# Background

We are in the midst of a major shift in the way software is delivered. Software-as-a-Service is changing the very underpinning of how a software business operates from the way software is built, delivered and consumed. Having been on the vendor side and fielded queries, RFPs, product demonstration requests and support queries, I have seen first hand what customers, prospects face in terms of challenges. As companies start looking at and evaluating SaaS software, I thought it was right time to put this reference document out there with all the information I have seen prospects ask and in most cases don't. Hopefully you will find it useful.

# Overview

As SaaS model becomes a predominant model of delivering software and moves beyond Sales Automation into the more involved functional domains of Human Resources Management, Project Management, Supply Chain and Financial Analysis, IT decision makers now have to ensure they have the right process to procure SaaS offerings. While it is still software that you are buying, the dynamics on both the technology and business side are vastly different.

One of the things you need to factor right of the bat will be that the primary application management is not your main concern. That said, your team will still be responsible for the following

- Program Management of on-boarding business community
- Planning and Uptake of upgrades
- Managing and Certifying integration with the back-office (on-premise) applications
- Provisioning Access to the applications
- Service Levels to the business community

Once you get over the internal struggle that the application and your data is going to be hosted outside your premise and managed by others, three things that you should be immediately focused on should be data security, scalability, vendor lock-in.

Evaluating a SaaS solution involves three key areas

1. Vendor Qualification
2. Product and Technology Fit Evaluation
3. Governance Conformance

# Vendor Qualification

## Financial Stability

Given the market dynamics and the inherent nature of the technology industry, ensuring that the vendor of your choice is financially stable is paramount. Outside of Salesforce, RightNow, SuccessFactors, Netsuite, most other SaaS vendors are private and hence there will not be much financial information available in the public domain. So in the absence of that I would look for the VCs backing them.

> The key thing to check is to see if the VCs have a good track record in guiding companies in similar domain. Good VCs back their investment to a hitch. Specifically check the background of the VC on the company board. If you can get information on how the funding levels are, revenue run rate etc that would give you a better idea.

## Management Team

Any software vendor is only as good as its management team. While the product fit is critical to ascertain, ensuring the vendor has a good management team should give you more comfort. Having a good team should give you the assurance that they will execute on the vision you are being sold on despite the current state of affairs.

While looking at the management of the company, here are some things to look for

- A team that includes executives from the industry domain with excellent track record. Success in the past in most cases is a indicator of success in future.
- A industry leader as a CEO. As goes the leader, so goes the company.
- A passionate leader of customer support. Insist on talking to the executive in-charge of Support as part of your finalization process. An executive with no passion for serving customers in not someone you would want to deal with. As an IT organization responsible for the support you don't want to be caught between rock-and-a-hard-place. A angry business user on one hand and a non-compassionate support team from vendor on the other.

## Focus

SaaS model works best when the solution is purpose built, niche with a set of configurable options to tailor to specific nuances at each company. Any (small) vendor that claims that their solution can meet the needs of large and small companies alike clearly highlights the lack of strategy on their part and should

throw a caution flag. There is no way a smaller, leaner SaaS company can afford or be able to meet all the needs of small and big companies alike. A General Electric and a small electronic parts manufacturer operate completely differently and so are their needs. If you are the smaller electronic parts manufacturer then the vendor better be focusing on smaller customers like you or you will be in the queue behind the big customer who contributes to more than 30% of the revenue.

In terms of the target market, the needs of multiple industries might be similar to an extent, but the business demands will eventually diverge. So it is important to ensure that the current customer base of the software vendor has enough names that belong to your industry to ensure your industry will continue be a focus area.

## Organization Structure

While understanding the vendor also try and understand how their organization is structured – # of engineers, # of support analysts, # quality engineers. Each of those point to the value a company puts in those corresponding disciplines.

Here are some thoughts to put things in perspective.

- If the # qa engineers are less, guess who will their QA?  Correct. It is going to be you. Vendors across the board are trying to cut costs and stay lean and if you know software vendors guess who they cut first – you are right – it will be QA.
- Less support engineers would mean you will have to compensate by having a team on your end to answer to your business. Remember SaaS is supposed to cut your overheads in terms of resources.

