Bessemer's Top 10 Laws of Cloud Computing and SaaS

Running an on-demand company means abandoning many of the long-held tenets of software best practices and adhering to these new principles.

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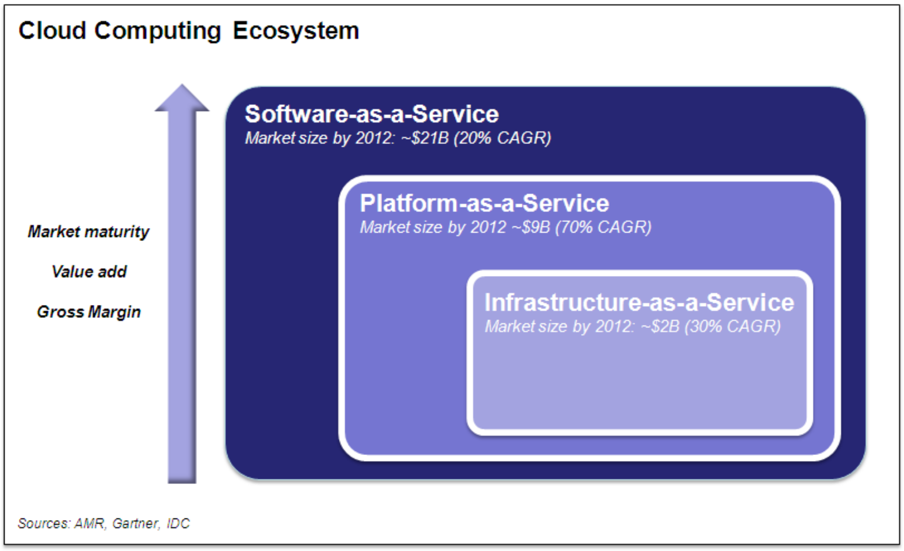
Bessemer Venture Partners is a global investment group with offices in Silicon Valley, Boston, New York, Bangalore, Mumbai, and Tel Aviv. As the oldest venture capital practice in the United States, BVP has partnered as an active, hands-on investor in leading technology companies including Ciena, Ingersoll Rand, Parametric, Skype, VeriSign, and Veritas. More than 100 BVP-funded companies have gone public on exchanges in Canada, India, London, and the United States. Bessemer has been focusing on Cloud Computing and recurring revenue businesses for the past 15 years, investing in industry pioneers such as Verisign, Cyota, Netli, Postini and Trigo, and the firm has today a portfolio of more than two dozen active cloud computing investments including many listed below. Find out more about BVP's Cloud Computing and SaaS practice online at www.bvp.com/cloud.

When we first published *Bessemer's Top 10 Laws for Being "SaaS-y"* two years ago in conjunction with our annual Cloud/SaaS CEO Summit, we were overwhelmed with the positive response and feedback we received. We continue to incorporate the most compelling elements of this feedback into our evolving Cloud Computing best practices profile that follows below. We have modified many of the best elements that we believe are still relevant, and have added several entirely new concepts for this publication.

This work is literally the result of hundreds of conversations that the partners of Bessemer have had with Cloud executives from our past and current portfolio companies, as well as other leading public and private Cloud companies. Because we can touch only briefly on many of the core concepts in this overview document, we have made several additional whitepapers and presentations available online to answer some of the more sophisticated questions.

At Bessemer Venture Partners, we fundamentally believe that the emergence of Cloud Computing – and the three core components of Software-as-a-Service (SaaS), Platform-as-a-Service (PaaS), and Infrastructure-as-a-Service (IaaS) – will completely change the economics of the multi-billion dollar software industry. We have been fortunate to be investors in many of the early Cloud winners (such as Postini, Netli, Trigo, and Cyota), and continue to invest actively behind one of the largest Cloud portfolios in the venture capital industry. Periods of tremendous transformation create tremendous opportunity, and we consider ourselves privileged to be working with many of the great entrepreneurs who are currently creating the next giants of the "software" industry.

The Cloud computing stack is currently defined by three levels: SaaS, PaaS, and IaaS. Software as a Service (SaaS) , the most mature of these segments, is comprised of end user applications like Salesforce.com. Platform as a Service (PaaS) is the service and management layer of the cloud platform, and is evolving dynamically to include things such as intelligent provisioning, as well as application and network management. Infrastructure-as-a-Service (IaaS) is the foundational layer of cloud computing, and includes raw storage, compute, backup, disaster recovery, databases, and security. As the first segment to emerge in scale and the most application oriented, SaaS has lead the market to date with the largest market size, highest gross margins, and highest per-seat pricing. Recently, however, we've seen the rapid emergence of hyper-growth businesses in the PaaS and IaaS markets demonstrating that these will soon be independent, multi-billion dollar segments in their own rights with the potential for massive sales volume and attractive cash flow characteristics.



