

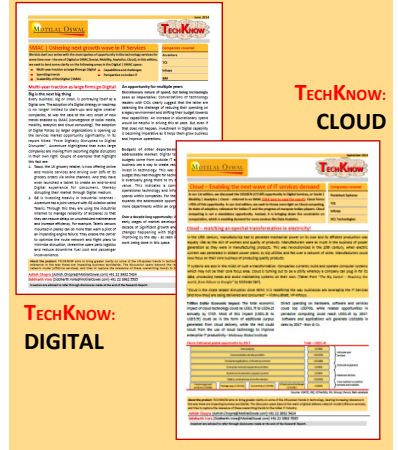
XaaS— Xplaining As-a-Service

Services in the digital world

The 2nd issue of Techknow explored the area of cloud computing and the huge opportunity it provides to transform businesses digitally in the near future. We discussed the factors that favor large-scale adoption of cloud computing among enterprises, which will be in the form of “Everything as a Service (XaaS)” business model where everything from technology services to key business processes can be delivered as a service utility. We shed some more light on the same in our latest issue, which will cover:

1. What is XaaS and role of players in the ecosystem?
2. How big is SaaS? Is it a threat to Indian IT services sector?
3. Expert Speak: Prasenjit Saha, CEO – IMS and Security business, Happiest Minds
4. What are the imperatives to flourish and not perish in the new wave of technology services?

Our past editions



Is it time for Moore's law in services?

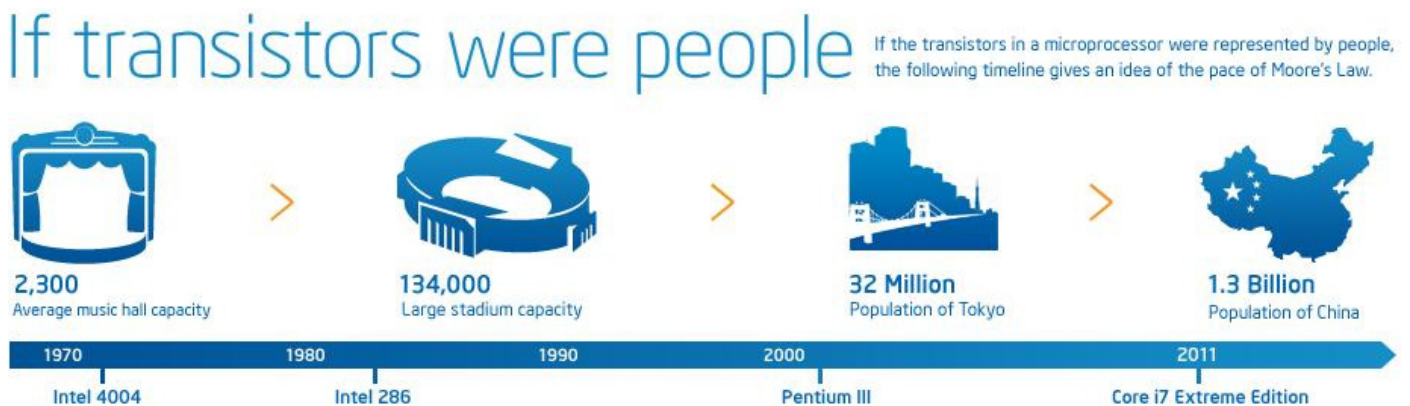
Cloud to act as the services multiplier

Gordon Moore, the co-founder of Intel, made an observation in his 1965 paper that the number of components in an integrated circuit will double every year. The famous law has lasted for 50 years in computing power and has seen various offshoots in other segments.

With the advent of cloud, the same is not unimaginable in services market - for the same cost, the quantum of

services delivered could double every 2-4 years. Fueling this belief is the savings obtained from moving infrastructure to cloud, along with ever-reducing prices charged for per unit of services. This gets compounded by the increasing acceptability of Robotic Process Automation. All this feeds into the flexibility in the way customers chose to consume storage and computing capabilities.

Moore's law simplified!



Now imagine that those 1.3 billion people could fit onstage in the original music hall. That's the scale of Moore's Law.

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What is XaaS/SaaS?

