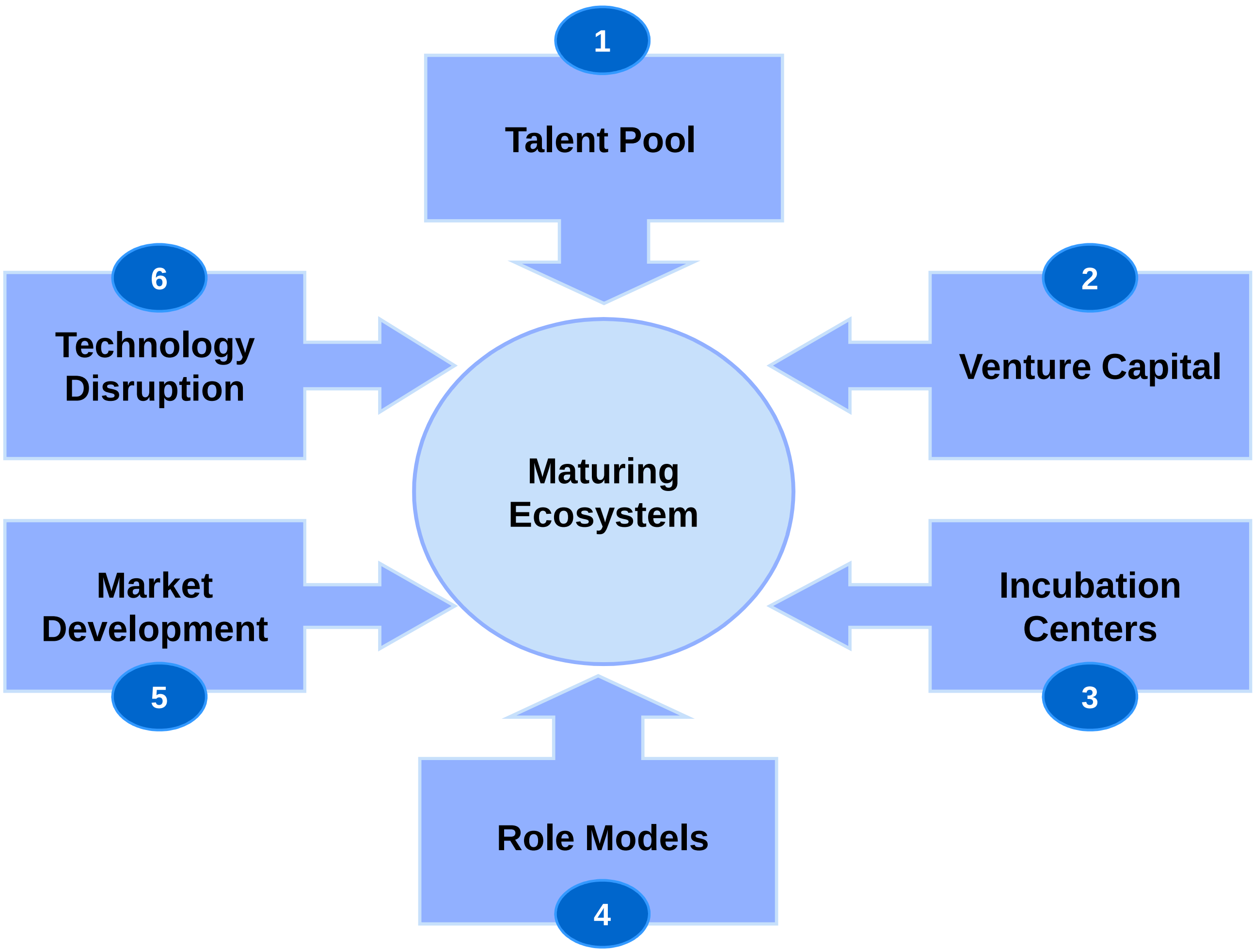
Source: Zinnov Analysis

While India's role in global technology IP creation has grown steadily, several challenges have constrained the growth of home-grown software product business



Source: Zinnov Analysis

However, a maturing ecosystem has helped accelerate the growth of home-grown software product businesses over the past few years



Source: Zinnov Analysis

Product development professionals in India are spread across MNC subsidiaries as also service providers and Indian software product businesses

Distribution of Software Product Development Talent, 2007

MNC Subsidiaries

- MNC subsidiaries have nurtured product development talent across value chain
- Movement of expatriates has additionally created leadership talent

\+

Product Engineering Service Providers

- Service providers are moving up the value chain and innovating on value creation
- E.g. Center of Excellence (CoE)

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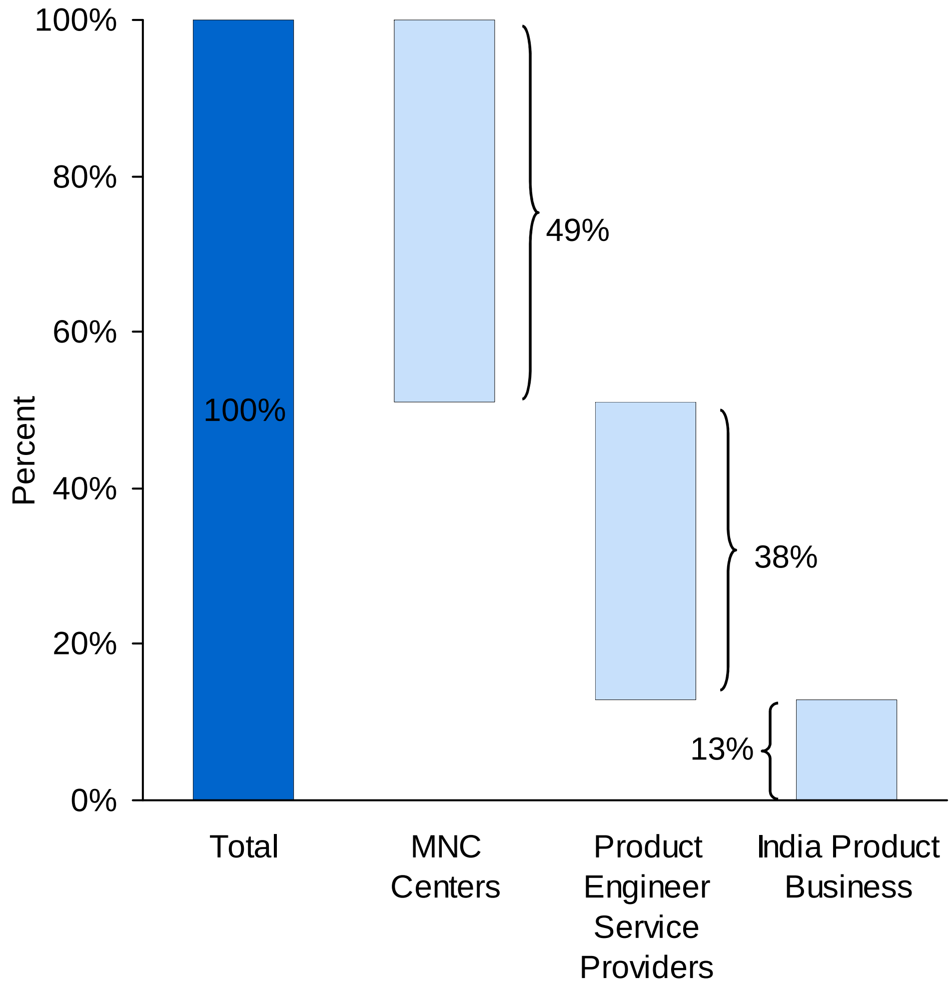
Indian Software Product Business

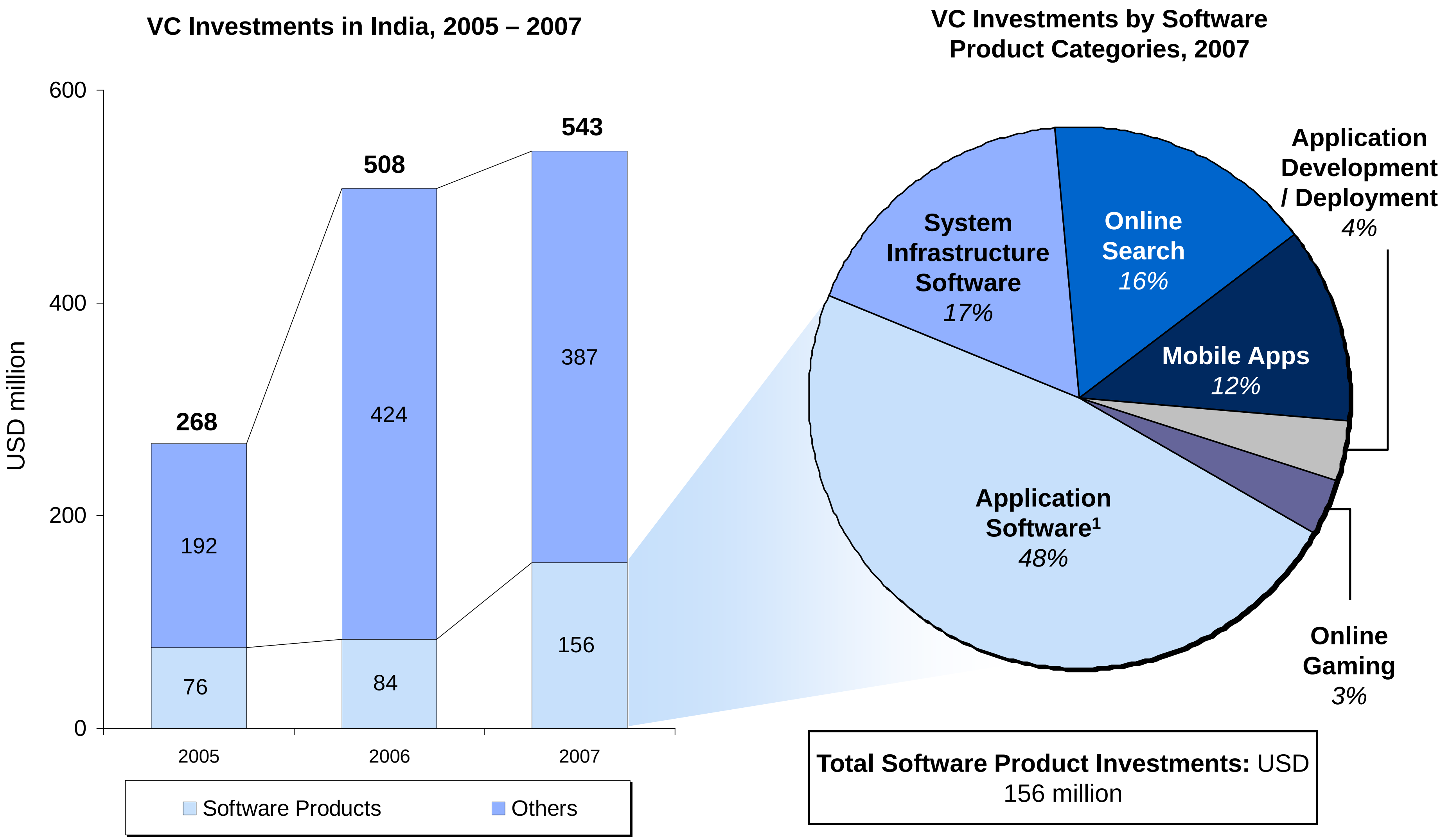
- Installed base of talent pool is increasing with the increase in number of software product start-ups in India