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Bessemer's Top 10 Laws for Cloud Computing

BESSEMER CLOUD COMPUTING LAW #1: Less is more! Leverage the cloud everywhere you practically can, both for your internal systems as well as for your own product offering(s) and "just say no" to on-premises deployments! This will not only give you a direct understanding of the customer experience and best-of-breed strategies of Cloud Businesses, but it will free up your technical resources and balance sheet to focus on your core product and customers.

Although your technical team may be great at setting up Exchange servers and PBX systems, they are far too valuable to your organization to waste their time on such rote tasks. Your cost of capital is also likely very high, making upfront hardware and license costs extremely painful (dilutive) for a young company. By pushing as much as possible into the cloud, you avoid management headaches and make these expenses variable. You should be able to pick many initial products quickly, including hosted email (Gmail, hosted MSFT Exchange, USA.net), CRM (Salesforce.com, Oracle CRM On Demand, Microsoft Dynamics CRM), Marketing Automation or email management (Eloqua, ConstantContact, Vertical Response), Financials (Intacct, NetSuite), Talent Management (SuccessFactors, Cornerstone OnDemand, Taleo, LinkedIn), web analytics (Omniture/Adobe, Google Analytics, Coremetrics), telecom (Verizon, AT&T, Paetec, Smoothstone, Nuvox)Skype, Google Voice, Fonality, etc..), security (Google/Postini, McAfee, Symantec, Perimeter eSecurity), webcasting/remote access (Webex, GoToMyPC, LogMeIn, TeamViewer), and the like.

Similarly, try to leverage PaaS and IaaS whenever possible for your own core product development. There has been a massive change in the consumer internet world over the last two years, with the vast majority of new internet websites and applications using Cloud environments such as Amazon Web Services as the foundation of their development from the first day. We believe that quality of service and portability issues are rapidly resolving themselves at a level that will be suitable for enterprise deployments, and a similar migration will occur within the software and Software-as-a-Service worlds over the coming years. Although trends in Cloud businesses tend to be more predictable than those in consumer internet traffic, many of the same drivers exist: you no longer have to worry about the details of capacity planning, data center operations, infrastructure optimization, and hardware purchasing, and can instead focus on building a great product for your end customers.

One of the clear benefits of the Cloud Computing hype is that many very large companies are collectively investing billions of dollars in Cloud infrastructure and are now tripping over themselves to offer your business Cloud infrastructure at ridiculously low prices. Among Salesforce.com's Force.com, Microsoft's Azure, Amazon's Web Services, IBM Computing on Demand, Google App Engine, Sun Cloud Computing, Rackspace Cloud Servers, and the dozens of private vendors entering this market, you should be able to find at least one provider that fits your needs. Stability and portability are particularly critical items to evaluate, and you should be cautious to leverage any proprietary tools and services that encourage lock-in, as portability is your best protection against future performance or pricing issues.

Finally, although this is becoming more widely accepted as a best practice, we must still emphasize the importance of building a **single instance, multi-tenant product, with a single version of code** in production. "Just say no!" to on-premises deployments! Multi-instance, single tenant offerings should only apply to legacy software companies moving to a dedicated hosting model because they don't have the luxury of an architectural re-design. Of course it is possible to use virtualization to provide multiple instances, but this hybrid strategy will make your engineering team much more expensive and much less nimble. A few outlier hybrid models have been successful, but in general please leave the hybrids to the "clean tech" entrepreneurs. You also want to leverage your core infrastructure as much as possible, even when expanding internationally This generally means to invest early in backup and disaster recovery, but if you're managing your own datacenter, avoid a second production facility as long as possible (at least past $2M CMRR).

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BESSEMER CLOUD COMPUTING LAW #2: Get Instrument rated, and trust the 6C's of Cloud Finance. Any good pilot (CEO) knows that you can't fly in cloudy weather without an instrument rating, yet many CEOs are attempting to do exactly that. Build and trust your CEO dashboard. Your key business metrics must include: 1) Committed Monthly Recurring Revenue (CMRR), 2) Cash Flow 3) CMRR Pipeline (CPipe) 4) Churn, 5) Customer Acquisition Cost (CAC), and 6) Customer Life Time Value (CLTV).