Remote delivery of solutions online

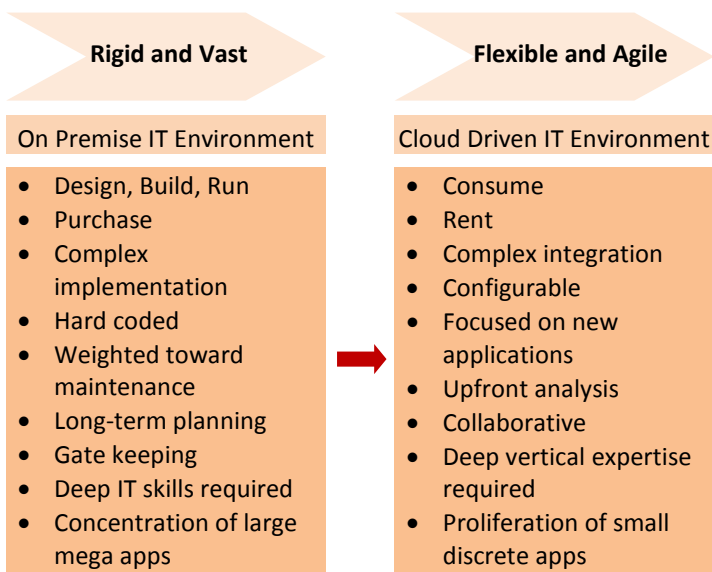
XaaS refers to the increasing number of services that are delivered over the internet rather than traditional classification of services provided locally or on-site. The customer does not take ownership, but instead rents a total solution that is delivered remotely.

Subscription-based business model is the driving force behind XaaS offerings. As enterprises' need to turn "Capex to Opex increases", upfront capital expenditures for business applications, utility software or data centers are increasingly being replaced by cloud and XaaS subscription-based offerings. This allows customers to fund IT investments as operational expenditures with no upfront capital spend. Also, as a consequence, an important shift in the applications, which is of significance for Indian IT Services, is from customized to standardized.

Key characteristics of a XaaS-based offering are largely similar to that of cloud, including:

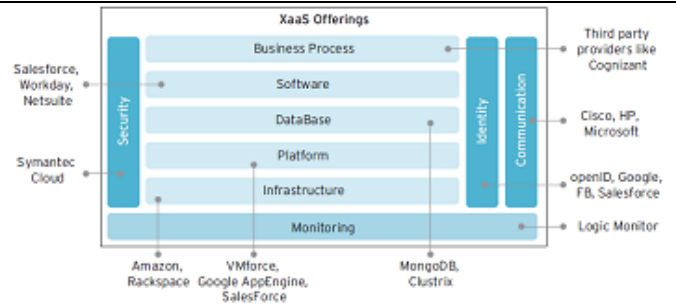
- Term-based billing or Pay-as-you-go models
- High scalability and flexibility
- Multi-tenancy
- Device independence that may also enable users to access software across multiple platforms
- Location independence
- Try and buy

Transformations of cloud on Enterprise IT



Source: The Cloud's Impact on IT Service Providers—HfS Research, Aventus

XaaS offerings across the technology stack

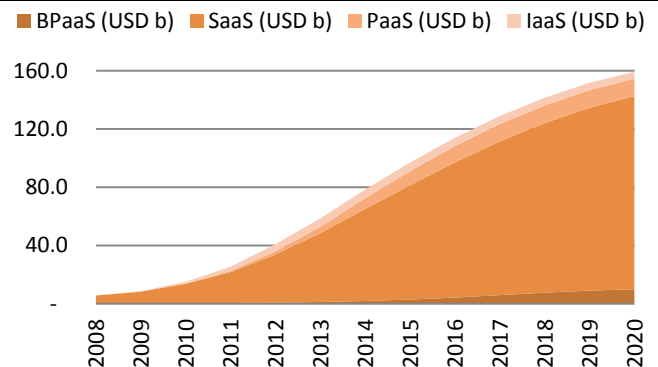


Source: Optimizing XaaS by Cognizant

How big is As-A-Service?

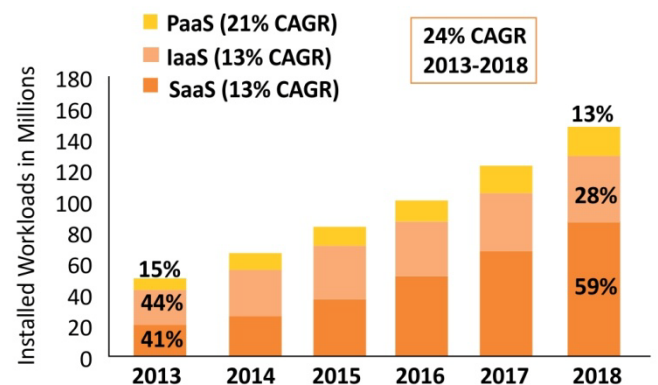
There are as many estimates around the size of As-a-service market. Among the broad categories of XaaS, software-as-a-service (SaaS) is the biggest followed by Infrastructure (IaaS) and Platforms (PaaS). On the whole, this is a USD100b+ market and growing much faster than the overall as well as the Indian IT services sector.