## Pricing Terms and Billing

Typical pricing in SaaS is by subscription. Vendors usually require customers to sign a one year or three year contracts. Based on the unit price, be it a user-based, transaction-based or tiered price or some combination of user + module price you should make sure the terms are elastic. The turnover of people in your organization, due to mergers-divestitures-layoff can create changes in usage. Pay attention to the escalation clauses. Also ensure the billing/payment terms are clearly outlined in the contract. If the you plan to put uptime guarantees in the SLA terms, service credits, penalties should also be accounted for in the billing.

One additional thing you need to factor would be the switching costs. Termination process should be clearly worked out as part of identifying the vendor. Refer to the Governance section for more detailed information on this.

## Technology

Majority of the SaaS solutions are built on some flavor of Multi-Tenancy architecture. That is the only way the vendor can establish economies of scale and provide you a all-wrapped-in-one subscription fees. You will hear a lot about web services, but check to make sure it is the flavor you are looking for. Most of them would involve you buying additional paid IT services to adapt them instead of them working out of the box. To effectively integrate the technology into your business process, keeping in mind the customizations you might have to do, you should also look at the technology being used by the vendor. Specifically, you should have your architects look at the architecture, redundancy infrastructure, scalability considerations, provisioning made by the vendor.

## Customers

Checking who uses the solution before making your decision is absolutely critical. As the first order of business, check the news and events section of a site to check the press releases. Lack of frequent press releases should raise some signals – indicating things not being rosy. Check for the quotes from those customers in those press releases. The names there would serve as good reference checks. If you are lucky you might already have them in your network. Besides throwing names around, a vendor should be able to provide references and case studies of successful implementations. While you are at it, also check for customers who have renewed their contract at least once. A customer who has renewed the contract (after the initial term of 1 or 3 years) is much more convincing reference than a new customer just couple of months old.

## Product Roadmap

Evaluating a product fit to your business need no doubt would be the first thing you look for. Granted that you would verify and ensure the product meets most of your current needs. A product roadmap with concrete list of items for at least the next six months and candidates for future releases are a good measure of a quality vendor. That said, you will also want to ensure that the vendor is agile enough to change course and priorities as business needs demand.

## Change Governance

If you thought the imposition of regulatory mandates in recent times is onerous already, implementing them with a bunch of SaaS solutions might exacerbate it further. The governance processes implemented by the SaaS vendor should be of particular interest to you. Who manages the application, backups, upgrades, change management, infrastructure, security model, data center resiliency, data retention policies, disaster recovery all should be high in your criterion while

considering a vendor. Most small vendors, understandably, have ad-hoc processes but it is important for you to vet that against your own SOX-404 process needs. Despite the fact that software is hosted outside your premise, the burden of proof of compliance rests with you. Your auditors might not have yet identified the right process of auditing SaaS applications, but rest assured it is coming. Stay ahead of the curve and ensure your vendor has SAS 70-Type II certification done – periodically. Include this as part of your terms in the contract.

# Product & Technology Considerations

As in the case of on-premise software solution, identifying and establishing the match of business needs with the software capabilities will obviously be the foremost consideration.

This is where one of the biggest contradictions comes into play. SaaS business model, by its very nature, requires vendors to keep the customer acquisition costs (CAC) low. This would imply the salesperson will try to close the deal with minimum investment and fast. At the same time your interest should be to do all the necessary due diligence while making the decision. Beware of the "it-is-low-risk-what-have-you-got-to-loose" tactic. To ensure that you don't end up with a long road of frustration, my recommendations are as follows.

## Product Evaluation

Expand the scope of the product demo by vendors' salesperson to be followed by a evaluation period. Insist on a minimum of 30 days evaluation period so as to give your team enough time to do the necessary crosschecks.

As part of the evaluation, include the following activities, at a minimum.

- **Feature set:** Have your business users do a deep dive into the product capabilities and cover all the critical areas promised by the vendor's salesperson. Nothing like seeing it for yourself.
- **Availability:** Have business users from different geographies, within your business, test the application from their remote location. This will ensure application will provide the requisite performance and does not impact productivity once deployed. Specifically pay attention to those telecommuting employees who will access the application. Accessing from a office on a T1 line is different from accessing the same from a lower speed DSL line. Even if the SaaS vendor does not certify against slow DSL access, this will give you an idea to plan for potential expense item for either higher speed DSL or cable internet access to ensure there is no productivity loss.
- **Internationalization/Localization:** Most SaaS companies have originated in the US and few have a really strong user base outside. If you are global company, and have a non-english speaking employee from a different geography verify the capabilities around Internationalization and Localization.
- **Customization/Personalization:** SaaS delivery model, at the outset, discourages long drawn out customization phase that has long been the pain with on-premise solutions. That said, your business process

might still not be adaptable to the software delivered out of the box. So it is important to evaluate the abilities provided by SaaS vendors for customization, albeit lightweight.