Total Installed Talent Pool = 140,000

Source: Ziinnov R&D Offshoring Report 2008, Zinnov Analysis

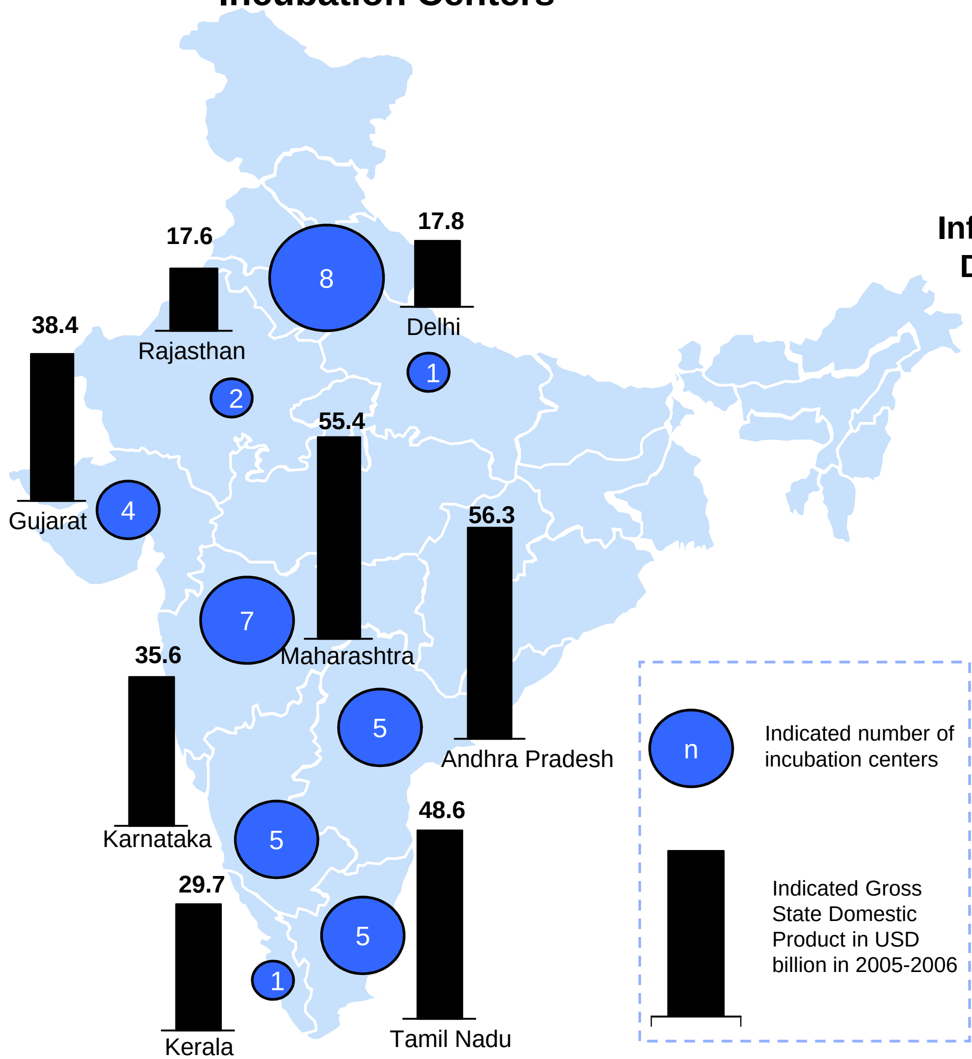
Venture capital funds investing in India are actively focusing on software product business funding



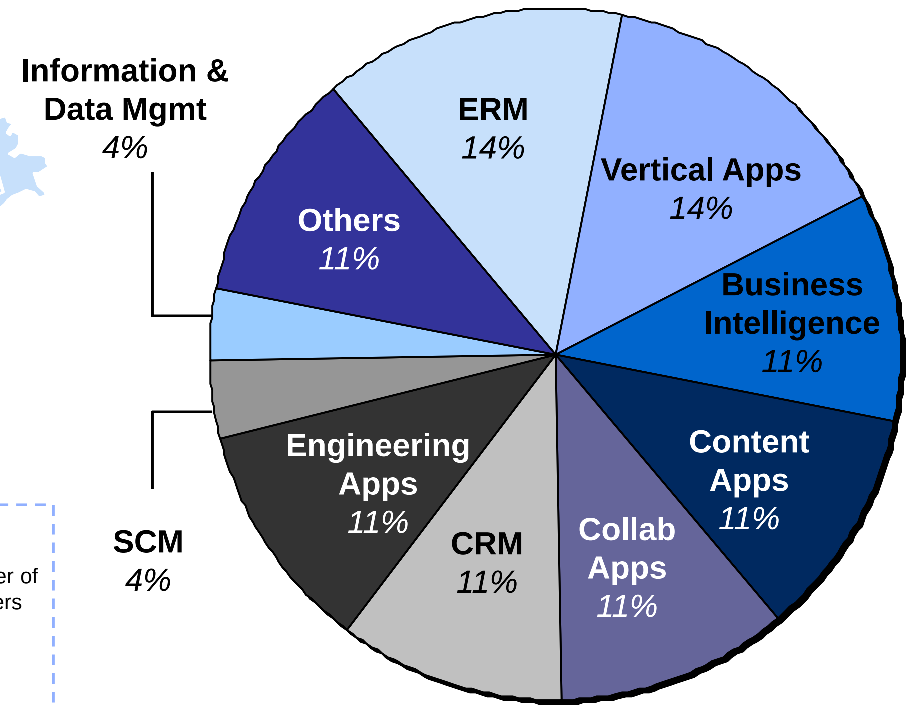
Source: Venture Intelligence; Zinnov Analysis

A number of incubation centers have been established across India, that are helping technology startups with funds and mentorship

Geographical Distribution of Incubation Centers



Number of Companies Registered with Incubation Centers Across Product Categories, 2007



Software Product Companies Incubated = 28

Source: CII; KPMG; Zinnov Analysis

Over the years India based software product businesses have built renowned products which can act as role models for startup companies

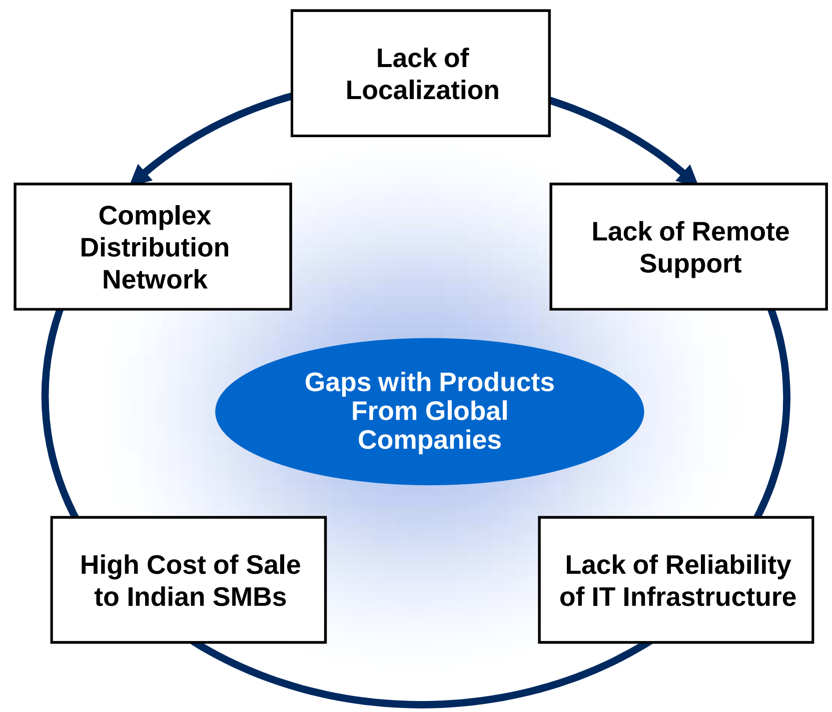
Companies	Description
i-flex solutions	▪ In 1992, Citibank spun off the FLEXCUBE product division into a separate company called Citicorp Information Technology Industries (CITIL). In the year 2000, CITIL changed its name to i-flex solutions. ▪ FLEXCUBE was consistently ranked as the number one banking solution in the world by IBS UK, for five consecutive years. ▪ As on 2007, Oracle Global holds 80.58 per cent of the total paid up capital of i-flex
subex powering the ROC	▪ Mr. Subash Menon founded Subex with a startup capital of INR 20,000 in 1992 ▪ Subex Systems, incorporated in 1995 was listed on the BSE in 1999 ▪ Subex boasts of a client list that includes 32 of the world's 50 largest telecommunications service providers ▪ Subex has grown both organically and inorganically over the years; Syndesis and Azure are few of its recent acquisitions ▪ In 2007, Subex won the Verizon Supplier Excellence Award
Tally POWER OF SIMPLICITY	▪ Mr. S. S. Goenka, set up Peutronics Pvt. Ltd in 1986, which later metamorphosed into Tally Solutions ▪ Tally has released multiple versions of their accounting product; In the year 2005 launched Tally 7.2, which created an accounting revolution in India ▪ Tally has a robust sales and distribution channel. Tally's strategy for the future is to become a company with the world's largest channel partner network with 15,000 partners