According to Forrester, the global XaaS market is expected to reach USD160b by 2020.



Source: Forrester Research inc.

As per CISCO, 59% of the total cloud workloads will be SaaS workloads—up from 41% in 2013.

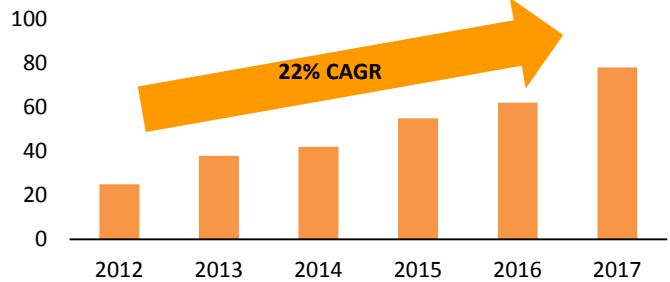
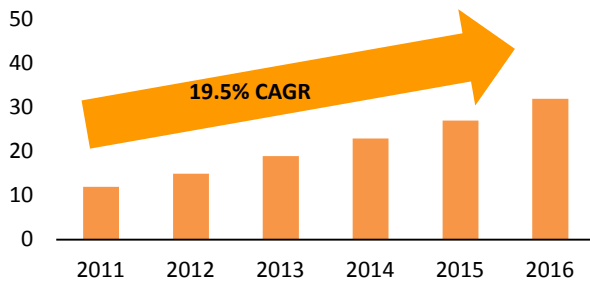


Source: Cisco Global Cloud Index, 2013-2018

Centaur Partners forecasts the SaaS market to reach USD32.8b in 2016 from \$13.5b in 2011—a 19.5% CAGR.

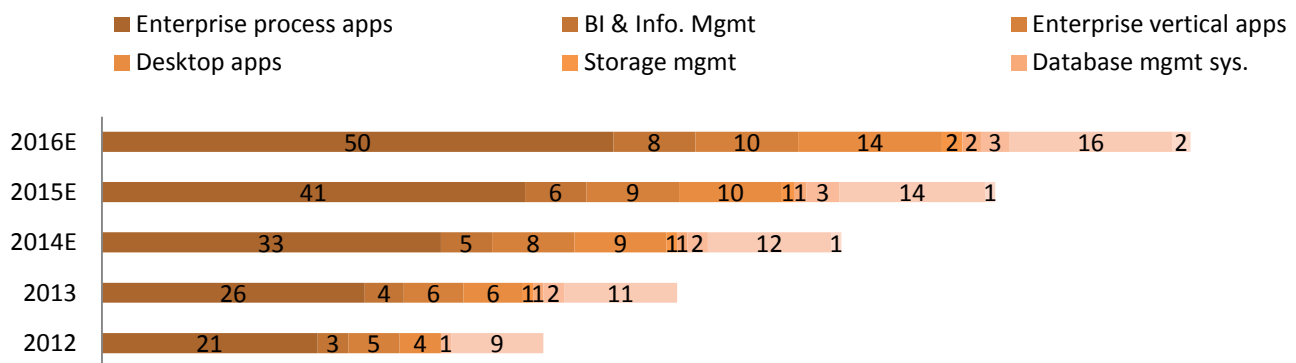
SaaS-Based Business applications market (2011-2016)

Worldwide SaaS and Cloud Software (2012-2017)



Source: The Cloud's Impact on IT Service Providers—HfS Research, Avendus

Forrester forecasts global SaaS software revenues to reach USD106b in 2016, increasing 21% over 2015 estimated spending



Source: Forrester Research, Inc.

IDC predicts that by 2016, there will be an 11% shift of IT budget from traditional in-house IT delivery toward various versions of cloud computing as a new delivery model.

By 2017, 35% of new applications will use cloud-enabled, continuous delivery and faster DevOps life cycles to streamline the rollout of new features and business innovation.

