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InishTech Software Monetization Services

Transitioning your Software Business to SaaS

An InishTech Whitepaper

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1. INTRODUCTION

It is interesting to note that within the space of a single decade, we are witnessing not one but two seismic shifts in the world of computing that are changing the face of the software business beyond recognition.

The first is the global shift towards mobile computing – a trend being driven by the growing ubiquity of smart mobile devices available to consumers together with a dramatic improvement in the quality and capability of wireless transmission networks.

The second shift is cloud computing – a trend that is being driven by the relentless spread of easily accessible hi-bandwidth internet access “for all” coupled with a gradual maturing in the IT business beyond the old client/server model that has created the conditions favorable for the cloud. As the cloud is happening “behind the scenes” it will probably never enter our collective consciousness like mobile has – although by any standard of measurement it promises to be even more dramatic, more disruptive and more significant for the computing industry than the mobile revolution.

2. CLOUD COMPUTING

So, what is cloud computing? In short, it's a better way of doing things. Traditionally, computing resources have been purchased, deployed and then consumed either on-site at an enterprise's own location, or remotely in a shared hosting centre. The enterprise usually owns the computing resources and sometimes even the networks over which they operate. This model is the equivalent of setting up your own power station in order to get an electricity supply. It is expensive to setup, and difficult to scale up and down to adapt to your changing computing needs.

The cloud changes all of this. Organizations no longer need to own or manage their IT resources. They simply access those computing resources over the web, from highly optimized data centers that provide everything as an "on demand" service - virtual computers / servers, data storage, communications & messaging capacity, network capacity and development environments. The benefits of the move to the cloud for organizations are clear and compelling – they can improve their computing infrastructure (in terms of power, speed, reliability, flexibility, storage capacity & automation) while reducing overall cost and facilitating worker mobility (anywhere accessibility).

So, instead of setting up your own power plant, the cloud provides you with the ability to get power on demand from the socket in your wall. This is the root of the terms "Utility Computing" and "On-Demand Computing" – starting to think of computing as a basic service, just like water, power, heating etc.

Cloud computing is generally considered to encompass services offered at 3 distinct levels: infrastructure, platforms and applications.

- IaaS (Infrastructure as a Service). At its most basic level, the cloud provides raw computing power & storage capacity to run and manage any public or private cloud application. Examples include Amazon Web Services, VMWare vCloud etc.
- PaaS (Platform as a Service) provides a platform, or runtime environment, together with tools with which to create, deploy & manage applications in the cloud. Examples include Microsoft Windows Azure and Google AppEngine.
- SaaS (Software as a Service) provides ready-to-go applications that reside in the cloud and use a combination of cloud based compute and storage services. Common examples include Salesforce.com, Windows Live & Gmail

2.1. What is SaaS?

Essentially, the SaaS model provides access to a software application as a service over the internet, where the application is typically owned, operated and managed by a third party and the customer using the application just pays for accessing that application. Some, but not all SaaS applications are also built on cloud-based platforms for greater integration, availability & scalability.

While the SaaS model of software delivery has been around for some time, to date it has been out of reach of most ISVs because it involved building a substantial computing environment on which to deploy the service. The economics of this requirement meant that SaaS was not viable for many, other than large well-funded ISVs with a compelling application requirement. The cloud computing revolution changes all that, providing a ready-to-go set of platform and service choices, making SaaS a realistic option for even the smallest ISV start-up. There is no doubt that ISVs need to move their business to the cloud in order to survive and thrive in the new environment, and rebuilding their applications for SaaS is the most appropriate way to harness the real power & potential promised by cloud computing.

3. SAAS, THE CLOUD & THE ISV

The Client/Server computing revolution of the 1980s and early 1990s created the technology leaders of today – Intel, Microsoft, Oracle, Sun, EMC - just as it sent several others to the graveyard – companies like Data General, CDC and DEC. The internet revolution has already added many new names – companies like Google, Facebook and Amazon. We can be certain that the cloud revolution will have the same effect. New unknown players will emerge, and household names will fade away.

The software business, and the ISVs that operate within this fast paced world, will be changed beyond recognition by the advent of the cloud, because it changes everything about the software business is a single sweep – how software is built & maintained, how software is priced, licensed and sold, how software is used and consumed. This shift simultaneously presents an enormous opportunity for all ISVs and for those who choose to ignore it, a profound threat.