Domestic market in India is unique in multiple ways—this is fueling opportunities for India-based software product businesses

Drivers to Tap Domestic Software Market

Drivers	Description	Opportunity
Market Growth	The software product market in India is growing 2.8 times as fast as global market	
SMB Potential	SMB market in India is huge and the current IT and software penetration is very low	
Need for Localization	Increased requirement of localized products to best suit the needs of consumers	
Evolving IT Infrastructure	Internet, PC and mobile penetration is faster as compared to other emerging nation	

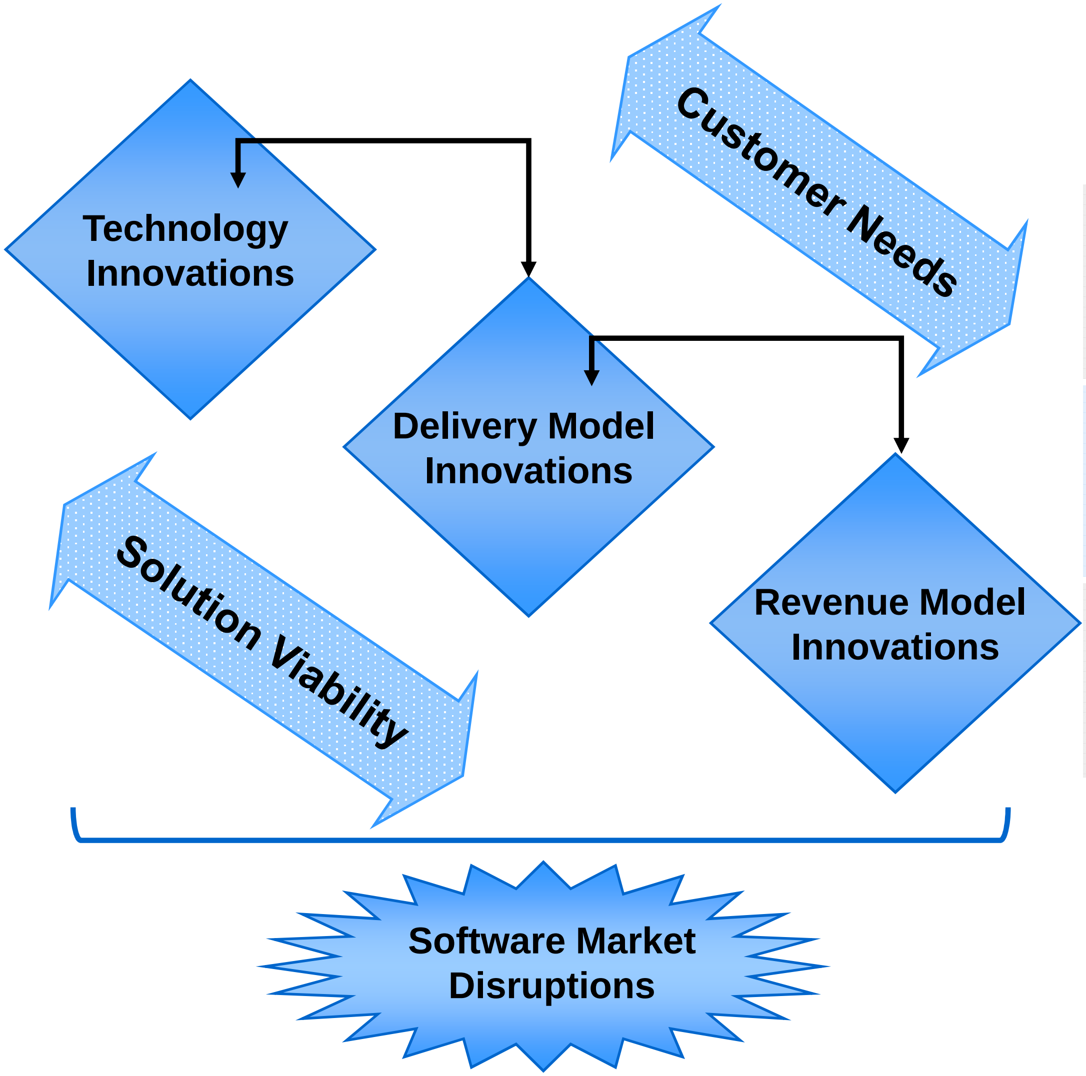
Challenges for MNCs in Domestic Market



Source: Zinnov Analysis

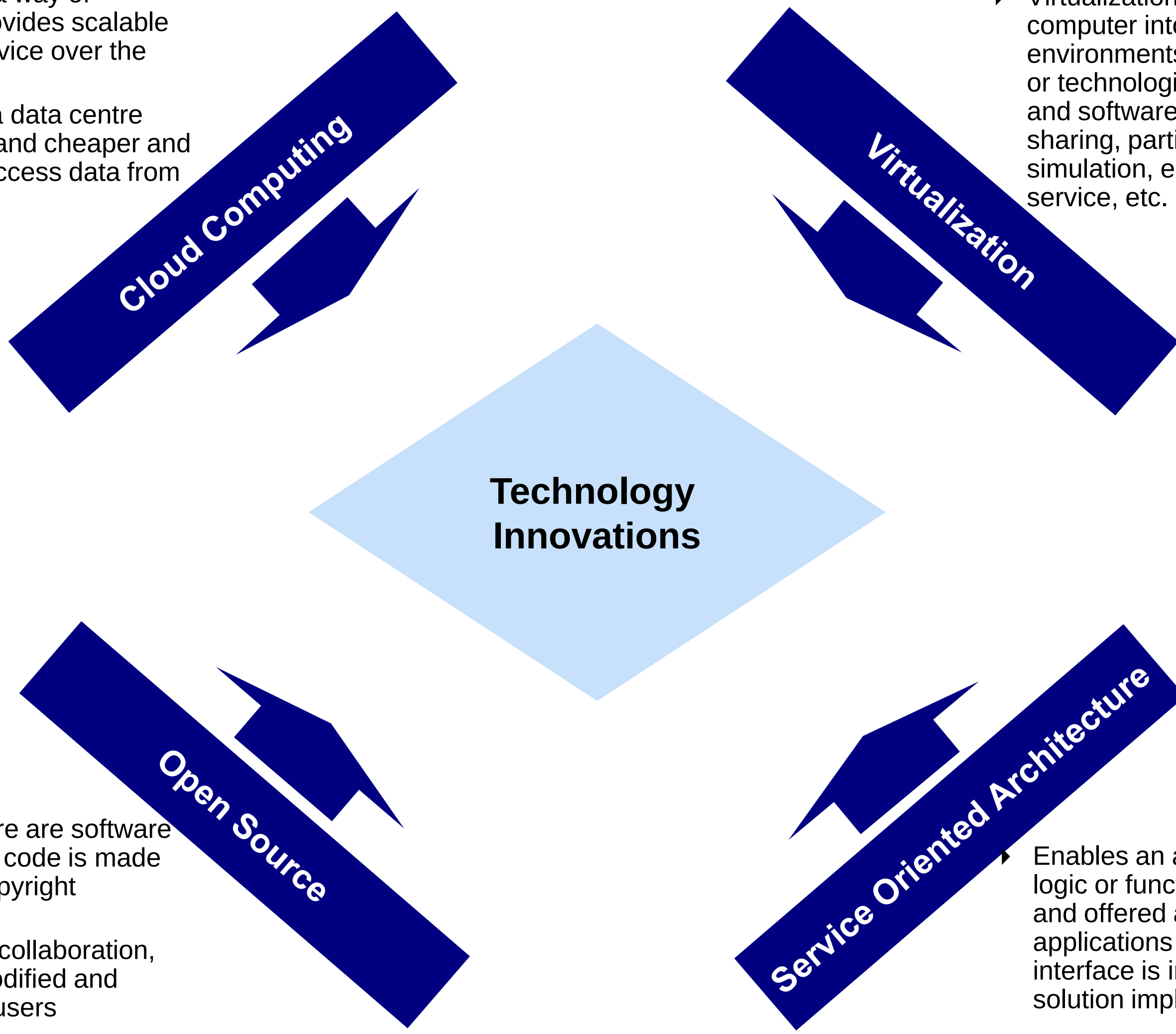
Additionally, disruptive innovations in technology, revenue and delivery models are helping unlock significant potential for Indian software product businesses

Innovation Levers in the Software Product Market



Technology Innovations	• Cloud Computing • Virtualization • Service Oriented Architecture • Open Source
Delivery Model Innovations	• Packaged/ License • Software as a Service • Software Appliance • Software Enabled Solutions
Revenue Model Innovations	• License • Subscription/ On Demand • Transaction • Ad Based

Disruptive technology innovations are opening up newer opportunities for software product companies globally



- Cloud computing is a way of computing which provides scalable IT solutions as a service over the internet
- Benefits: Benefit of a data centre without owning one and cheaper and simpler devices to access data from anywhere