As increasing number of enterprise applications migrate to the SaaS model (as seen in the rapid adoption of Salesforce.com Workday, and now even SAP and Oracle), it is natural to question the market opportunity

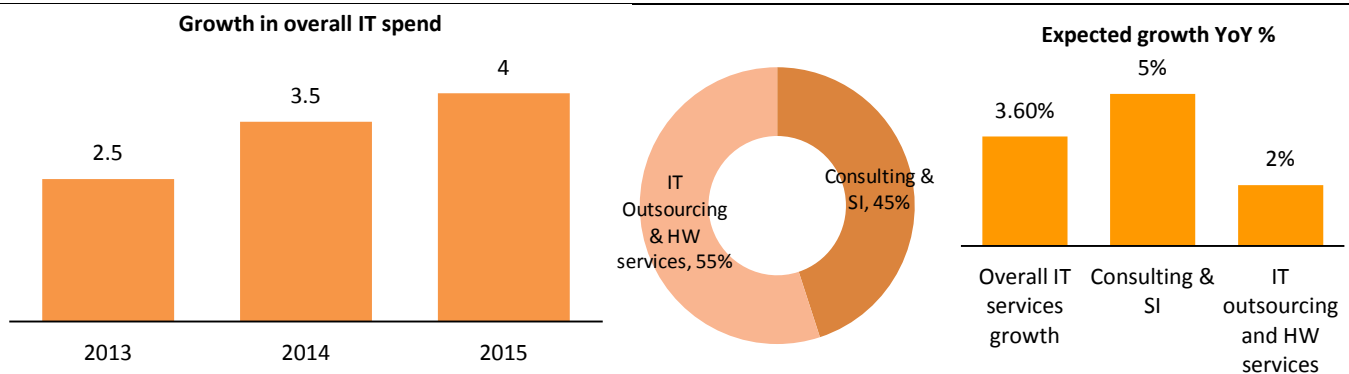
for IT outsourcing industry in the future.

So is it a threat to IT services?

XaaS-based offerings enable enterprises to convert large upfront capital expenditures into operational expenses. Consequently, large component of enterprise spend can now be procured at a much lower cost. Besides, SaaS implementations need lower third-party customizations. Thus, the market opportunity for IT outsourcers will begin to shrink in the years to come.

The mainstay of Indian outsourcing players is the traditional business of building custom application and maintenance, on-premise ERP implementation of

Overall Tech spend grows slowly but shows steady improvements Consulting and app services grow fast



Source: Offshore Insights Dec 2014/Jan 2015 Study

platforms like Oracle and SAP; this will be directly impacted by SaaS adoption.

Selling XaaS services is a different premise

The on-premise way: Traditionally, CIOs of enterprises allocate their IT budgets to various vendors for a particular service at an agreed price. Upfront investments are made in hardware and software licenses, and applications are developed in collaboration with the client looking at the processes. The businesses live with the IT systems as long as they are functional and satisfy the objective, as switching provider's entails huge costs. Normally, the sales cycle is complete with the deal being finalized and then the account manager incrementally mines the client with additional services and maintains the relationship.

The As-a-service shift: The advent of XaaS has lowered the cost of switching to another vendor owing to low upfront cost. Consequently, customer satisfaction is higher, quality of engagement better and servicing assumes higher importance.

The vendor imperatives' bridge: In the backdrop of the As-a-service shift, vendors will have to increasingly be proactive to maintain client relationships by providing creative solutions that can be added on a "plug and play" mode in the cloud; this requires them to demonstrate superior domain knowledge about client industry, business and processes. Cloud enables businesses to adopt higher level of automation, analytics and platform-based services, which can be priced on the basis of business outcome and not effort and labor.

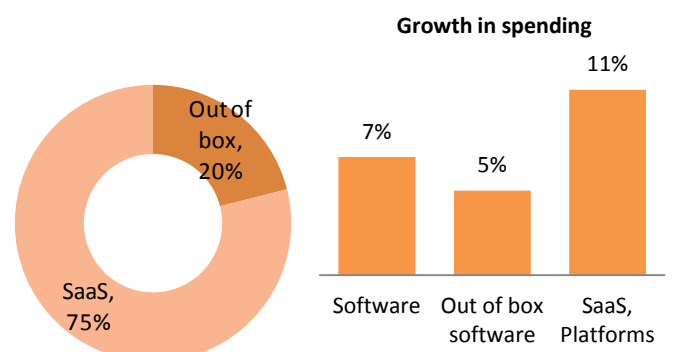
XAAS: Gaining share in clients' IT spend

Enterprise spend on IT has roughly been 5% of sales for quite some time now, and the spending can be broadly split under hardware, software and IT services. As per Offshore Insights, the spending grew 3.5% in 2014 v/s

2.5% in 2013. The steady uptick in growth is likely to continue in 2015 as well and is predicted at 4%.