- **Browser Support:** Given that most SaaS applications would be browser-based, incorporate Cross-Browser Support in your evaluation.
- **Reporting:** Typically users are trained to build custom reports using tools like Crystal Reports. In some cases over a data warehouse or data mart. In a SaaS application, you will be limited to the tools supported – in fact – in most cases it will a simplified drag-and-drop report generator. Ensure the capabilities of the report generator meets your complex needs.

It will be challenging to get a team assembled to do all this in a short duration while you are still running a business but trust me every minute spent here is well worth it.

**Note:** One thing to keep in mind, right during the evaluation  is, most SaaS applications will cater to the 80% needs that are common across companies. So it should not come as surprise to you if you find certain company specific needs not met out of the box. Don't get bogged down by that.

Once you have the go ahead from the business community, you will want to ensure the SaaS solution aligns with the other IT standards you might have established in your company.  Remember as IT, your team will still be the conduit in delivering the solution and service levels to your business despite the solution being outside your control. Here are the key things I would look for from a pure IT point of view.

## Adaptability

- **Service Availability:** Request and Review the Standard License Agreement with Service Levels clearly outlined ahead of time so when it comes to contract negotiation you give yourself sufficient notice. Pay attention to the Service Credits that you will be owed in case of the vendor not meeting the Service levels.
- **Scalability:** Review the architecture for accommodations made to address the scalability needs via redundancy. Ask for benchmarks done for scalability in terms of data volumes and workloads. Better yet ask for reports that indicate the scale over time and overlay it with availability.
- **Integration:** Review the integration capabilities. Given that SaaS is in-cloud, having a comprehensive architecture to support integrations for your company to close the loop with your existing applications is critical. I would specifically check for standards based data adapters available in the form of Web Services. Given that most companies still have legacy/homegrown applications that might not be web services

conversant, you might also need a CSV based adapter combined with secure FTP capability.

- **Ecosystem:** Deciding and buying a software (or a service) is a commitment, lack of vendor lock-in argument notwithstanding. Once a enterprise makes a commitment to a software and gears its IT/Business workforce to work with it, it becomes almost impossible (never say never) to switch to another, along the way. So while making the decision it is important to ensure the technologies used by the vendor are open, standards-based and has a good community following. Without that you will be at the mercy of the vendor for all the customizations and also not be able to hire/retain employees with those skills.

# Governance

In this day and age of increasing governance and regulatory compliance mandates, the evaluation of your abilities to support the governance requirements, audits assumes a higher degree of importance.

SaaS can really help the cause when it comes governance, if sufficient legwork is done upfront. On the one-hand, having SaaS application in your IT portfolio relieves you of some of your IT responsibilities. The vendor assumes responsibility of the upgrades, patching, backups, recovery. The fact that the application is outside the realms of your IT boundaries also means that it is out of the reach of all the unauthorized employees. That said, the data sits in a remote data center with employees from the SaaS vendor accessing it and you have scant visibility.

So here are some governance checks to be done as part of your evaluation of the SaaS vendor

- **Access Control:** Considering that the application is hosted by the vendor, by definition, your team will not have access to the technology infrastructure. Check the policies the vendor has in place in terms of who accesses the data center and how secure it is. Also check who in the vendor team has access to the application. The application should also provide an audit trail of every time someone accessed the application.
- **Security:** Evaluate the various aspects of security in the product. Starting with
    - password encryption, policies
    - application security model (data and role-based),
    - encryption of data transfer between user's browser to the server across multiple tiers and in some cases multiple vendor cloud services
    - Security on the servers (the access, configurations, logs)
    - Data center security
    - Physical premise security
- **Data Separation:** One of the biggest mental hurdles companies have in adopting SaaS is the fact that their data resides outside their control and the fear that it might be within the reach of wrong people.  While the former is true it is no different than having your personal online bank or brokerage account. When you combine that with the fact that your data could be co-mingled with that of your competitor makes customers that more finicky.  SaaS companies should be able to share with you the policies used for data segregation and architecture used to implement it. With technologies like Virtual Private Databases (VPD), shared-code-separate database models would be underpinning their multi-tenancy

architecture. Around privacy, have your security experts verify that none of the customer/tenant information like ID, code in URLs, hidden variables are exposed in the user interface. If not coded properly, this could provide access to data you should not be seeing.