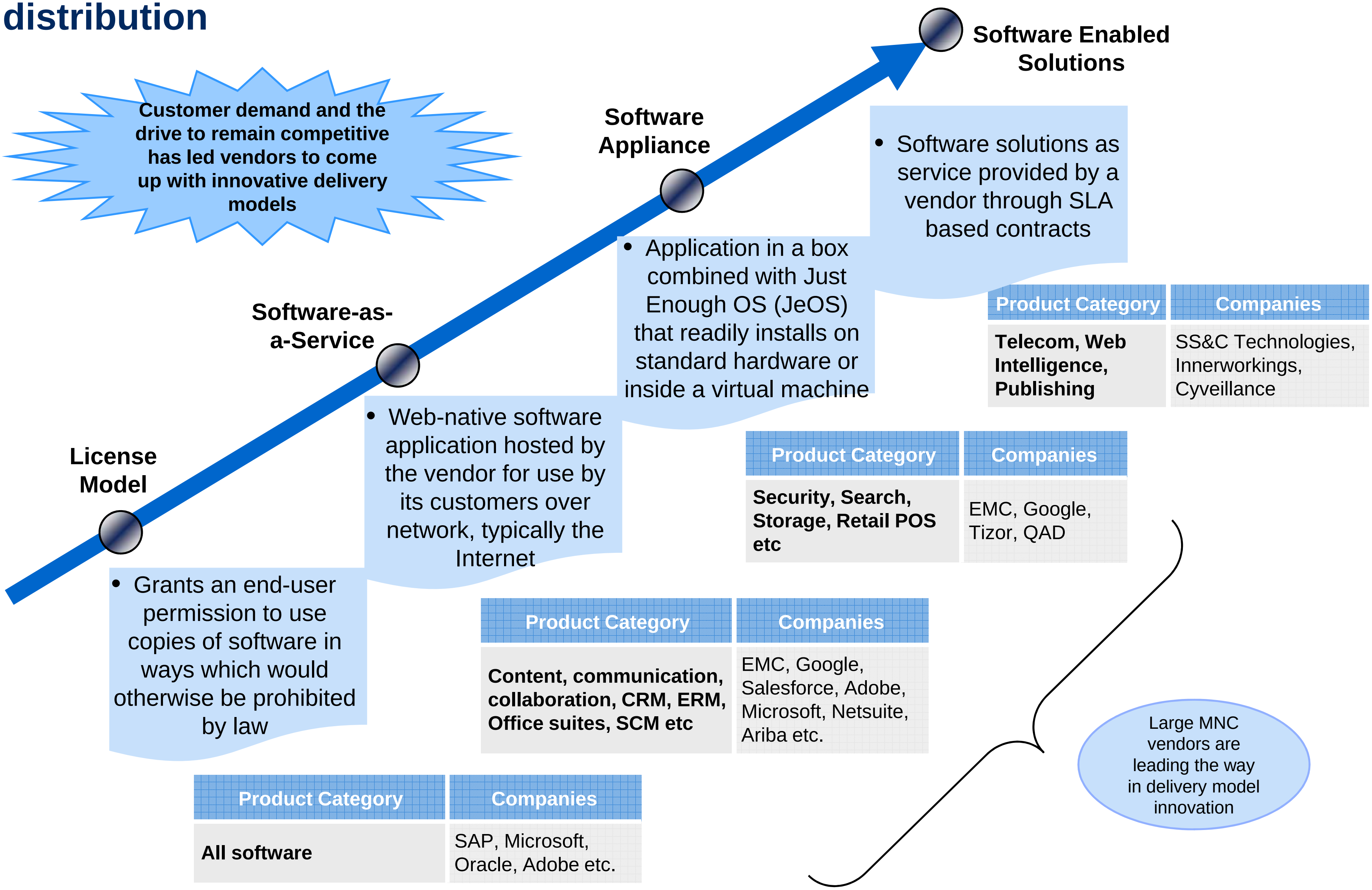
- Virtualization technologies divide a computer into several execution environments by applying concepts or technologies such as hardware and software partitioning, time-sharing, partial or complete machine simulation, emulation, quality of service, etc.

- Open source software are software for which the source code is made available under a copyright agreement
- Developed in public collaboration, this can be used, modified and redistributed by the users

- Enables an applications business logic or function to be modularized and offered as service for consumer applications where the service interface is independent of the solution implementation

Source: Zinnov Analysis

Innovation in delivery models has led to a radical shift in global software distribution



Product Category	Companies
All software	SAP, Microsoft, Oracle, Adobe etc.

Product Category	Companies
Content, communication, collaboration, CRM, ERM, Office suites, SCM etc	EMC, Google, Salesforce, Adobe, Microsoft, Netsuite, Ariba etc.

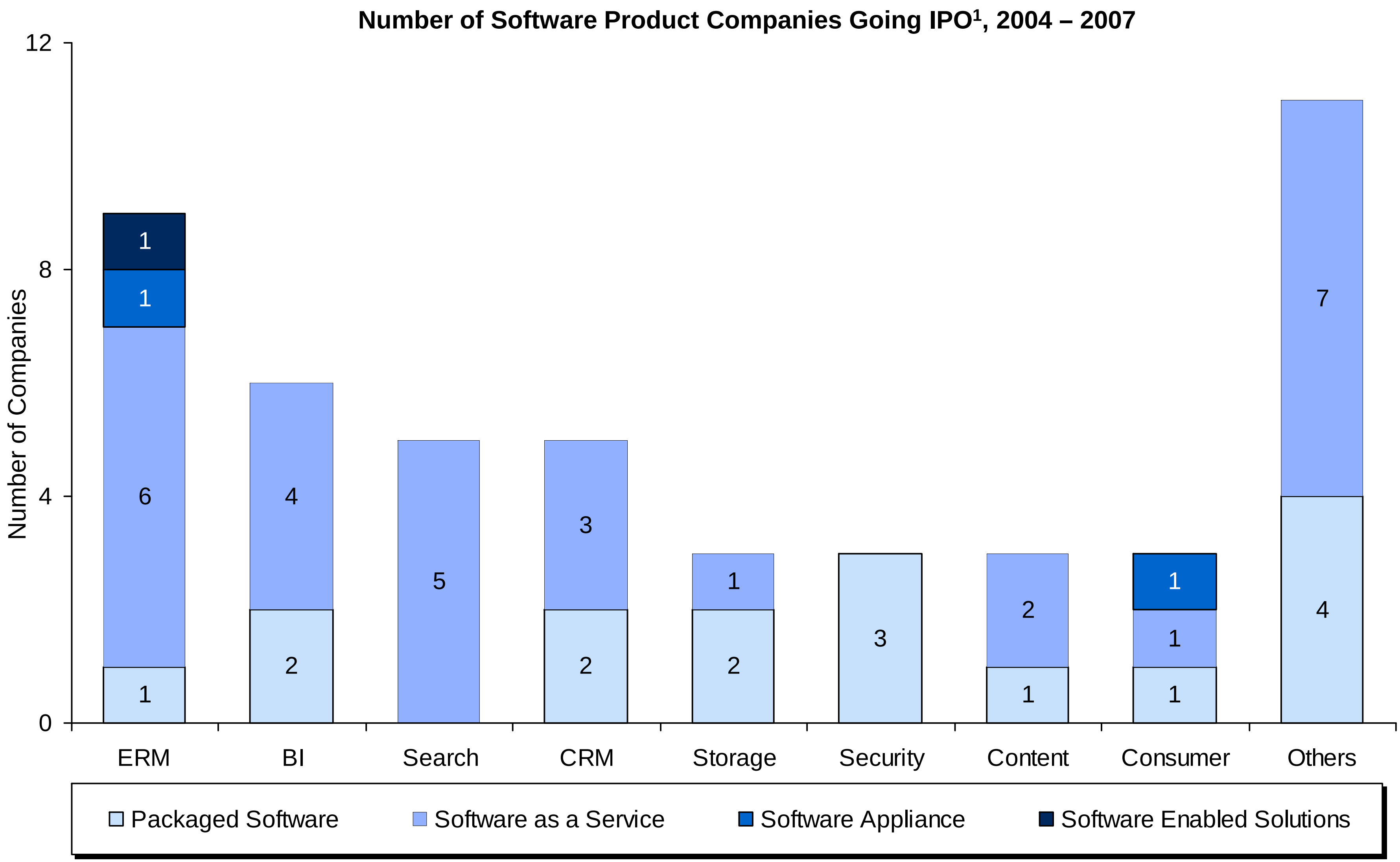
Product Category	Companies
Security, Search, Storage, Retail POS etc	EMC, Google, Tizor, QAD

Product Category	Companies
Telecom, Web Intelligence, Publishing	SS&C Technologies, Innerworkings, Cyveillance

Source: Zinnov Analysis

Companies with SaaS as a delivery model in high growth areas such as ERM and BI have gone IPO over the last three years

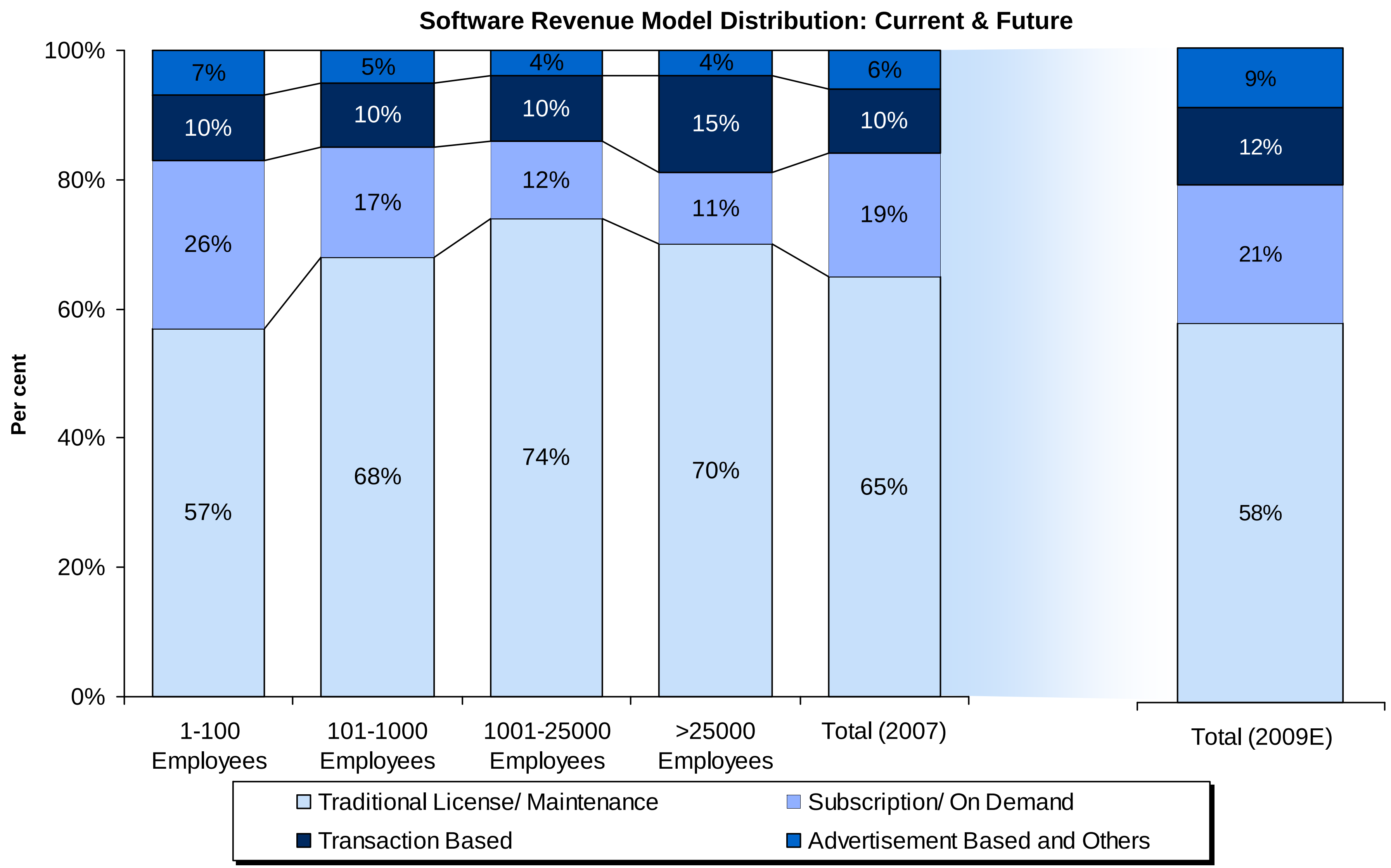
Illustrative



Note: [1]Initial Public Offering; Data based on a sample of 48 companies going IPO between 2005 and 2007