However, the dynamics of this spending distribution are changing. The trend of cutting run-the-business spending to fund 'change-the-business' is evident in the market for a while now. As a result, it is driving higher growth in SaaS platforms compared with out-of-the-box on-premise software.

Large share of incremental growth anticipated from shared

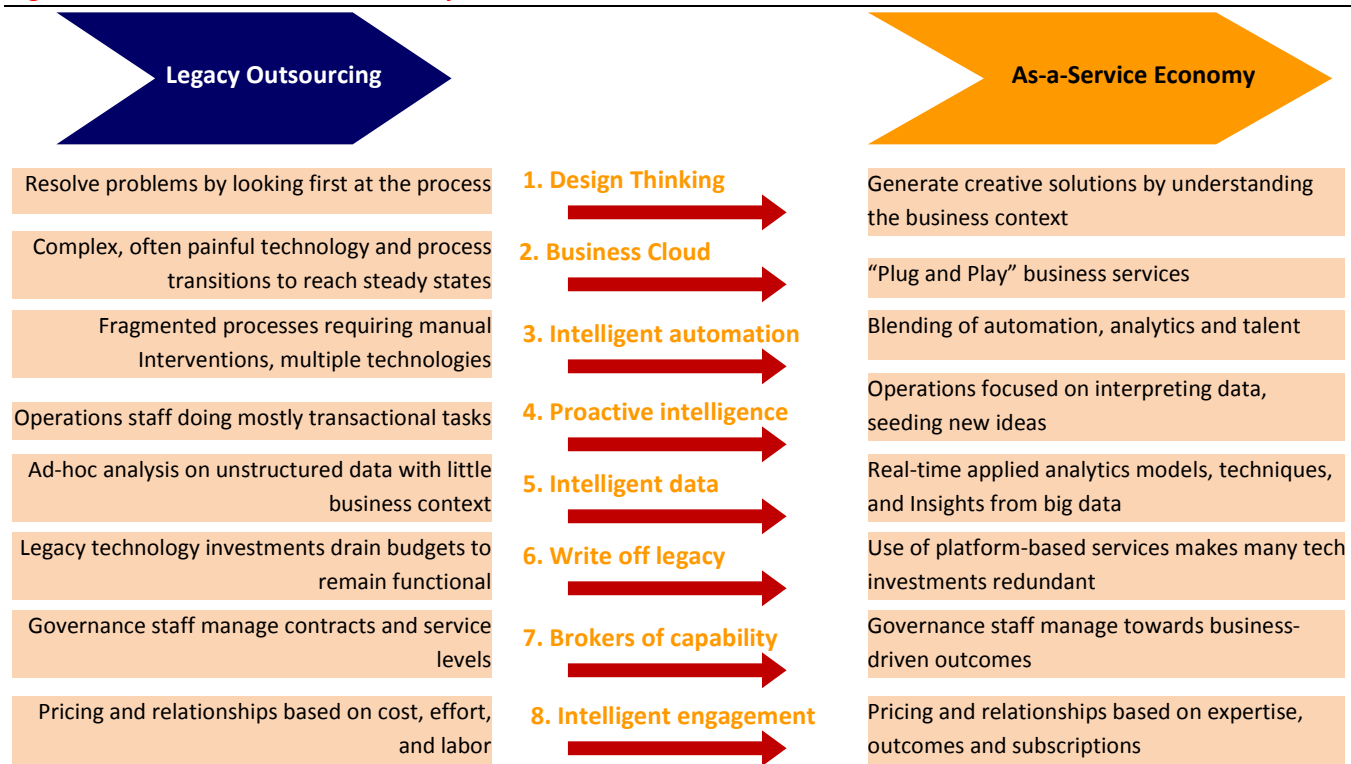


Source: Offshore Insights Dec 2014/Jan 2015 Study

That said, the same budget shift activity also suggests that businesses are in a need to spend more on their technology needs but the current IT budgets are insufficient with respect to the requirement of enterprises. With so much to be done with the help of IT, enterprise spends are not going to deflate anytime soon. The challenge for Indian IT players lies in their transformation toward XaaS offerings and participating in the corresponding evolution of enterprises in the cloud-enabled XaaS world.

The share of IT budgets has the potential to change dramatically in the long term as upfront capital intensive and software license based expenses will change to a subscription-based model. While the requirement for IT hardware tends to be inelastic to price, the consumption of IT services can increase rapidly if there are savings in the IT budgets as these savings can be effectively redeployed in areas of digital business transformation.