Industry analysts all appear to agree that the shift towards the cloud will be significant and that new business models will emerge rapidly (as they already are). What they don't agree on is the speed and scale of adoption. Gartner estimate that in 2011, 25% of new business software will be delivered as SaaS. For the established ISV with significant established on-premise software business, that is a serious statistic. That's a fundamental shift in the market which they need to be a part of.

IDC forecasts SaaS revenue to grow five times faster than traditional packaged software through 2014 and predict that by 2012, nearly 85% of net-new software firms coming to the market will be built around SaaS service delivery. Furthermore, they estimate that by 2014, 65% of new products coming from established ISVs will be delivered as SaaS services. So ignoring the transition to SaaS is not an option for ISVs. While the traditional barriers to entry have been significantly reduced with the availability of cheap cloud computing, the substantial opportunity that the SaaS model offers the ISV community comes with a number of significant challenges – not just technical but also organisational and commercial.

3.1. Why move my applications to a SaaS model?

Beyond the analyst's industry forecasts, why should an ISV consider transitioning his applications across to the cloud and adopting a SaaS model within his portfolio? What are the business reasons for justifying this investment & business realignment?

- **Incremental opportunity** – while ISVs can continue to target their traditional on-premise market segments, the addition of a SaaS offering will open up new market segments not amiable to the traditional on-premise/perpetual licence approach on the basis of cost or flexibility.
- **Global Market Access** – SaaS allows ISVs to offer the service on a 24/7 basis anywhere in the world. Unlike the traditional distribution approach there is no need to have local implementation and support partners. Expanding into geographically dispersed markets no longer requires significant upfront investment in traditional sales and marketing, and customer and technical support.
- **Innovation** – coupled with good engineering and operations practices, SaaS ensures speedy delivery to the market of new features and functionality. It aligns the ISV's business model with an Agile development approach, where incremental functionality can be delivered, and in many cases, begin to generate incremental revenue, as it becomes available from the development team.
- **Capex becomes Opex** – the availability of a SaaS offering changes the nature of the customer's purchasing and approval process from the rigorous and time-consuming practice required for significant capital investment decisions to the less demanding approval process associated with day-to-day operating expenses. This significantly increases the probability of a positive decision and reduces the timescale from sales proposal to revenue flow.
- **Incremental Revenue** – It is well documented that sales to existing customers are more profitable than to new customers. The nature of SaaS service offering makes it far easier to generate incremental revenue from existing customers by increasing the number of users/subscribers or by having them sign up for incremental functionality, avoiding the need to get approval for an enterprise-wide upgrade.
- **Revenue Predictability** – One of the fundamental differences from a business perspective for an ISV is that revenue flow moves from "lumpy" to steady

predictable subscriptions. While this is challenging initially from a cashflow perspective, it is beneficial once a planned level of subscriptions is achieved.

- **Quicker time to deployment and revenue flow** – the deployment of a SaaS model eliminates the long deployment and implementation cycles associated with traditional on-premise enterprise software systems. Because the software is offered as a service it also eliminates the need to support different legacy versions on customer sites.
- **Test Marketing** – With a SaaS offering, through flexible configuration, different feature sets and functional modules at different price points can be made available quickly without the administrative and technical effort involved in upgrading large numbers of on-premise installations. Such a facility allows product management and marketing to quickly assess what functionality customers really use and to analyse the usage patterns by differing market segments. This is a powerful competitive tool as companies seek to understand and respond to *real* customer needs and achieve first mover advantage.

3.2. Is my application right for a SaaS model?

SaaS, like everything else in life, is not all things to all people. Certain types of applications will benefit more from SaaS than will others. If your application demands one or more of the criteria below, it's likely you have a good reason to consider SaaS:

If your application needs high reliability	e.g. medical diagnostics or airline ticketing	If your application needs external storage	e.g. An application that archives data
If your application is collaborative	e.g. scheduling, rostering, gaming	If your typical customers	Don't have their own data centre
If your application needs scale	e.g. Social networking, e-commerce		Want to avoid IT spend
If your application has peaks and troughs	E.g. Online ticketing	If your application must fail or scale fast	e.g. Start-ups / large ISVs with high levels of innovation
If your application is purpose or event specific	E.g. Marketing campaigns or mobile apps	If your application has a diverse range of clients	e.g. Mobile or tablet applications

3.3. Moving to SaaS: Business impact for the ISV

Moving to a SaaS model represents a very significant strategy shift for an existing ISV who has a successful business based on traditional on-premise deployments with perpetual / up-front licensing & payments. It requires a sound business case, careful planning and flawless execution. The transition has implications throughout the organization; development, product management, sales, support and finance.