Source: Zinnov Analysis

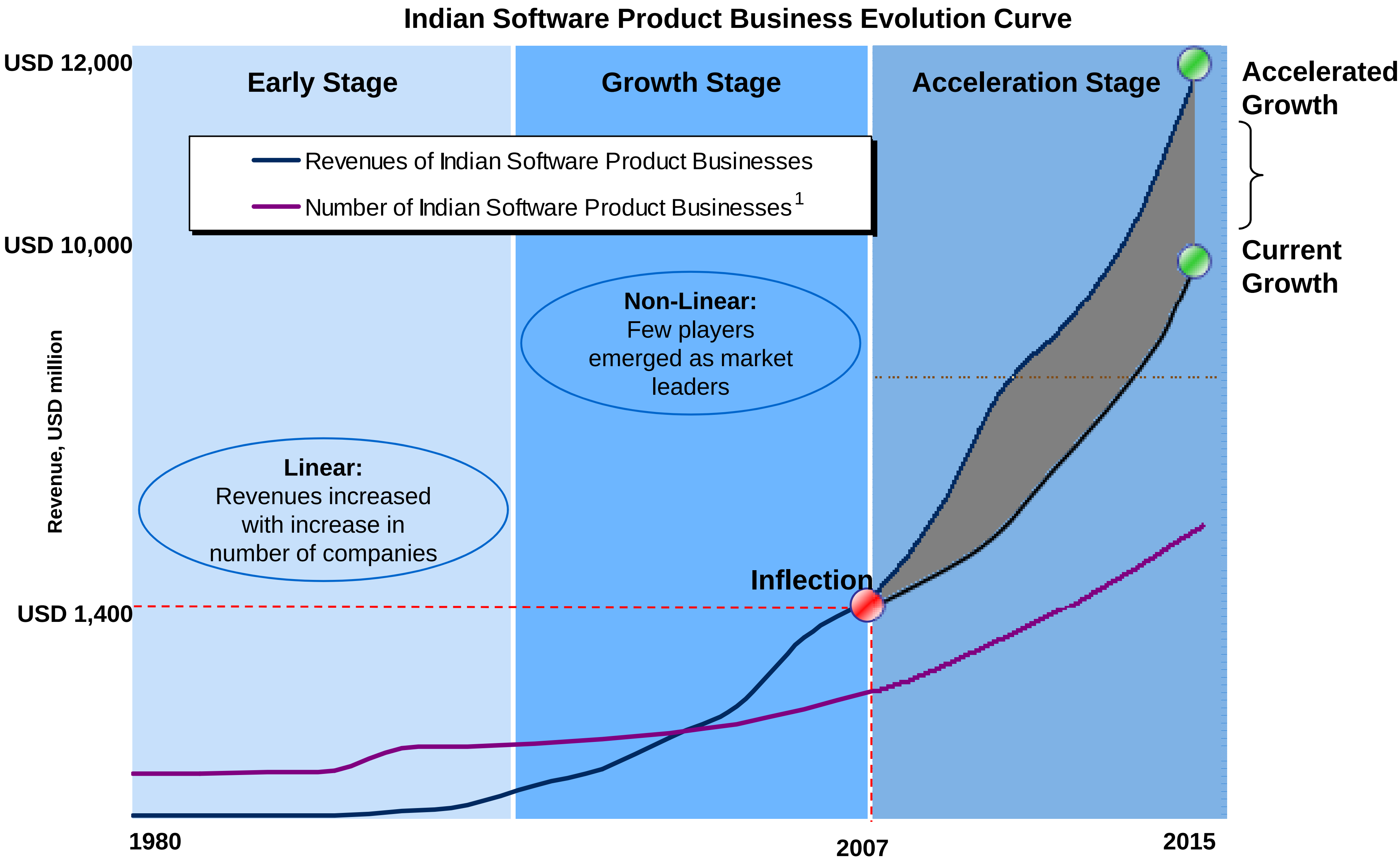
Traditional license-based revenue models are giving way to other innovative business models in the global software product market



Note: E = Estimated; Based on the survey conducted among 857 enterprise software customers

Source: McKinsey & SandHill Enterprise Software Customer Survey, 2008

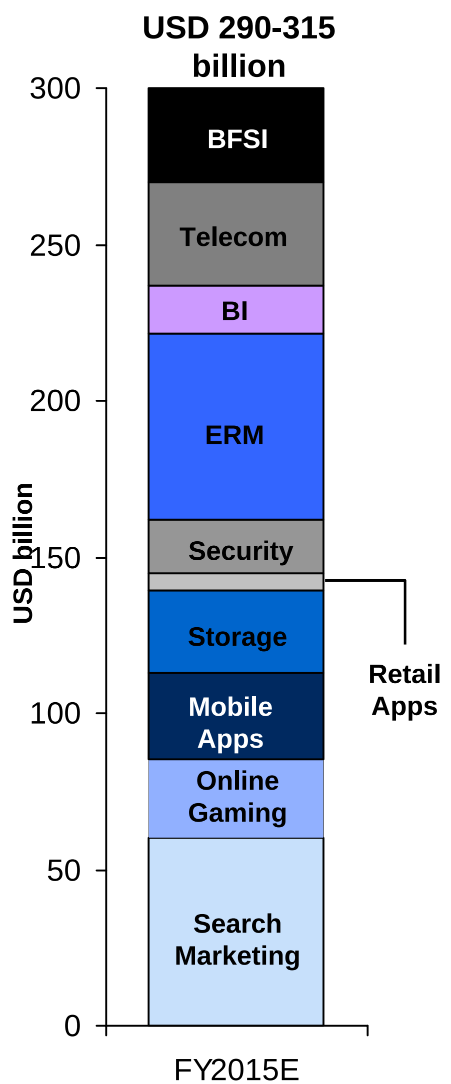
All these market indicators are leading Indian software product industry towards an inflection point in its evolution curve



Note: [1]The number is net of mortality rate and companies that got acquired during the period

Source: Zinnov Analysis

Over the next seven years, Indian software product businesses have an addressable[1] market opportunity of USD 290 to 315 billion



Opportunity Areas for Indian Software Product Companies

	Opportunity Area	Exports	Domestic	
i	BFSI	●	◕	Go Global
ii	Telecom	●	◕	
iii	Business Intelligence & Analytics	●	◑	Start Local, Go Global
iv	Enterprise Resource Management	◕	◕	
v	Security	◕	◑	
vi	Retail	◑	●	Start Local, Go Emerging
vii	Storage	◑	●	
viii	Mobile Applications	◕	●	
ix	Online Gaming	◑	●	
x	Search Engine Marketing	◑	●	

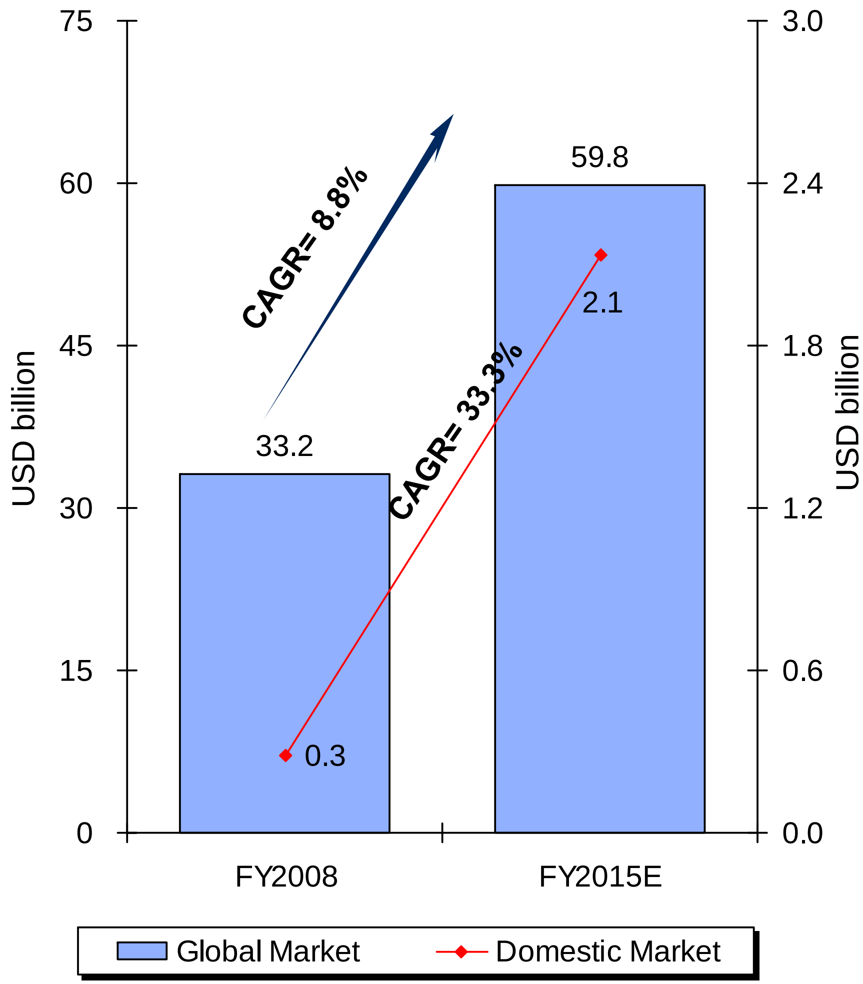
● High → Opportunity → ◔ Low

Note: E = Estimated; [1]Represents the total estimated market size of the opportunity areas by FY2015