1. ***CMRR – Committed Monthly Recurring Revenue.*** Experienced software executives have been taught for years that there is a single critical metric by which the health of a growth software business can be judged: "Bookings". However, in the SaaS world, "Bookings" is for suckers. It's ambiguous at best and often very misleading. To achieve better business visibility, most top performing Cloud companies focus on Annual Contract Value (ACV) or Monthly Recurring Revenue (MRR) -the combined value of all of the current recurring subscription revenue - instead of Bookings. We recommend companies actually take this a step further and track the forward view of Committed Monthly Recurring Revenue (CMRR). The CMRR differs from the MRR in two ways: firstly, it includes both "in production" recurring revenues of the customer and the signed contracts going into production. Secondly, it is reduced by "churn" which is the MRR expected to be lost from customers that are anticipated to be stopping service in the future. This single metric gives you the most pure forward view of the "steady state" revenue of the business based on all the known information today. *This is the single most important metric* for a Cloud business to monitor, as the change in CMRR provides the clearest visibility into the health of any Cloud business.

2. **Cash Flow.** To be fair, visibility into the current cash position and its likely changes has always been important for software executives, but it is even more critical for Cloud businesses because the working capital requirements are higher and the payment terms are often stretched out over the term of the contract. Given the high cost of capital for private Cloud companies, wise executives will often offer slight MRR discounts to customers in exchange for quarterly or annual pre-payment terms, and provide incentives for their sales force accordingly.

3. **CPipe** – **CMRR pipeline.** Because "bookings" is a poor proxy for business health, you must also adjust your sales mindset to focus on CMRR – including comp plans, reporting, and pipeline. Based on your business size and average sales cycles, you will need to determine which pipeline time frames (monthly, quarterly, or rolling forward 2 quarters?) and stages (all qualified and above? Probable? Only Committed?) are most appropriate, and whether to show the pipeline as a total number or a factored number. Regardless, consistency and transparency are critical. Have a consistent definition of CPipe so that you can track the changes over time. Over time, this should become a reliable leading indicator for elements of CMRR, Cash flow, and CAC.

4. **Churn.** It's very difficult and expensive to grow subscription businesses if you have moderate customer churn-- and prohibitive if your churn is high. Cloud executives need to track churn in detail from a "logos lost" (lost customers) perspective as well as the amount of lost CMRR. Whereas the largest legacy enterprise software companies literally made billions of dollars over the last decade with "shelf-ware" projects that never got fully implemented, project failure is not an option for Cloud businesses or the customer will simply turn you off, regardless of your contract terms. The top performing Cloud companies typically achieve annual customer renewal rates above 90% - with most of the churn due to death (bankruptcies) or marriage (acquisitions) - and over 100% renewals on a dollar value basis due to up-sells into this installed base.

5. **CAC Ratio - Customer Acquisition Cost Ratio**. How do you know if your sales and marketing investments are ultimately "profitable"? The answer to this question can be found through the CAC Ratio. We introduced this concept several years ago (and it is

similar to Josh James' "Magic Number" at Omniture/Adobe), but we've recently refined it further to include only NEW CMRR Gross Margin booked, to better account for businesses with slower growth and/or higher churn in these volatile markets. This single number is the key to determining your level of sales and marketing investment. It can be calculated simply by dividing the NEW annualized net gross margin added during the quarter (forget the effect of churn for now), by the sales and marketing costs of the previous quarter excluding any account management costs attributed to your "farmer" organization.

$$\text{CAC ratio} = \frac{\text{New CMRR (Q409)} \times 12 \times \text{GM\%}}{\text{Sales\&Marketing costs (Q409)} \; \textit{(excluding account management costs)}}$$

The CAC ratio determines how much of your sales and marketing investment is paid back within a year: a CAC ratio of 0.5 for example means that half of your investment is paid back per year, so it is a two year payback period. So how should you use this ratio? The punch line is that a CAC ratio of a third (0.33) or less is bad – this suggests it takes you at least three years to payback your initial customer acquisition costs – so you should slam the brakes on your sales and marketing spending until you can improve sales efficiency. At the other end, assuming your churn rates are also low, anything above one (1) means you should invest more money immediately and step on the gas (and please call Bessemer immediately because we want to fund you!) as your customers are likely profitable within the first year.

6. **CLTV - Customer LifeTime Value.** The CLTV is the net present value of the recurring profit streams of a given customer less the acquisition cost. A profitable business will have a positive CLTV. To make the calculation simple, let's assume that a customer generates $1 of annual recurring revenue for a company with a CAC ratio of 1.0, a 70% Gross Margin and 10% each of R&D and G&A costs. The $1 of revenue will generate $0.7 of gross margin and $0.5 of profit each year ($0.7 less $0.1 of R&D and $0.1 of G&A costs). Over 5 years, this customer will generate $2.5 of profit (5 years x $0.5/year). A CAC ratio of 1.0, means a $0.7 upfront acquisition cost, making the CLTV equal to $2.5-$0.7= $1.8. This is equivalent to ($1.8/5) = $0.36 of annualized profit or 36% profit margin. The calculation can be refined with a better allocation of the S&M costs (part are used to support current customers) and by discounting the profit streams (in this example, a 15% discount rate would reduce the CLTV to $1.23 or 25% annualized profit margin). For young companies, it may be more of an art than a science to estimate the lifetime of the customer as your churn data is still limited, but we'd conservatively take 3-4 years for SMB customers, and 5-7 years for enterprise customers.