- **Change Management:** It is one of the most critical things to evaluate in a SaaS provider to gauge the maturity of the vendor. Most vendors begin with ad-hoc processes and gradually institute mature governance processes as the company grows. As part of the evaluation process insist on reviewing the following
  - Change Management policy document
  - Change Log from a change effected
  - Communication of changes to customers.
- **SOX, SAS-70, PCI-DSS, HIPAA, GLBA:** Managing information, access and usage across the entire on-premise IT portfolio is a challenge enough. With SaaS, it becomes a more challenging. You store information regarding assets, leases, contracts, employees, payments, vendors, in a database outside your firewall and maintained on infrastructure managed by third party. That is enough to give sleepless nights to any CIO/VP of IT. So to give yourself assurance that your data is being accessed by authorized people, ensure the application provides ability to capture and review audit trails. The ability to generate reports on the access log, audit trails should be a critical part for you to close the sale. If you see shortcomings in these areas and get commitments for those features in the product – tie milestones and payments to that feature delivery.
- **Intrusion Detection:** With more applications being deployed on the internet, Intrusion Detection Systems have become a quintessential part of any IT infrastructure. In a SaaS world it assumes a larger importance. Given that the infrastructure is hosted by a third party, it is critical you insist on an implementation of a IDS and follow-up process to proactively check for potential areas of vulnerability. A standing process for regular inspection of the servers, routers, hardware for "hardening" is something you should ensure.
- **Disaster Recovery:** Most vendors, to begin with, will not have Disaster Recovery. With competing priorities, budget constraints it is bound get tougher to spend on DR. But this is something you must ensure your vendor would support. Pay attention to the RPO and RTO commitments and the location of the DR site. Having two DR sites in the same electric grid (or fault line in SF Bay Area) does not really amount to a effective Disaster Recovery plan. If not available, capture that in the contract as a necessary milestone that will be measured for payments, renewals.
- **Availability:** While going with a SaaS solution relieves you of the active maintenance of the Application, the availability of it will still be your

ultimate responsibility. Ideally, the vendor should have and share monitoring reports to support the conformance to SLA. Some vendors even share this information publicly on their site.

- **Scheduled Maintenance:** Pay special attention to the scheduled downtime windows that might be defined on the contract. Most vendors have weekly maintenance windows that require the application to be down for the part/majority of the weekends. While that in itself is not a problem for most parts of the year, don't forget to identify blacklists for certain weekends like month ends, quarter ends, year ends so you can do what is necessary for the book closing activities in your company.

- **Data Portability:** One of the allures of SaaS is that there is no large upfront investment so if things don't work to your satisfaction, you can cancel the contract and move to another vendor. And the SaaS vendor themselves would tell you this to convince you and close the sale. While SaaS does provide you with quick ramp up option, getting your data back, if and when you choose to move to another solution, is altogether a different proposition. If the SaaS vendor has a multi-tenancy based solution, based on a single database, it gets even more tougher. So I recommend incorporating terms in the contract to ensure you have the claim to ownership of your data in the event of service termination, without breaking the bank. You will end up paying some professional services but it should be reasonable. If you are lucky, besides the snapshot of the data you should also be able to get copies of log files, audit trails, application access logs for you to be able to support upcoming regulatory compliance audits after your move.

- **Data Retention:** There are two things you need to cover in Data Retention.
  - While you are still a customer, you would want to ensure your SaaS vendor has the necessary retention policies to retain the essential information log files, audit trails, historic transaction data in the application to support your regulatory compliance obligations.
  - When you cease to be a customer and you have canceled the contract and reclaimed your data, you should make sure the vendor does not retain your data and risk exposing your company in any potential data leaks in future.

Besides all these operational guidelines, you have to pay attention to the elastic consumption-based billing. As your companies goes through the troughs and crests of business climate, you will likely have different levels of consumption and it is important that you have defined the rate of increase and decrease factored into the original contract terms.

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