Source: Zinnov Analysis

The opportunity for Indian ERM product businesses is huge, and India has already started seeing some early signs of success in this category

ERM Software Market Size, FY2008[1] – 15E



India's Capability for ERM Software

Role Models		• India now has some respectable names in the ERM space such as Tally, Ramco, Adrenalin, Intelliob, Kom7 Tech. etc. • Most of these role model companies have gained expertise in fulfilling SMB-specific demands for ERM software
Talent/ Domain Expertise		• India has gained a significant domain knowledge and talent expertise with all the leading global ERM software vendors such as SAP, Oracle, Microsoft having their large development centers based out of India
Incubation Centers		• ERM-related software product startups are increasingly being incubated in India with 14 per cent of the total incubated companies (28) operating into ERM space • Examples include Global Tech (CIIE, Ahmedabad), CEON (CIIE, Ahmedabad), Bridle IT (TBI, Pilani)
Acquisitions		• Acquisition trends are increasing in the ERM space with companies like SAP and TVS showing interest in Indian ERM companies • Examples: SAP acquired Yasu

India Capability

High → Low

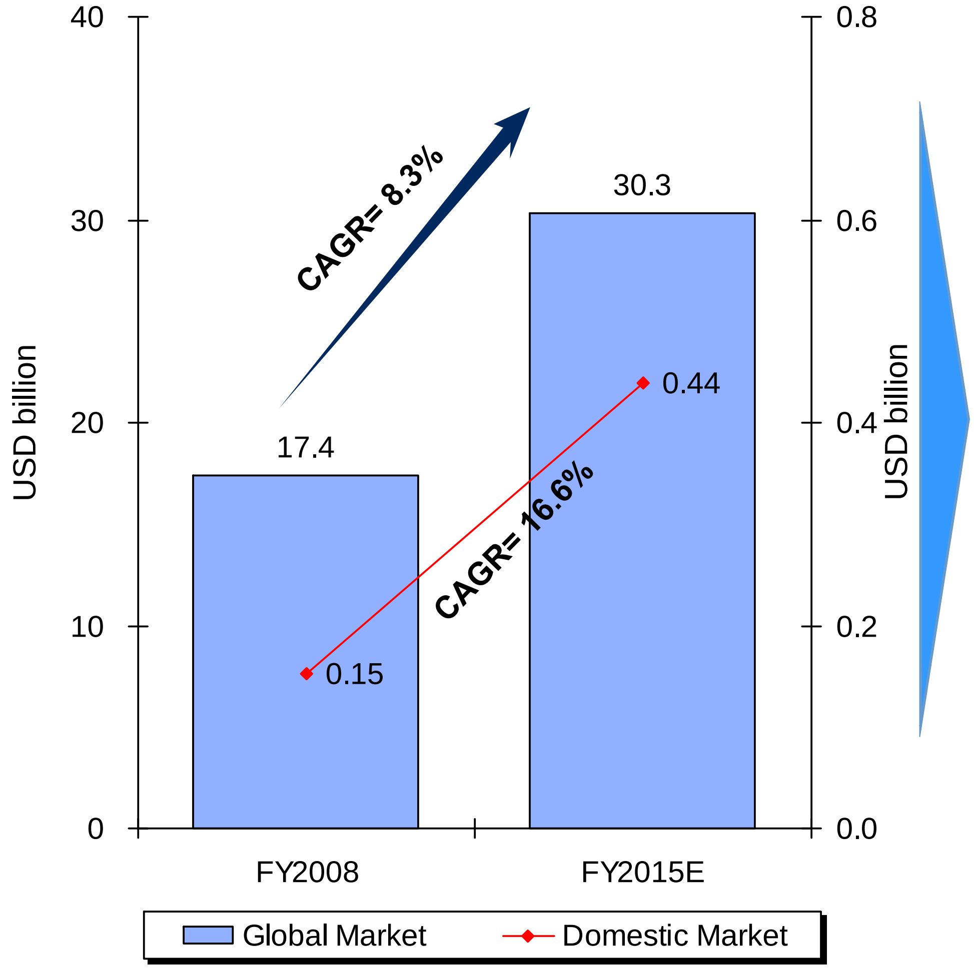
Note: E = Estimated; [1]Estimated based on the market size data for CY2007

The list of companies mentioned in the table is illustrative and may not be exhaustive

Source: IDC; Zinnov Analysis

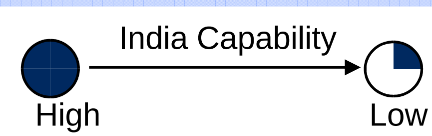
The opportunity in the BFSI market is huge and is driven by increased demand in the domestic and global market

BFSI-Specific Software Market Size, FY2008[1] – FY2015E



India's Capability for BFSI-Specific Software

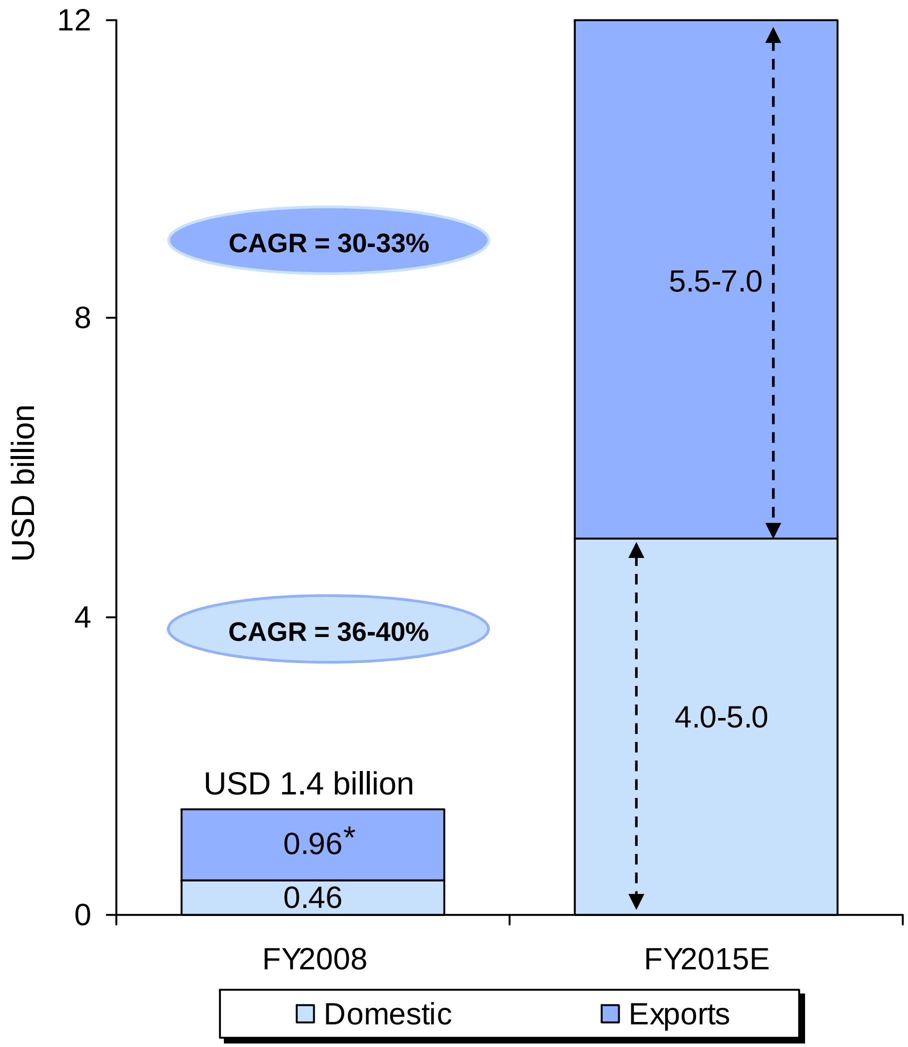
Role Models		• BFSI sector specific software products from Indian companies such as TCS, Infosys, i-flex, 3i-Infotech, Polaris, Nucleus Software, Omnesys, Lasersoft, Mindmill are preferred by customers globally
Talent/ Domain Expertise		• Some of the global leading BFSI software providers such as Fidelity, Misys, SAP, Sunguard, CSC have set up their subsidiaries for development activity • This along with IT outsourcing has helped increase domain expertise and talent capabilities in the BFSI sector
VC Investments		• Indian companies in the BFSI software product segment have been able to attract high VC investments • Funding Range: USD 7 -24 million • Total Funding (Since 2004): USD 71 million • Examples: Financial Software & Systems, Infrasoft etc.
Acquisitions		• Indian BFSI companies have been successful in gaining increased interest from global software giants • Oracle's acquisition of i-flex is one of the key examples to highlight the rising BFSI expertise from India



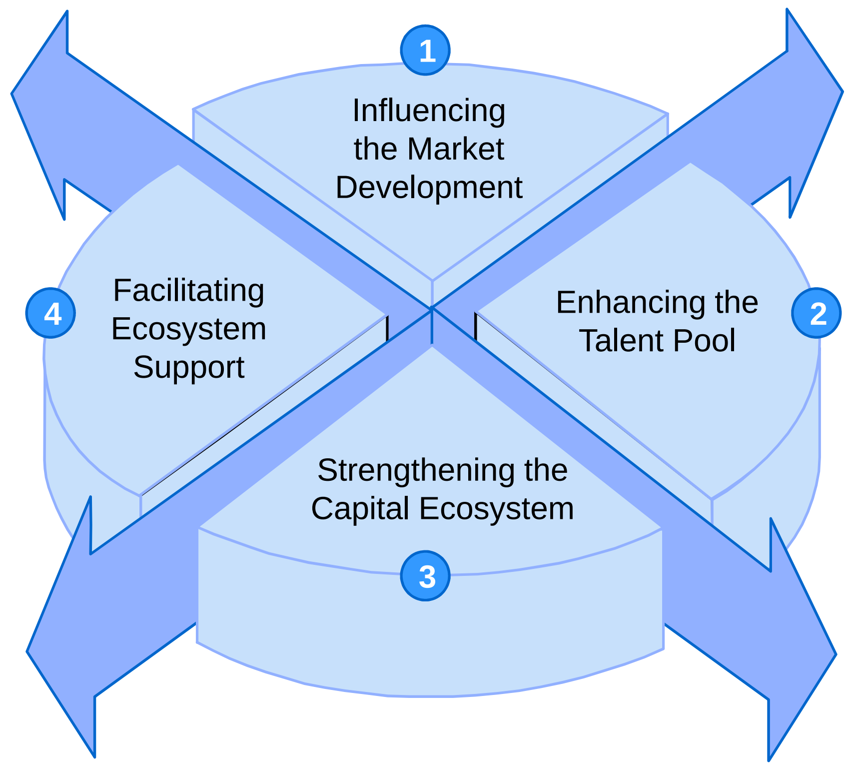
Note: E = Estimated; [1]Estimated based on the market size data for CY2007
The list of companies mentioned in the table is illustrative and may not be exhaustive
Source: Zinnov Analysis