Some of the implications that arise for the different functional teams are as follows:

- **Development & Operations** – in a SaaS scenario the nature of the development cycle needs to change; the year long development cycle which culminates in a significant upgrade once a year is not appropriate. Focus must be on maintaining a continuous build/deploy/support cycle, geared to delivering a stream of high value functionality on a frequent basis. In many cases this involves deploying an Agile or hybrid approach rather than a more traditional waterfall one. Developers will need to master the technical requirements of their chosen cloud platform, be it IaaS or PaaS, and adapt to new and possible incomplete tooling. And finally, for ISVs that are used to shipping software to be installed on premise, there is the additional requirement to manage and monitor the application on a 24/7 basis.
- **Product Management & Marketing** – The SaaS model also provides significant opportunities for innovative approaches to product management. To take full advantage of SaaS it is important that product management, rather than being focused on the “big event” surrounding a major product upgrade once or twice a year, use the short development and deployment cycles to respond rapidly to market changes and to get new ideas to market quickly, resulting in shorter concept-to-cash cycles. This should be supported by encouraging direct/rapid customer feedback and incorporating this into the development/deployment lifecycle.

The nature of a SaaS service means that - for those ISVs who choose to deploy a flexible configuration, licensing and deployment service - product managers can quickly create new offerings (or SKUs) with features sets and licensing terms to target new or existing market segments. Best-in-class monitoring tools also provide marketing with highly granular, up to the minute feature usage intelligence that is just not possible with on-premise deployments. This allows marketers to understand and react to actual usage patterns at the SKU level in each market segment. The availability of such direct market intelligence allows ISVs to react quickly with reconfigured and new offerings and new pricing that is not feasible with on-premise deployment.

SaaS also changes the focus of the marketing role towards actively managing and nurturing the customer engagement from lead to sales-ready prospect through the use of service trials and “freemium” editions.

- **Sales** – The deployment of SaaS will in many cases have a significant impact on the role of the Sales organisation. The nature of the sale changes from a high value capital sale to one that is viewed by the customer as a day-to-day variable operating expense. This may have implications for the makeup of the purchasing team and influencers. SaaS provides the sales executive with selling tools, such as live service trials, that are not normally available in an on-premise scenario. Because ongoing revenue flows and a significant portion of future growth may be tied to existing customers, good account management increasingly becomes an imperative for the sales organisation.
- **Support** – With the ISV responsible for deploying and supporting the “total” service good customer support is critical to the adoption of SaaS. In addition to dealing with the usual user and technical issues related to the application and its deployment environment, the support team must also be able to respond to issues around the broader account management issues e.g. account activation, upgrades, billing etc. If the SaaS service is being offered in several markets on as a 24/7 basis, the ISVs must address the out of normal office hours support requirement. The use of self service tools for provisioning, activation and managing of services by the customer offers both an enhanced level of customer satisfaction and reduces support costs.
- **Finance** – Revenue and cash flow forecasting and planning change significantly as an ISV transitions to SaaS from on-premise. The large “lumpy” receipts of cash from on-premise deployments and the annual payment in advance of substantial maintenance charges are replaced by a more predictable lower level of receipts throughout the year. Planning for this and understanding the working capital requirements during the transition period are particularly important.

This detailed understanding of the impact on the total organisation should be built into a robust business case, both to support the decision to move to SaaS, and for the subsequent detailed implementation plan. The true costs and benefits, and underlying assumptions, should be fully documented. A key issue to be addressed in the implementation plan is the fact that for most ISVs they will need to continue to maintain and support the on-premise business model for a transition period that may last three to five years.