Your specific business is likely to have additional "key" metrics that are worthy of showcasing on the top level executive dashboard, but we have found these six to be pretty universal across the vast majority of Cloud businesses. You will find yourself reviewing them at different frequency levels: CMRR, Cash Flow, CPipe and Churn tend to be highly dynamic and thus daily or weekly metrics, whereas CAC and CLTV are more strategic and thus longer term in their nature. Many of our top performing Cloud CEOs have modeled their executive team objectives and bonus plans around a subset of these metrics exclusively (typically CMRR growth, Churn, and Cash flow) and we would encourage you to consider doing the same.

Together, CMRR, Cash flow, CPipe, Churn, CAC, and CLTV make up the "6 C's of Cloud Finance." To learn more details about calculating and using these metrics, you can download "*CAC Ratio - One Number to Manage your SaaS S&M Spend" or "Measuring Growth Businesses with Recurring Revenues."* at www.bvp.com/cloud.

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BESSEMER CLOUD COMPUTING LAW #3: Study the Sales Learning Curve and Only Invest behind Success. Years ago, Bessemer was fortunate to invest behind Mark Leslie at Veritas, and as a result our firm became big believers in the Sales Learning Curve (SLC), a concept Mark helped to pioneer . The core concept is that software organizations often fail because they staff up their sales efforts too quickly, before the sales model has been refined. This concept is even more critical for Cloud businesses, given the large upfront investment required to acquire customers. Ramping up too quickly will burn precious cash reserve and could sink the business. This typically means you should hire sales reps slowly upfront, only focus on your core geography until your business starts to scale considerably, and separate your "hunters" and "farmers" as you start to ramp.

It takes at least $300,000 CMRR to climb the Sales Learning Curve. You should tune your model before you scale, which typically means stopping at three sales reps until you hit at least $300,000 CMRR and at least two of your reps are making their $100,000 CMRR quotas. You know you can profitably scale sales when a couple of sales reps are at an annualized run rate to sign annual contract values (CMRR x 12 months) equal to twice their fully-burdened cost of sales. In this case, fully-burdened is not just the salary, bonus, and benefits of the sales rep, but also allocations for sales engineering support, executive support, marketing expense, and professional service expenses associated with securing the customer.

For a direct, enterprise sales business model, these thresholds are likely to be around $80,000-100,000 CMRR (approx. $1-1.2M annualized), and for tele-sales models, this may scale down to $60,000-75,000 MRR ($720,000-900,000 annualized). It is usually time to accelerate sales hiring when at least two out of three sales reps are hitting quotas at these numbers, and the business has achieved some scale to suggest that the processes are repeatable- at least $300,000 of CMRR. The "repeatable" aspect is critical: too often companies scale their sales force aggressively after their first senior rep is getting traction in the market and then quickly realize that the new hires struggle to sign their first deal because they don't have three VP's and the CEO alongside them.

You should also separate your "hunters" and "farmers" and pay them all on CMRR growth. As soon as you have climbed the Sales Learning Curve and have a sizeable customer base, you should supplement your sales force with renewal-oriented account managers. When a Cloud company starts to hit the sales inflection point, it is important to keep the new business reps (the "hunters") busy with finding new deals, while a team of account managers (the "farmers") tends to the established customers.

Both teams are critically important for the health and growth of the business because CMRR is a function of new sales net of churn from your existing accounts. Therefore, you should have dedicated experts for each of these two revenue groups as soon as is practically possible. Once a company has a few sales reps achieving quota and a significant customer base, it is time to hire dedicated account management experts who are compensated to focus exclusively on customer service, renewals, and up-sells. The compensation plans will drive behavior, so it is vital that you structure the sales and account management plans to align with the key metrics of your business: CMRR, Churn, and Cash flow. The new account team should be paid on new CMRR with a standard deal structure (such as a one year deal, with quarterly pre-payments), and incentives for more favorable cash flow terms (such as multi-year pre-payments). You should think of account management as a sales function, and that group should be compensated in a similar fashion – but modeled on your CMRR and churn assumptions instead of a new CMRR sales quota.

To create a repeatable sales process, focus is also critical, which typically means that you should restrict yourself to your core market. If you're based in North America, prove your business in North America first. Only after reaching $1M in CMRR should you consider hiring European sales and services execs behind customer demand. Save Asia for post-IPO. You can think of this as a "bowling pin" strategy on a geographic basis, or good military strategy by avoiding concurrent wars on multiple fronts, but it's also good business strategy for Cloud Computing.