Actions across four key themes will help India based software product businesses to achieve accelerated growth and reach the target

Indian Software Product Business Revenues, FY2008 to FY2015E

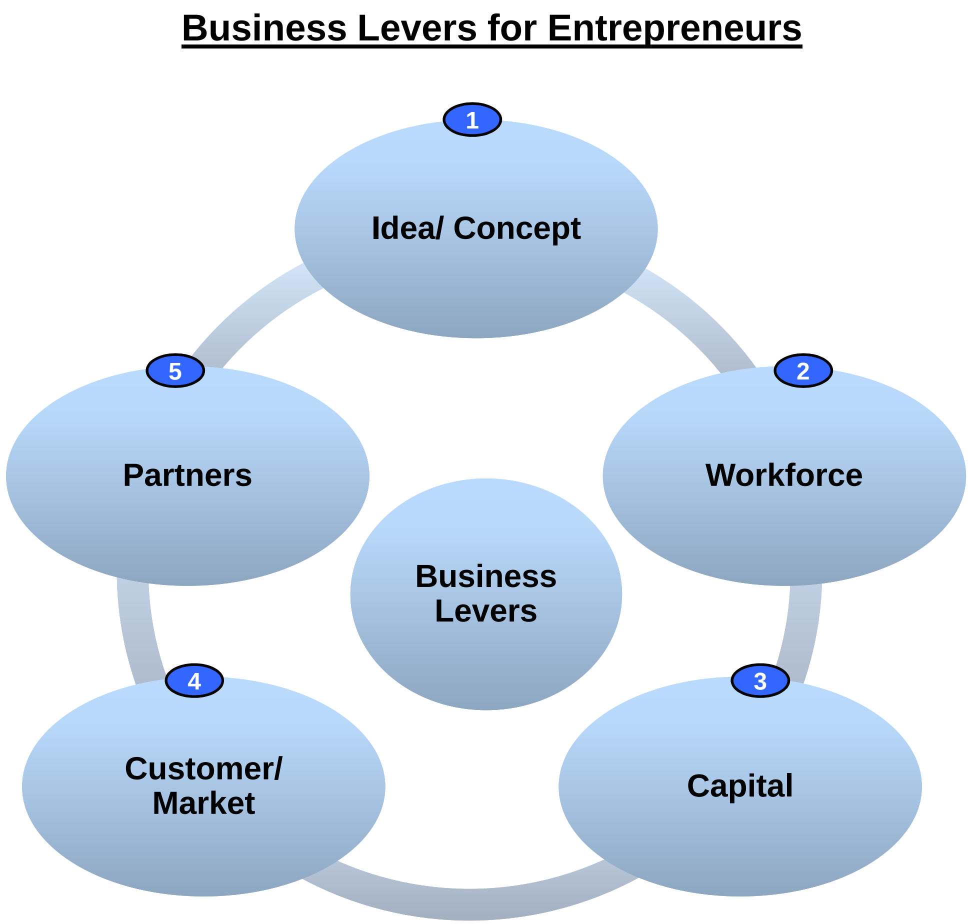


Enablers of Accelerated Growth

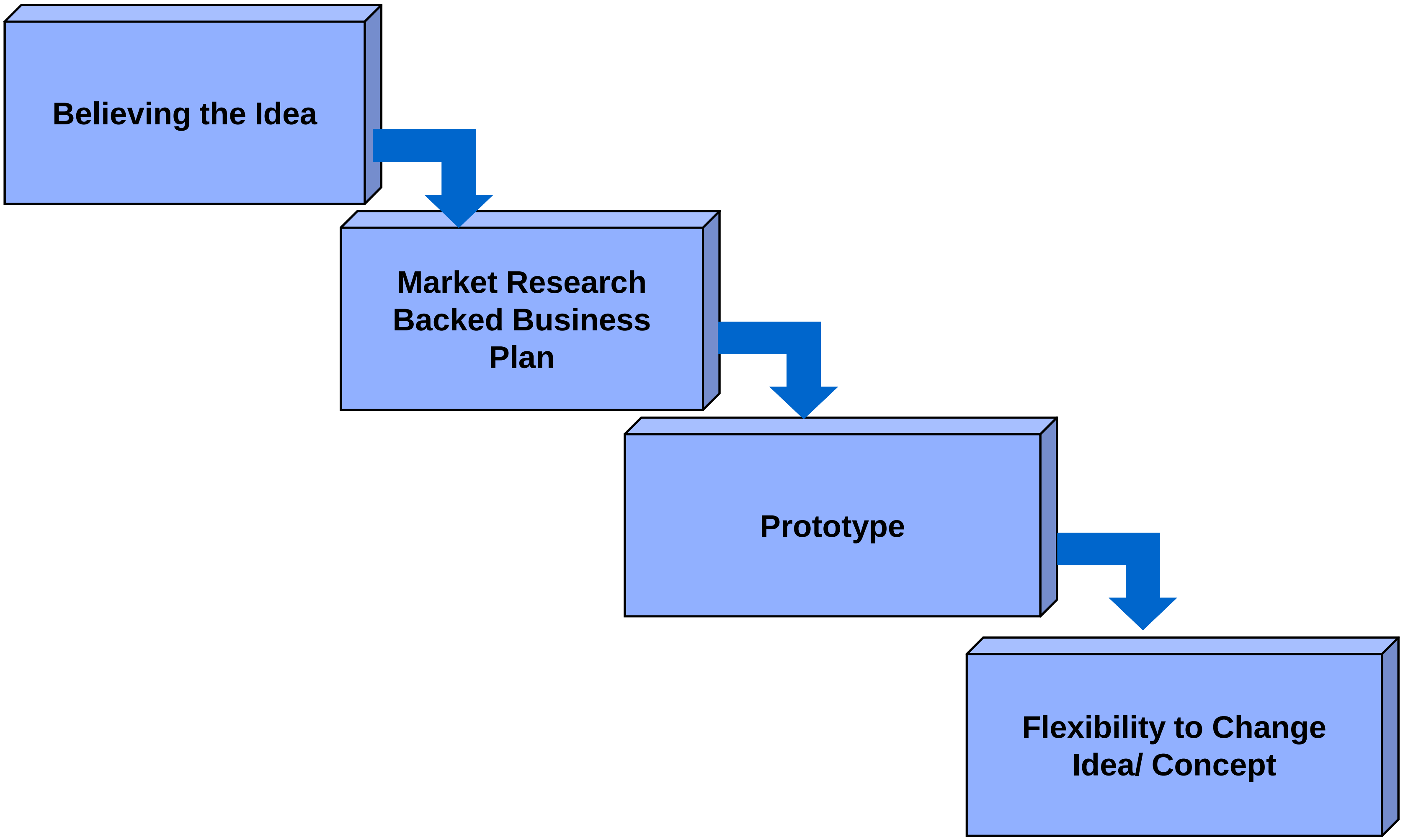


Source: Zinnov Analysis

There are five business levers that entrepreneurs need to take stock of to build a scalable software product business



Validating the feasibility of an idea and backing it up with research-based facts is very critical for entrepreneurs to move ahead in the initial phase



Hiring right mix of talent and effectively leveraging their skills to wear multiple hats is the key to a build a thriving organization

Workforce

Core Team/ Founders

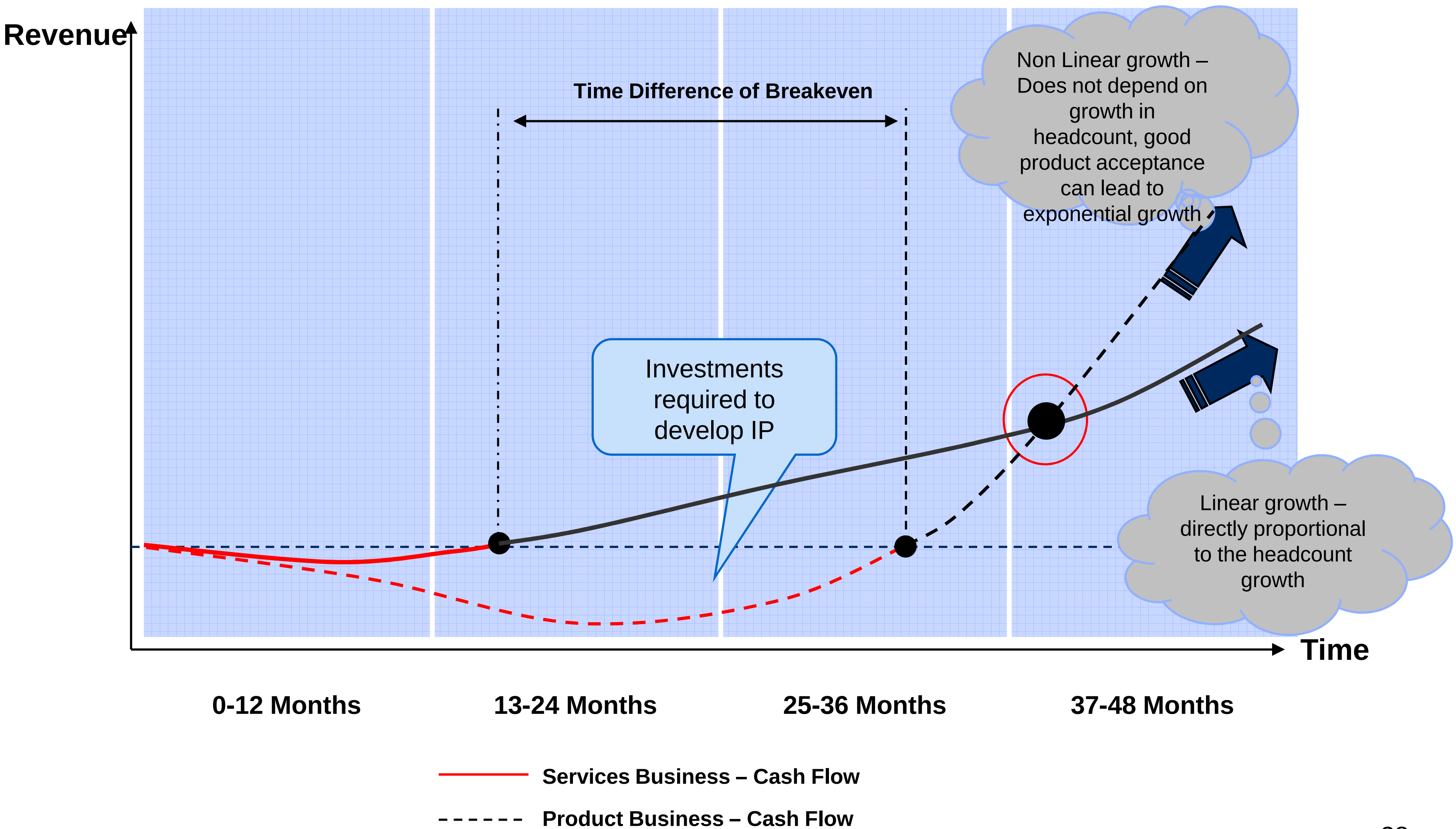
Mentors/Role Models

Development Team

Sales & Marketing Team

Software product business requires significant investments and it takes about 36 to 48 months to breakeven