Eight Ideals of the As-a-Service Economy



Source: HfS Research

Vendors have the opportunity, clients the readiness and flexibility

An advantage of low upfront cost and pricing based on business outcomes is now business heads participate in discussions regarding IT spending. With models such as "Try Before You Buy" and "Pay Per Use", decisions no longer need to be taken only by the CIOs of an enterprise. New products, platforms and innovations by vendors and which will benefit the business may well be readily adopted by clients. Essentially, more than

Empowered by cloud, vendors can now experiment with various revenue models to push new offerings to the clients. Vendors who have domain expertise can utilize the same to make offerings that can impact client revenues. Revenue model innovations such "Try Before You Buy" and Freemium Model are a compelling proposition for clients to try features unlike previously where changes would require upfront investment, system changes and accord of the IT department for such push initiatives of the vendors; not only is the cost

The new revenue models will encourage clients to adopt new services faster

Revenue Model	Pricing Strategy	Advantages	Disadvantages
1 Recurring Revenue Model	Subscriptions per user, per month, per transaction.	Brand loyalty, since a one-time sale can become a recurring sale. Lower cost than purchasing the product.	Fixed fee as per unit (month, users, transactions) which can get underutilized.
2	Metered services (pay-per-use).	Customer has access to potentially unlimited resources but only pays for what it actually uses.	More complexity in implementation and monitoring.
3	Pay as you go.	More beneficial than subscription as payments are more usage-based.	More complexity in implementation and monitoring.
4 Try before you buy		Free versions for evaluation which will attract more customers for upsell later.	Conversions of free users to paying customers is a challenge.
5 "Freemium" Model	Free to customers.	Give away service for free in return for customer's personal details, and convert them into paying customers later.	Network of other consumer for the customers' personal details needs to be built.

Source: Optimizing XaaS by Cognizant

variabilizing the costs, one of the major reasons for investing in XaaS transformation is the ability to do a lot more with the data at the management's disposal.

of such investments lower, time-to-market is faster, making the RoI known for advancement of projects.

Expert Speak: Prasenjit Saha, CEO – IMS and Security business, Happiest Minds

About Happiest Minds

Happiest Minds is a next generation digital transformation, infrastructure, security and product engineering services company with 1450+ people, 16 locations and serving over 100 customers. The company is headquartered in Bangalore has operations in the US, UK, Singapore, Australia and has secured \$ 52.5 million Series-A funding. Its investors are JPMorgan Private Equity Group, Intel Capital and Ashok Soota.

Happiest Minds' SaaS presence

- ~12% of Happiest Minds' current revenues come from SaaS platforms. The revenues from SaaS platforms does not include pure play consulting and SI services revenue. SaaS revenues are accounted from its home grown IPs and accelerators.
- The platforms which are already in the market and source of revenues are Security-as-a-Service and Big Data Platform-as-a-service.
- The next in line is a platform for migration of on premise applications to clouds hosted by the likes of Microsoft and Amazon – provided through the company's **Cloud Technology Management Services**.
- And the fourth key platform is Unified Communications-as-a-service. Rapidly evolving technologies, consumerization of IT, proliferation of smart phones and the increasing adoption of Bring-Your-Own-Device (BYOD) are simultaneously creating a host of new opportunities and challenges at workplaces. Enterprises are looking at unification of various communication tools and integration of new architecture through sophisticated and secure technological solutions over virtualized platforms. Unified Communications is Happiest Minds' solution towards addressing the same.
- The company's long term aim is to be a key player in the entire spectrum of cloud-based offerings. The segment should grow to 30% of business in 3-4 years time from current ~12%.

Economics of As-a-service model

- Typically, a business case is well and truly made when the RoI to the customer is 30% over a period of time. This is assuming that the offshore

proposition has been leveraged optimally. The economics of taking to SaaS / cloud platforms will depend upon the usage and the RoIs usually grow in non-linear fashion. Enterprises start with small migration and then transfer more workloads and realize a better RoI over 2-3 years.

- Cost is not the only factor behind choosing SaaS. In fact, the biggest factor behind the increasing usage of cloud-enabled SaaS platforms is speed / agility. Time-to-market is significantly important in the Digital era and the combination of faster-better-cheaper is what will align the IT Services consumption trends of the future with such models.

Monetization strategy

Happiest Minds charges its customers currently purely on a subscription based model (monthly / annually). This is in contrast to the typical charging of License fees, followed by implementation and then annuity-based maintenance and support services.