Almost all businesses will look to go global at some point if they continue to grow. But Cloud vendors face more barriers to globalization than traditional software companies because you can't just localize the UI and ship a new CD to some remote country. Given the different architecture and high service level expectations in the Cloud industry, companies are faced with questions about latency, data access and security through replicated local datacenters, in-country customer support personnel, packaged integration with other regional software and Cloud products, and similar issues.

Simply put, North America is a massive market with a rising tide around Cloud. There is no need to go global early and force this cost and complexity upon your organization. In most Cloud sub-markets, we find that Europe is roughly three years behind the US in adoption, and Asia is slightly behind Europe – although we have recently seen some interesting pockets of activity in Japan and India that may be accelerating. A rough rule of thumb is that you should look to pass $1M CMRR ($12M Annual Contract Value) before even considering Europe, and even then you should let customer deals pull you into the region as you incrementally hire sales and services professionals. Unless you have some extremely unfair advantage in Asia, wait until Europe is a clear home run before even considering opening up a sales war on another front. Your default position should be to consider Europe as your pre-IPO growth story, and Asia only after you're a high-flying public company.

Finally, do not confuse any of this with a message to build your business slowly or to under-invest in sales or marketing. Quite the opposite! The 6 C's of Cloud finance and the Sales Learning Curve are tools to help you know when and how to invest aggressively to maximize the business's long term value creation with the least dilution for you as the executive team. If the metrics are strong, you will be able to finance the business at very attractive terms. You will actually be destroying value if you don't invest behind success when the ROI is strong!

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BESSEMER CLOUD COMPUTING LAW #4: Forget everything you learned about software channels. The internet is your new channel and Technology Enabled Service providers are among the few partners that actually care if you succeed.

Unfortunately many software executives have spent years building deep relationships with executives at the major software and integration companies like IBM, Oracle, HP, and Accenture…only to find they aren't much help to Cloud businesses. Cloud products, by their nature (and luckily for customers!), do not pull through sizeable amounts of professional services, hardware, or infrastructure software, so none of these traditional vendors will really help in selling your product. Channel relationships are very hard for any small company to establish even when interests are directly aligned, but it is practically impossible given Cloud's restricted value proposition to the SI and ISV community. Therefore, it is still the case that most Cloud businesses have to be comfortable with the fact that they will live or die by their ability to sell directly.

However, there is good news to more than offset this loss of traditional channels. The internet is the new channel. The biggest sales gift of the internet is direct access to your customers. Laws 5 & 6 highlight related elements of this new paradigm, but you now have the ability to reach these customers directly. It is now possible to reach customers in a 1:1 fashion as never before, with freemium models, limited trials, access-based pricing, and very low friction processes overall, giving the nimble startup a sizeable advantage over many of the traditional incumbents.

For businesses that are successful selling directly and believe they can still achieve some leverage through more traditional channels, we have seen some encouraging signs within *business services* channels, i.e., partners that provide technology enabled or managed services to the same customer segment and can enrich their offering by adding a Cloud application. These business services channel partners range from marketing agencies to payroll providers (such as ADP) to accounting firms and have started to understand the power of Cloud when many of the ISVs and SIs do not. We have also seen the emergence of a new generation of smaller, more nimble and Cloud-savvy SI firms (like Appirio) that have started to extend their set of partnerships to late stage private companies.

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BESSEMER CLOUD COMPUTING LAW #5: Build <u>Employee</u> Software. Employees are now powerful customers, not just their managers! We're witnessing the "Consumerization of Software" so focus on ease of use. The gig is up. Pandora's box is open. Your customers all now know that software doesn't have to suck anymore. They use rich internet applications including Facebook and Skype to communicate with their friends; they use LinkedIn to manage their business networks, Google or Wikipedia/Wikia to find accurate online content, Yelp to find restaurants, and Travelocity to book flights. Your potential customers are now looking for similar "cheap and cheerful" products in a violent revolt against the years of oppression by the likes of SAP and Oracle.

Products will now see rapid adoption by virtue of being intuitive, aesthetically appealing, and dynamic as opposed to deep and complex. Customers no longer require you to capture every use case or business need in your product, and they're willing to forgo considerable flexibility in return for rapid on-boarding, progressive discovery, and context-sensitive help.

Individual employees and mid-level managers can now take out their corporate credit card and expense products, and are becoming direct consumers in the process. The best possible way to land a large enterprise customer is to call up the CIO and say "we're excited by how much you like our product and were surprised to note that we now have several hundred users of our product within your corporation. We wondered if you were interested in rolling these into an enterprise license with the administrative dashboard, integration to your other systems, coordinated billing and provisioning?" Many Cloud companies are doing this with great success.