3.4. Enabling SaaS for the ISV – Key Elements

In a traditional on-premise model the development team usually delivers an application solution which is deployed on the client's site. In the case of a SaaS solution the core application is part of a larger ecosystem. The SaaS service offered to the customer requires all or most of the components of the ecosystem. The ISV who is responsible for delivering the "total" solution must make sourcing and make-vs-buy decisions for each of the components that make up the total service. The main service components that are required to complement the core application to deliver the total service are:

- **Computing platform** – with the ready availability of affordable commercial cloud computing platforms, for most ISVs this reduces to the selection of a either an IaaS or PaaS offering. Considerations include costs, functionality, API support, choice of language/technology, degree of lock-in, etc. The availability of tools for the platform will also influence the decision.
- **Platform Tooling** – Platform tools fall into two categories - application development/deployment and application management/monitoring. In many cases the existing tools used by engineering will not support SaaS application development and deployment and may need to be replaced or augmented. In a SaaS environment deployment, management and monitoring tools take on an increased importance; many ISVs of on-premise solutions will have limited exposure to such tools. The quality and maturity of the tooling bundled with cloud platforms varies greatly but in most environments an increasing range of third party management and deployment tools are becoming available.
- **Licensing and IP Protection** – In a Cloud and SaaS environment licensing and IP protection take on a new dimension. Frequently in the on-premises situation an organisation-wide or site-wide perpetual license is issued for a fixed upfront license fee with infrequent updates with relatively long lead times. The ISV has little interest in the number of users, or the degree to which any particular functional modules are used. On the other hand, in the SaaS environment the revenue flow from any particular customer may be directly tied to the actual number of users, feature sets used or other usage parameters. The ISV also needs to be a position to quickly and seamlessly up-sell customers, from basic starter packs to more advanced offerings that add more users, increased functionality and/or additional resources. Finally, while a trust model may be deemed appropriate for many on-premise customers, strong IP protection is essential when deploying in a Cloud/SaaS environment, where in a SaaS deployment the software is being run in an environment that is not directly under the control of the ISV.

- **Customer Provisioning and Activation** – Unlike the on-premise deployment, where one typically has a “big bang” go live date at a specified location where most users are given access to the system, the nature of the SaaS model lends itself to a continuous cycle of provisioning and activating new users or activating access to additional feature sets for existing users. The geographic spread of users and the frequency makes it imperative that this be automated, ideally allowing the customer to self provision and activate.
- **Payment Processing** – With SaaS, efficient subscription management and, in particular, payment processing is critical to success. In the SaaS model the nature of payment and the resulting processing changes from a very small number of large transactions, to much more frequent smaller value transactions. The diverse geographic spread of the customers and the cost of pursuing non-payment of small amounts due is another consideration in deciding how payment processing should be handled. Depending on the nature of the customer base it may be necessary to support a range of billing and payment options. Automated payment processing integrated into the provisioning and license management systems is highly desirable.

Because of the diverse range of components required to build, deliver and support the “total” service, any attempt to develop the total solution in-house is extremely challenging. In most cases it is more appropriate for the ISV to focus on the core application – the source of his real added value and competitive advantage – and to use best-of-breed suppliers for each of the supporting technology services.

3.5. The role of software licensing in the Cloud

What was generally regarded as “software licensing” – the process of conferring entitlements on people & entities to use a particular software program – is a term that retains an enduring association with the physical concept of a “license” – in other words a document - and furthermore is tied to the concept of ownership. As we know, the cloud removes both the need for physical software and also for software ownership, so does the term licensing have a place in the cloud?

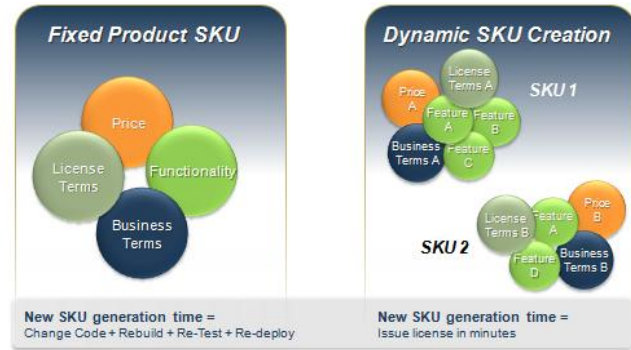
Of course it does. The need to manage *who* is entitled to use *what*, and the process of tying those rights into access control, consumption metering and service billing is greater than ever. It probably just won't be called “software licensing” any more. The label will change, but what is happening behind the scenes will remain the same, in fact will get a lot more sophisticated. So, while a move to SaaS can be seen by the ISV as a necessary defensive action to respond to changing market conditions, it should be also viewed much more positively as an opportunity to address new markets in new ways.