Cash flow Comparison for Software Products and IT services



Source: Zinnov Analysis

Thorough understanding of the funding mechanism at every phase will help in negotiating a good deal with investors

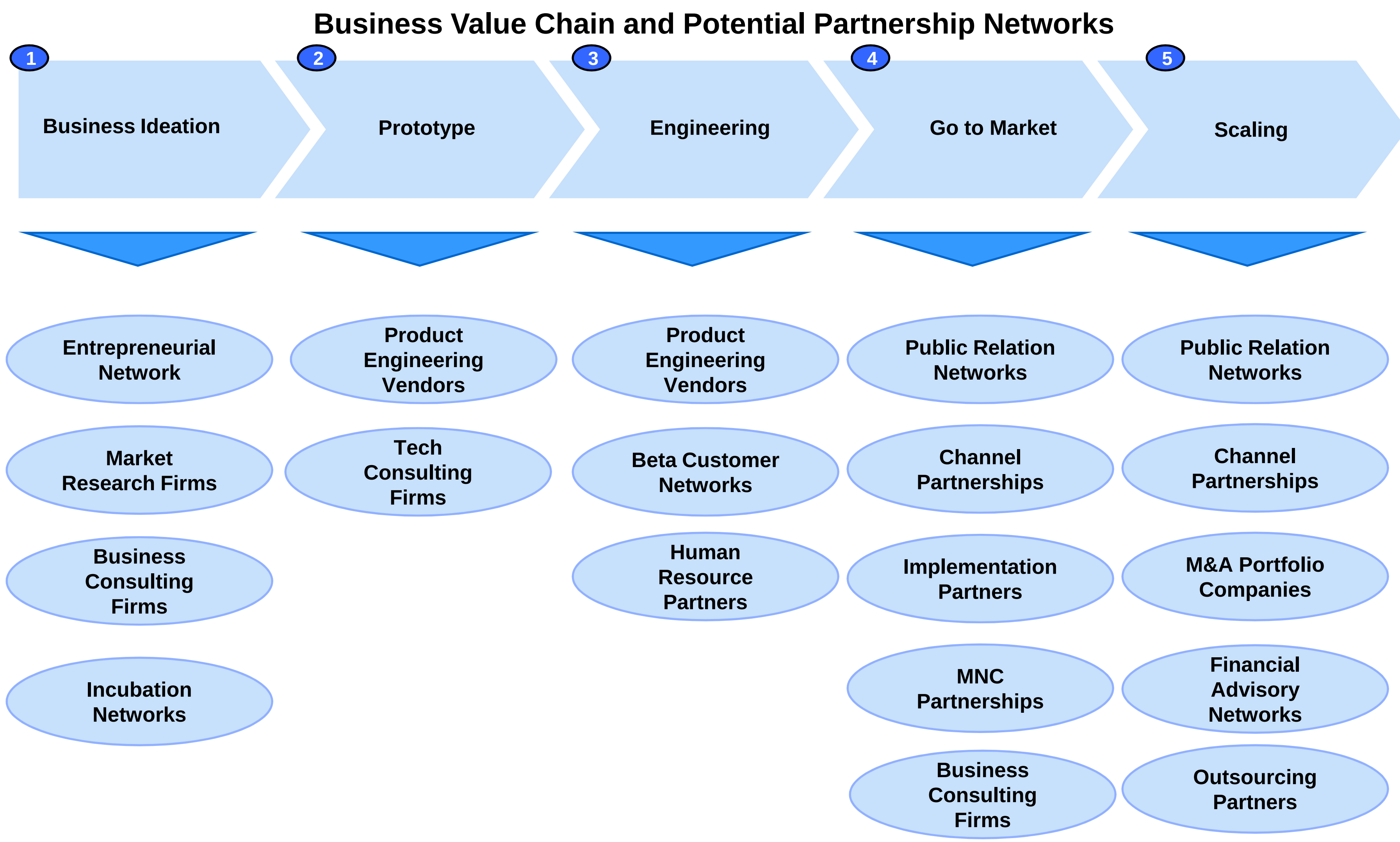
1 Business Ideation → 2 Prototype → 3 Engineering → 4 Go to Market → 5 Scaling

Stage	Pre Seed	Seed	Early Stage	Late Stage	Established
Source	Founders/ Core Team	Friends/ Family/ Angels	Angels/ Early Stage VCs	Venture Capital	IPO/ Private Equity

	Debt Capital	Equity Capital
	Money loaned in exchange for repayment along with interest	Money provided in exchange of ownership
A The Pros	• Full ownership resides within the company • Immediate access to cash	• Investors can bring fresh perspective to business • Risk is shared by the investor along with founders
B The Cons	• Personal guarantee of founders for the loan which is a huge risk • Regular loan repayments	• Can be tricky if terms are not well-negotiated • CEO/management team can be replaced depending on the stage of funding

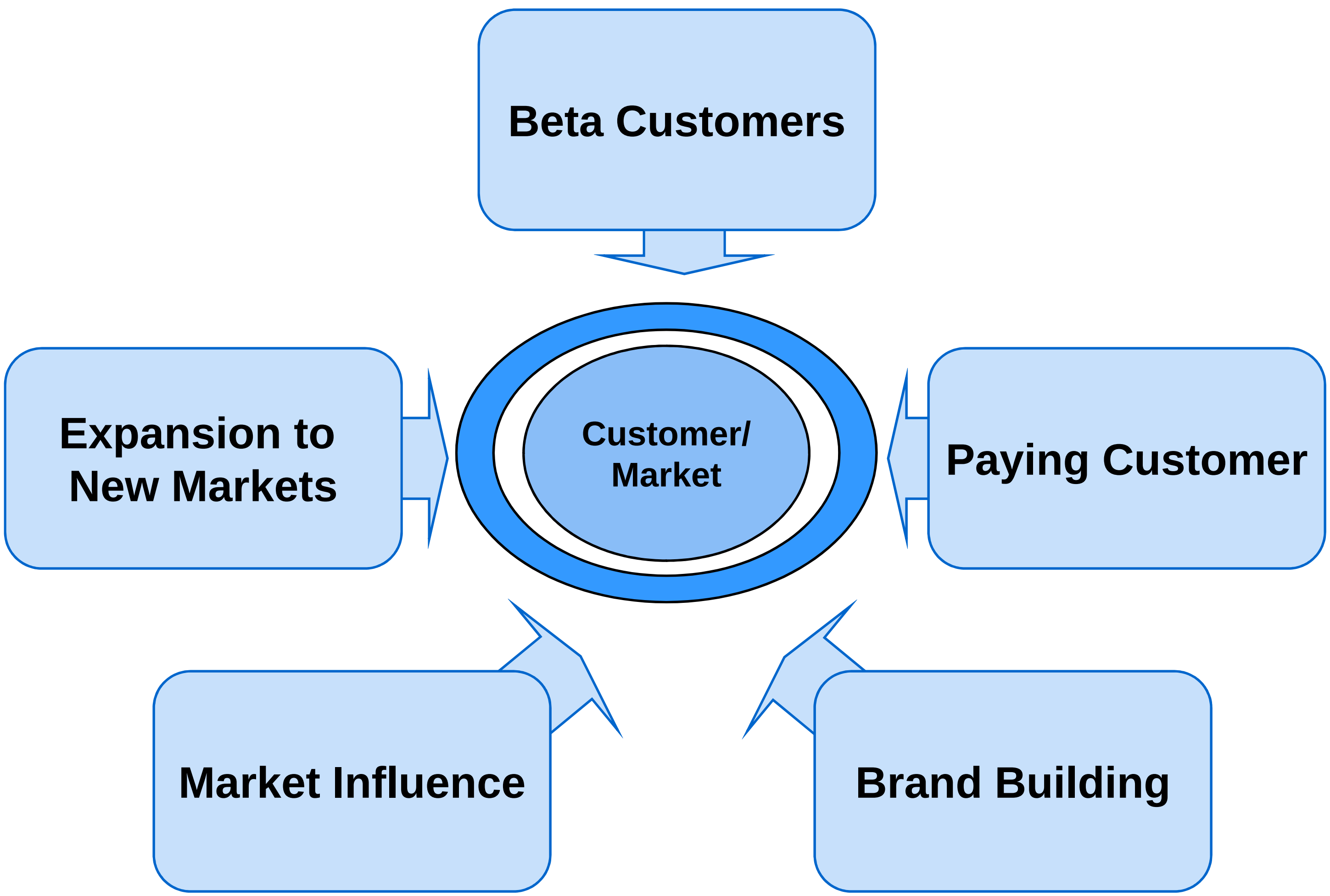
Source: Pitching to Investors, by Maya Elhalal, New Media Entrepreneurship Workshop; Zinnov Analysis

Leveraging the partnership ecosystem across the business value chain of software products can help in rapid expansion of the business



Source: Interviews with Product Business Entrepreneurs in India; Zinnov Analysis

Being connected to the customers and consistently incorporating their feedback helps in building a successful software product business



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