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BESSEMER CLOUD COMPUTING LAW #6: By definition, your sales prospects are online - Savvy online marketing is a core competence (sometimes the only one) of every successful Cloud business. You sell a product that requires an internet connection and a web browser for access, which means your prospects are online! Numerous studies show that your customers are now doing most of their primary research online, and this should not surprise you. As a consumer, you wouldn't imagine buying a car, making an offer on a home, planning a vacation, or completing other large purchases without doing some research online. The same is now true for executives at your target customers. You should therefore be aggressive in marketing to them online.

This is a clear example where business-to-business (B2B) marketers need to learn from their business-to-consumer (B2C) counterparts. The most innovative B2C companies are lead generation machines, leveraging search engine optimization (SEO), viral marketing, search engine marketing (SEM), email marketing, and other technically-advanced methods. Yet many B2B companies don't have a clue.

The incumbent technology leaders like IBM, Oracle, and SAP, have done very little in online marketing, and thus have given their smaller challengers a huge opportunity. Private Cloud companies have so many disadvantages against the larger incumbent vendors that it is imperative that they exploit this potential advantage. Whether they use an automated product like Eloqua or a team of marketing analysts and spreadsheets, online marketing and demand generation is simply a "must have" for Cloud companies.

In this new era, the creative elements of marketing are becoming secondary and quant jocks and analytical wizards are starting to take over the CMO and VPM positions. At the marketing executive's fingertips should be detailed reports showing pipeline sources, costs per lead, funnel conversion rates by stage, costs per acquisition by source and campaign, effectiveness by channel, and so on. If you are the CEO or a Board member, you should review these reports closely and make them the basis for assessing marketing effectiveness and performance.

The most advanced marketing executives are also starting to embrace social media and to do multimodal attribution analyses. Customer and prospect conversations are no longer defined by website text, email messages, and sales discussions. Forums, Twitter, Facebook, LinkedIn, and dozens of other social media tools constantly facilitate discussions about your market, your competitors, and likely your company and product. You need to get into position to monitor and help define these discussions, and the most savvy marketing teams will use this to their considerable advantage.

Similarly, strategic marketing executives realize that the last touch point is often not the primary value driver for a lead. If a prospect typed your company name into a Google search box and happened to click on the paid link instead of the organic link (as is often the case), it would be foolish to credit SEM for this conversion, although most tools typically will. The customer was specifically looking for your company because of previous brand exposure, and your processes (likely with the support of some of the new tools coming to market) need to evolve to the point where you can better understand this behavior and attribute this credit to further improve marketing effectiveness.

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BESSEMER CLOUD COMPUTING LAW #7: The most important part of Software-as-a-Service isn't "Software" it's "Service"! Support, support, support! The only acceptable reason to lose a customer is death (bankruptcy) or marriage (acquisition). Every Cloud company is in the service business, and therefore your customer service can be the difference between failure (churn) and huge success via high retention and up sells.

One of a Cloud business's most valuable and least appreciated assets is the detailed usage statistics of its customers. For years, product marketing and product management groups in license software businesses have attempted to guess at the behavior of their customers. Despite heroic efforts, it was very hard to truly know how customers used the product on a detailed level and to incorporate this feedback in the major annual releases. Cloud businesses should instead learn from their consumer internet peers, by taking advantage of their web application architecture to analyze detailed customer usage data, use a/b test variations, iterate on small details of a page or a feature, and evolve the product each and every day.

Basic proactive monitoring for likely churn or up-sell opportunities is too simple not to do, and all Cloud businesses should do it well. You already know who logs into your product, how often, what they do inside the product, and what results they achieved. So now you need to track the key usage metrics and measures, and create internal dashboards to know which customers are getting the most value (potential up-sell candidates!) and which are likely to churn (time to intervene proactively!). Work with your marketing team to automate "low usage" reports internally, and send low usage escalation emails to your customers requesting an explanation of the behavioral changes. As you get more insight into the issues, you may want to consider techniques like expanded online training or even unlimited subscription-based training (as many leading SaaS companies are now doing) to drive adoption and awareness.

It is likely that your Cloud business will experience system outages over time. As long as you are keenly focused on backup and disaster recovery and thus avoid a data loss, these will not be fatal. How you handle these outages, however, can either further endear you to your customers or send them running into the arms of your competitors. Transparency is key. Salesforce.com took a lot of flak early for their outages, but they took a weakness and made it a strength by implementing their trust page (www.trust.salesforce.com). Different methods will be most appropriate at different stages, but a good rule of thumb is that you should be open, proactive, and honest with your customers in communicating these outages and their causes.