The talent and structure of the team

- Given the novelty of platforms and nature of the job, the structure of team is very top-heavy. 5% of the members are in top management roles such as program managers. As much as 75-80% of the team comprises of senior personnel such as architects, technology leaders and Subject Matter Experts. ~15% of the team is at the junior level. Here too, freshers do not suffice. Happiest Minds has employees with 2-3 years experience in the industry.
- The company currently has E-learning and knowledge management programs where a lot of senior management gets trained. These programs will get more rigorous as the size increases and more and more fresh talent starts to get trained.

Competition and potential cannibalization for Indian IT

- Almost every company in the IT Services industry is trying to create such disruptive solutions, so effectively they are competition at some level. However, while such technology solutions are only 2-3% for others, it is bread-n-butter for companies like Happiest Minds, who strive to bring deep expertise as a result.
- Overall, 10-12% of clients' IT budgets are towards disruption while the remainder is still lights on

traditional business. So that business is not vanishing for the larger players. However, this proportion will gradually keep shifting towards more new work around Digital, and that poses a challenge of cross training and re-training at a massive scale for larger companies with huge base in traditional offerings.

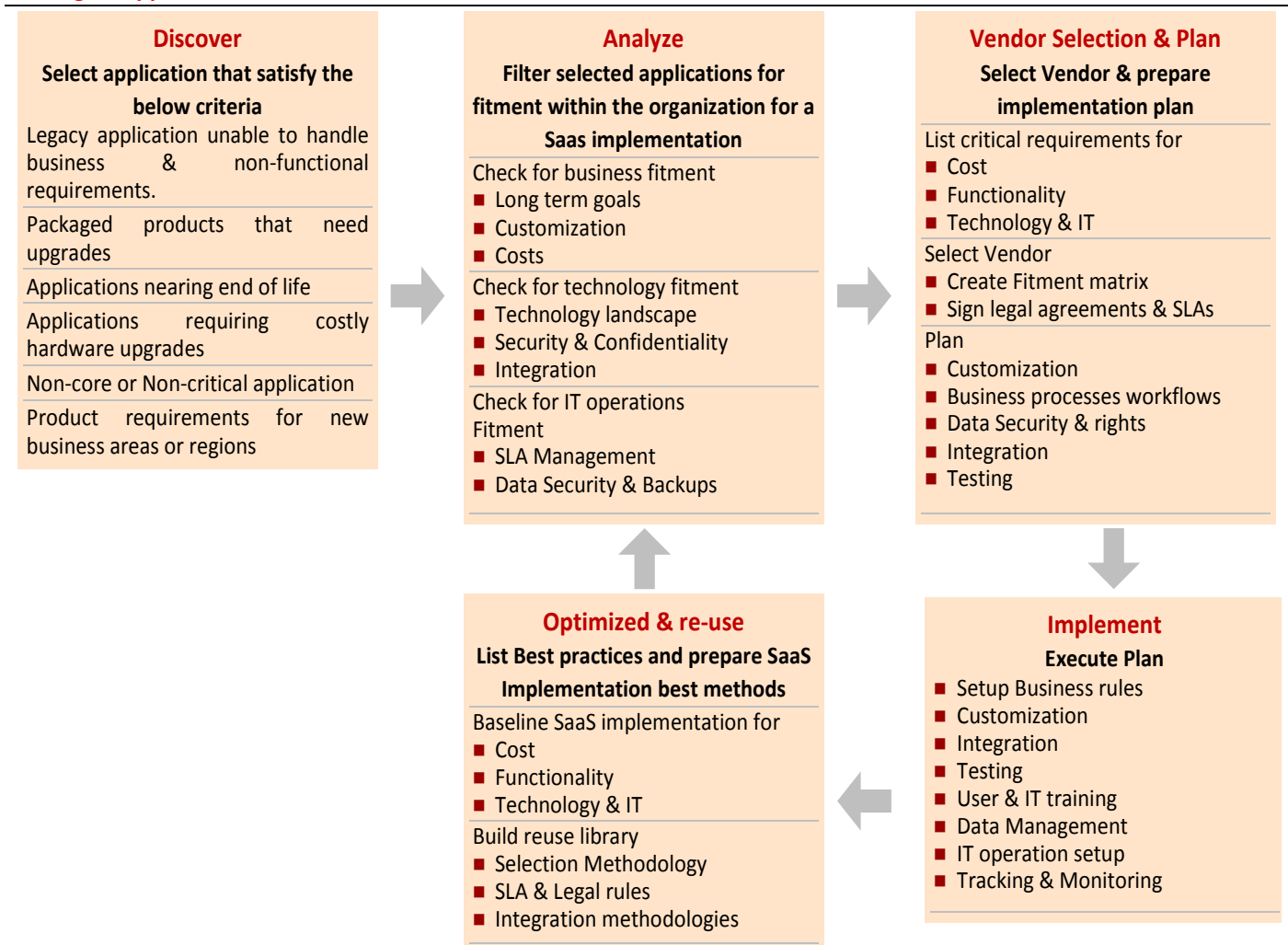
True SaaS masters will emerge gradually..