One of the main attractions of the SaaS model for customers is the ability to purchase software in a way that best suits their business, i.e. purchase only what is needed, as needed, for selected users, on selected devices. On the other hand a SaaS offering allows an ISV to quickly react in a targeted manner to market demands by introducing new features, license models, and payment terms as and when required by different market segments.

To maximise the benefits of moving to SaaS the ISV needs to be able to quickly change how their product is packaged, purchased and delivered. This significantly reduces the lead time and complexity in initial deployment and subsequent upgrades of a customer instance, compared to an on-premise offering where substantial onsite work is undertaken in installation, configuration and training, frequently in a one-off inefficient way. Flexible licensing, enablement and activation systems have a significant role to play in allowing the ISV to deliver the desired business agility.

A good licensing management system allows the ISV to move away from the restriction of “one size fits all” approach to both packaging and licensing. In addition to allowing the ISV to create new feature sets it should support multiple licensing models - perpetual and subscription; instance or seat based, usage based, or combinations of the above, e.g. number of users together with a limit on the number of resources to be consumed. It should also incorporate dynamic SKU agility which enables the decoupling of the licensing management function from the core product development and operations activity, allowing customer-facing staff to define, create, and deliver different product offerings (or SKUs) across a range of billing and delivery options; ultimately providing the ability to customise the offer down to the individual customer.

Such an approach ensures there is minimal delay in getting new ideas into the hands of paying customers; this coupled with direct and rapid market feedback (based on real customer usage data) results in a significant shortening of the “concept to cash” cycle.



A licensing service should support the entire customer cycle from initial registration through subsequent upgrades – involving (ideally web-based, self service), registration, the full licensing activation, management and enforcement process, as well as on-going product usage monitoring. It is important that the licensing service provides real Business Intelligence on the various product offerings and usage patterns; with this real time information ISVs can react quickly to changing usage patterns or target new market opportunities with new offerings and/or new pricing as appropriate.

The licensing management system should protect revenue by ensuring that only those who pay for the application can use it and only in accordance with the license terms.

4. CONCLUSION

The Cloud promises to be the single most disruptive force to impact the software business, and the IT business as a whole, since the early days of client/server computing. Software as a Service, or SaaS is the primary business model ISVs will adopt in their transition to becoming a cloud software business.

There are many issues that should be considered by the ISV when considering the transition to a SaaS business model. The transition itself must be well planned and well executed, as it will doubtlessly impact all aspects of the ISVs business. The key service components required for enabling a SaaS business model include the base computing platform, the platform tooling, the license management & software protection approach, customer provisioning, activation & billing. On top of this are a myriad of business changes required to reinvent the ISV as a software service provider.

A central business challenge for the ISV in moving to the cloud will be in sustaining and growing their business through the transition and into the future. The continued monetization of their applications is of paramount importance. Adopting an effective approach that can link up software SKU creation, application entitlements, consumption metering, subscription-based billing and customer usage analytics will be a key business enabler that facilitates success in the cloud.

5. ABOUT INISHTECH

Founded in 2009, InishTech is an innovative cloud technology company specializing in software monetization, licensing & code protection services for ISVs (Independent Software Vendors).

InishTech's flagship SLPS service allows .NET software developers to take advantage of the market opportunity presented by SaaS by decoupling the licensing process from the core product development. This allows customer-facing staff to manage the definition, creation, packaging & configuration of customer offering across a range of charging and delivery options, and engineering to focus on core product development, working from a single code base.

The service supports total business agility and rapid response to emerging and changing market conditions by allowing the ISV to quickly offering different features, licensing and payment models in the way the customer wants to buy, when he wants to buy, anywhere in the world on a 24/7 basis. Demos, trials, time and feature-limited editions and light and full versions of the same application can be offered simultaneously from a single code base, enabling complete licensing lifecycle management for ISVs that have a large on-premise business and simultaneously wish to bring SaaS offerings to the market.

Automation of the entire customer cycle from initial registration, including via web-based self-service, through full licensing activation, management and enforcement process, to subsequent upgrades, as well as on-going product usage monitoring is supported. Integration with other operational back office systems is supported by a range of well defined APIs.

Patented code transformation technology offers the strongest .NET code protection available, protecting the software from theft, reverse engineering, tampering and misuse and goes beyond traditional obfuscation and encryption techniques, removing the need for hardware keys. The protection also extends to the licensing files and thus protects revenue by ensuring that only those who pay for the application can use it and only in accordance with the license terms.

For more information, please visit <http://www.inishtech.com>