In addition to many of the "traditional" metrics that still apply for account management (customers managed per rep, churn metrics discussed earlier, and so forth), some companies are starting to construct efficiency ratios for account management. Our favorite thus far is the value of all of the margin renewed in the quarter, divided by the costs of those renewals. The equation to calculate this is [MRR dollars renewed/grown in the quarter x GM x 12 (to annualize revenue), divided by all account management costs incurred in the quarter for these renewals] However, it is premature to consider metrics like this as "best practices" in the market, so we've resisted the temptation to promote one to a top level executive dashboard. This is a quarterly number, but you will obviously want to look over a longer period (such as a trailing year) for businesses with high seasonality.

Given the growth of Employee Software and the fact that many customer orders are starting very small and growing very large over time, you may find that up sells from account management become more critical to your long term business model than the initial sale itself.

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BESSEMER CLOUD COMPUTING LAW #8: Leverage and monetize the data asset. While Cloud Computing is about providing a subscription service to your customers, one of the happy consequences is that you end up hosting their data. This becomes a critical asset that you can monetize by increasing the value of your offering; by leveraging it across your customer base in the form of benchmarks; or for specific businesses, by using the data to generate leads (within the contracted obligations). In these difficult economic times, where prices are under pressure and customers are tightening their budgets, data can be a difference maker.

As a Cloud Computing service, your company captures a lot of business information on each individual customer, information that is typically peripheral to the delivery of your service, but could be very interesting for your customer's executives. This information can generally be packaged and synthesized into a set of management dashboards that you can provide to your customers, potentially for an incremental subscription fee, or as a way to expand usage and increase product stickiness. Within our own portfolio, successful examples include the "CMO dashboard" (Eloqua), "Merchandising Dashboard" (Retail Solutions), "CFO Dashboard" (Intacct), and "HR Dashboard" (Cornerstone OnDemand) .

A second way to monetize your data is to identify the key performance indicators that you can derive from them – typically the ones that you have identified for your executive dashboards – and develop benchmarks across your customer base. These benchmarks can be customized along several dimensions (e.g., by company size, sector, geography) and be provided separately to your customers and even included in the executive dashboard. One of the early companies to sell benchmarks was Concur, the leading public company in the expense management space. With Concur reports, customers can compare their travel costs and business expenses against their peer group and track the evolution over time. We believe this "data-as-a-service" model has a lot of potential and will become more prominent as companies mature and need to find additional revenue streams.

Finally, another way to take advantage of your data is to use it to generate leads. While we recognize that this may not be possible for many of the B2B businesses for obvious reasons, this practice has proven to be successful for the lower end of the market, including small businesses and consumers. A company like Mint for example (now part of Intuit), even based its business model around it. Mint launched a SaaS financial application for consumers, competing against Quicken, but while the Quicken and Quicken Online business models used a license or a subscription fee, Mint was free and generated revenue by using its consumer insights to generate leads that were sold to service providers. For example, if Mint identified that your savings account had a 2% rate, it would notify you by email that another bank could offer you 2.5% and sell your click (or whatever action you would perform if interested) to a provider. Mint was so successful in this customer acquisition model that it ended up being acquired by Intuit in 2009 and will now replace the Quicken Online product.

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BESSEMER CLOUD COMPUTING LAW #9: Mind the GAAP! Cloud accounting is all about matching revenue and costs to consumption…well, except for professional services!

Cloud computing is fairly different from traditional enterprise software and, unfortunately, the accounting here confirms the rule. After seeing our portfolio wrestling with GAAP accounting practices and seeing public companies like Taleo restating their financials because of their alleged aggressive stance on revenue recognition, we thought this issue earned the right to be included in the "10 Laws." If you are a Cloud Computing CEO or CFO – even if you do not take the London tube every morning – we recommend that you "Mind the GAAP"! Before digging into some of these issues, we need to highlight that this paragraph is just scratching the surface and is not meant to replace the counsel of a certified professional.

Typically, Cloud Computing revenue is composed of two elements: subscription services and professional services, including implementation and training. Let's tackle first the subscription revenue. In the old days of Enterprise software, the license revenue could be recognized when the CD was shipped, as software was comparable to a product – like any box you can buy at Fry's. This was easy and intuitive as the revenue recognition was generally aligned with the cash collection. For a recurring revenue model however, the world is more complex. Even if the cash is collected upfront, the revenue needs to be recognized ratably over the lifetime of the contract. In addition, the revenue recognition cannot start before the service goes live, to ensure that revenue will match consumption. So, if you sell a product today, bill the customer upfront for one year with net 45 days, but need 60 days to implement the service and go live, you will have collected one year of cash, but won't be able to recognize any of it before the 61st day. This explains why the GAAP revenue lags the CMRR as we have discussed earlier in law #2.