XaaS and cloud offering for clients is driving an incremental opportunity around system integration and transformation of on-premise applications. It includes both [1] communication between on-premise application and cloud environment, and [2] transitioning

duration and in six figures, and not seven as they have been traditionally. The maintenance component of a deal will shrink and the onus will be on the vendor to bring on more innovation in delivering business-relevant information as cloud will allow vendors to impact business more efficiently than they could have by using traditional services.

Thus, vendors will increasingly need vertical expertise, increased speed to market, reusable IP and overall client engagement. Services in the cloud will have a low switching cost, sale of service will no longer be enough and vendors will have to concentrate on increasing client usage. It remains to be seen who can master the

Moving an Application to SaaS



Source: FINsights, Infosys

of on-premise application to cloud environment.

While the intermittent transition opportunity will be short-lived, there will be fundamental changes to industry dynamics. Deals may well be of shorter

art quickly. Companies that are out of the blocks faster clearly stand to gain—positive surprises in performances at Accenture and Cognizant bear testimony to this fact; both attributed the traction to their Digital readiness. We await the same for Indian top-tier peers.

Gartner Case Study: Olympus implements SaaS-based ERP system provided by NetSuite

Olympus has successfully established its management foundation within a short span of six months by implementing a SaaS-based ERP system in its newly established subsidiary in India, while maintaining a low initial investment. The new ERP system was launched to provide business application features that were good enough for operations in the new office, and to reinforce the IT governance driven by its headquarters.

Key Findings

If an organization needs a management foundation that supports ERP functions (such as finance and purchasing) in a situation where time and resources are extremely limited and if basic features for small or midsize businesses (SMBs) are sufficient, then a SaaS-based ERP could prove effective.

Since multi-tenant SaaS-based ERP is based on a single global system accessed through the Internet, it can be used to strengthen an organization's IT governance if planning, implementation and management at each location are driven by the organization's headquarters.

Comparative valuation

Company	Rating	EPS (INR)			P/E (x)			RoE (%)			FY14-17E CAGR (%)	
		FY15E	FY16E	FY17E	FY15E	FY16E	FY17E	FY15E	FY16E	FY17E	USD rev.	EPS
TCS	Neutral	110.1	129.8	151.3	22.2	18.8	16.2	35.6	34.5	32.8	15.6	15.7
Infosys	Buy	108.3	123.2	140.0	17.9	15.8	13.9	26.0	25.1	24.4	10.8	14.5
Wipro	Neutral	34.8	39.8	45.2	15.4	13.5	11.9	23.3	22.9	22.0	10.6	12.6
HCL Tech	Buy	107.5	117.5	131.6	14.3	13.1	11.7	33.3	29.9	27.0	13.7	13.4
Tech Mahindra	Buy	134.5	180.7	212.3	18.6	13.8	11.8	28.2	29.6	27.7	21.8	20.6
Cognizant	Not Rated	2.3	2.6	3.1	22.2	19.5	16.5	20.4	18.9	18.5	17.3	15.6
Tier-I Aggregate					18.4	15.7	13.6	27.8	26.8	25.4		
Mphasis	Neutral	32.4	37.5	43.0	10.6	9.1	8.0	13.0	14.4	15.6	3.2	6.8
Mindtree	Neutral	66.8	82.7	97.3	17.7	14.3	12.2	30.4	30.3	28.9	17.6	21.8
KPIT Tech	Neutral	13.6	18.4	21.9	14.0	10.4	8.7	20.9	24.3	22.8	13.1	20.3
Hexaware	Sell	11.1	14.6	16.5	18.0	13.7	12.1	26.7	31.8	31.7	13.0	9.4
NIIT Tech	Neutral	31.0	36.7	44.2	11.1	9.3	7.7	13.6	14.7	18.0	10.8	5.0
Persistent Sys.	Buy	77.0	97.3	116.0	19.4	15.4	12.9	23.5	25.2	25.0	16.1	23.0
Tier-II Aggregate					15.5	12.4	10.7	23.8	25.5	27.3		

NOTES

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