Now, let's look at the professional services side. Initially, some companies, using the rules of Enterprise software, opted to recognize professional services as they were delivered. For example, if a customer paid $100k of professional services to get the subscription service going over a period of two months, the company would recognize the $100k ratably over these two months. Unfortunately, things are not that simple and this is (partially) why Taleo had to restate its financials. According to GAAP, professional services for recurring revenue businesses are tied to the subscription service, and therefore cannot be accounted for separately. In this respect, even if the professional services are delivered only over the first few months of the contract, the revenue recognition needs to match at least the length of the contract. Increasingly, accounting firms are going further and recommending that the revenue should be recognized over the ***lifetime*** of the customer. The notion of customer lifetime is not easily defined, but it means the revenue recognition of the initial implementation services can be amortized over 5 or 6 years if your churn is low. GAAP is supposed to match cost and revenues and this rule does not exactly support the argument, but that is how things stand at this point.

There is one exception to this rule that is worth mentioning: if you sell a professional service (e.g., training) at least 3 months before or after the initial/renewal date of the contract, then you may consider recognizing it as it is delivered if you can prove that it is not associated with the delivery of the subscription. This "rule of the 3 months" is just empirical, but some of our portfolio companies are using it and it has passed several audits from the "Big four".

Finally, we would like to point out another element of GAAP accounting that will be useful if you consider raising venture debt. While it is better to avoid any financial covenants when raising debt, it is not always possible and one of the covenants that bankers like is a minimum "Quick ratio". If that is the case, you need to specify that the deferred revenues (which show up as a liability in the balance sheet) *should be excluded from the quick ratio*. Getting upfront payment from your customer is typically a good thing for the business and you do not want to have to defer your payment terms just to avoid triggering the quick ratio covenant.

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BESSEMER CLOUD COMPUTING LAW #10: Cloudonomics requires that you plan your fuel stops very carefully. There is no denying that the cash flow characteristics of a Cloud business are wonderful in the long term, but can be lousy in the short term. Cloud companies require you to fund research, development, sales and marketing upfront in return for a multi-year stream of revenue. This typically demands enough investment capital (over stages) to fund 4+ years of runway before a company can achieve positive cash flow (GAAP profit is even longer). Imagine you are flying a private plane from Silicon Valley to Wall Street (which sometimes is the figurative or literal goal), and you need to stop a couple of times for fuel (investment capital) for the trip. It is critically important that you plan your equity and debt financing events in advance to maximize value and minimize dilution.
There have been many promising Cloud startups that stepped on the gas too early and were wiped out as a result. Always model the business with a comfortable cash cushion and recognize that most Cloud businesses paradoxically consume more short-term cash as growth accelerates. As a business, it is critical to weigh forward investments carefully. Cloud businesses typically require multiple rounds of investment and a good amount of capital. For example, it took $126m to NetSuite to go public, $66m for DemandTec, $61m for Salesforce and $45m for SuccessFactors.

We believe that the best second generation Cloud businesses may be more efficient than many of their predecessors as they leverage Cloud services and shift many of their costs to variable models, but in almost all cases, significant capital will still be required to build a dominant Cloud business. If you plan these stages thoughtfully, you will be able to minimize dilution by progressively decreasing your cost of capital and mixing seed capital with venture capital and, eventually, debt before attracting public market investors. As private investors and public acquirers become more Cloud savvy, multiples of CMRR will likely become the primary valuation metric.

Finally, don't let the volatile economy "cloud" your judgment (sorry, couldn't resist). Trust your metrics and your dashboard. You can't drive by the rear view mirror (GAAP Revenue), but if the 6 C's show strength, then it would actually be irresponsible not to invest aggressively in growth. Great businesses are built in all market conditions, and tough markets are often the best opportunities to gain market share. And please call us at Bessemer as we'd love to be your partner and join you for the path ahead!

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Bonus Law: You can ignore one or two of these rules, but not more - Great companies innovate, but pick your battles!

You might be reading this and saying to yourself, "But wait - we've got a great channel partner that is going to take us to the moon!" or "I took an early chance in Europe and it's now driving the majority of growth for my entire business." To which we would say "good for you!" Nothing is absolute, and we certainly believe it is possible to ignore one or two of these core tenets and still succeed.

In fact, several of the companies we have worked with have also chosen to break one of these laws at some point in their lifecycles with success. Even within our current portfolio, a couple have made early channels start to work in scale, one has enjoyed success with an early bet on Europe, and one is actually having a huge amount of success with a hybrid model.

If you find yourself questioning several of these Ten Laws, however, it's probably time to step back and take a hard look at your business. As former Cloud CEOs and investors ourselves, we have learned the hard way that much of the battle is just learning from the mistakes of those who went before us. In our analysis of more than a hundred Cloud businesses, we encountered several successful companies that were on the borderline with one or two of these laws, but none that challenge several of them.

We hope that you can benefit from some of these best practices we've learned through the years and these "laws" can help you run your Cloud business more effectively! If you have thoughts, edits, or additions, please send them over to cloudvc@bvp.com as we always welcome new input!

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