

Optimizing Processes and Skill Sets for Cloud

Sage Cloud Partner Profitability Series

July 2017

Authored by:
Margaret Adam

Executive Summary

Why is Operational Efficiency in the Cloud Important?

Rethinking Standardization, Automation, Templates, and Tools

Rethinking Intellectual Property and Optimization

Rethinking Skills, Resources, and Enablement

Call to Action

Learn More

Executive Summary

Optimizing Processes and Skill Sets for Cloud is one of a series of ebooks written on the topic of partner profitability. It is intended to help Sage partners prepare for the global changes in the market for technology and business applications, caused by the growth in demand for cloud, specifically software-as-a-service (SaaS) solutions. It focuses on the need to take action in proactively adjusting your business processes, measurement and analysis tools, services practices, internal training, solution offerings, and IP assets to take advantage of the sea-change in the market for software applications and related services.

This ebook is specifically targeted at those individuals within the Sage business partner community with responsibility for the operational management, delivery of services, and strategic planning of your business.

We recommend taking the time to complete the [cloud readiness assessment tool](#) featured in this report. This will enable you to better understand how your organization is positioned in relation to your peers. After completing the assessment and reading the ebook, you will be able to perform a gap analysis to determine how the current state of your business compares to where you want to be and to devise a plan specific to your own requirements.

WHAT YOU will learn from this eBook:

1. Understand cloud profitability
2. How to keep your customers satisfied
3. How to on-board efficiently
4. How to keep your customers renewing
5. How you can differentiate through automation

This should be a blueprint to optimizing your cloud processes and skill sets in a phased manner by:

- Streamlining and standardizing your business processes, products, methodologies, documentation, and contractual practices
- Creating dynamic measurement of your business performance using key performance indicators (KPIs), common metrics, and introduction of analytical tools
- Internal hiring and training schedules to bring in the necessary skills to power the cloud business unit
- Development and nurturing of an internal culture of constant efficiency and productivity improvement
- Designing a portfolio of solution offerings and IP assets to differentiate the business and drive both efficiency and profitability

Why Is Operational Efficiency in the Cloud Important?

Operational Efficiency Underpins the Three Key Metrics for a Successful SaaS Business: Scale, Renewals, and Upsell

In IDC's reports on [partner profitability](#), [rethinking sales](#), and [rethinking marketing](#) we talk about how a successful SaaS business runs on three key metrics: scale, renewal, and upsell. We also introduce the principles of customer lifetime value and customer acquisition cost and why these are vital to running a profitable cloud business:

- **Customer acquisition cost (CAC)**, which is the sum of your sales and marketing expenses divided by the number of new customers added.

$$\text{CAC} = \frac{\text{Sum of all Sales \& Marketing Expenses}}{\text{No of new Customers Added}}$$

- **Customer lifetime value (CLV)**, looks at the number of customers in your SaaS install base (often referred to as cohort) versus your customer churn rate.

$$\text{Customer Lifetime} = \frac{1}{\text{Customer Churn Rate}}$$

To build a lucrative SaaS business, you need to be laser focused on keeping your rate of churn (losing customers) low while continuously acquiring new customers and ensuring the cost of acquiring those customers (customer acquisition cost) is kept as low as possible.

Your processes, operations, and service delivery mechanisms need to be designed to ensure customer satisfaction through delivering value in the most efficient manner possible. This is critical to efficient onboarding, delivering at scale and ensuring proactive renewals.



“Ultimately you need to get to a point in your SaaS business where you are able to make more profit from your customers than it takes to acquire them.”

Customers Demand Reliability, Security, Uptime, and Adherence to Regulation



Reliability and Uptime:

Cloud customers expect uninterrupted access to their online business applications. They also expect that maintenance updates, or new software releases, will be announced in advance and completed out of working hours. They will also expect application performance/response times to meet agreed SLAs irrespective of network or infrastructure issues. Service reliability is crucial for customer satisfaction, which is in turn crucial for customer renewal. So careful resource planning and ongoing monitoring of application performance and client satisfaction levels are paramount.



Security Across Multiple Domains:

Cloud and hybrid environments demand a new approach to security. Many organizations are concerned about the sensitivity of corporate data moving outside of on-premise applications and into a remote SaaS cloud environment. Additionally, modern SaaS applications enable accounting and other data to be available via multiple endpoints, including mobile devices. Many customers will be looking for reassurance that suitable device security/access control is available.

Depending on how critical your customer data is, they may require you to use encryption and ensure only authorized personnel gain access to sensitive data. Customers also need assurance that their business-critical applications are hosted in a physically and technically secure environment, with suitable backup, recovery, and maintenance capabilities and in line with local data regulations.



Regulatory Compliance:

Modern businesses have to ensure that they remain compliant with industry and national regulations. This is particularly prevalent in Europe, where a number of regulations on data privacy, transfer, and locality exist. A particularly prevalent regulation is the General Data Protection Regulation (GDPR) framework, which will affect every organization that holds personal data on any European individual. It is advisable to be ready to clarify how your cloud solutions will meet their immediate compliance requirements and how you will help them stay in step with changes in the future.

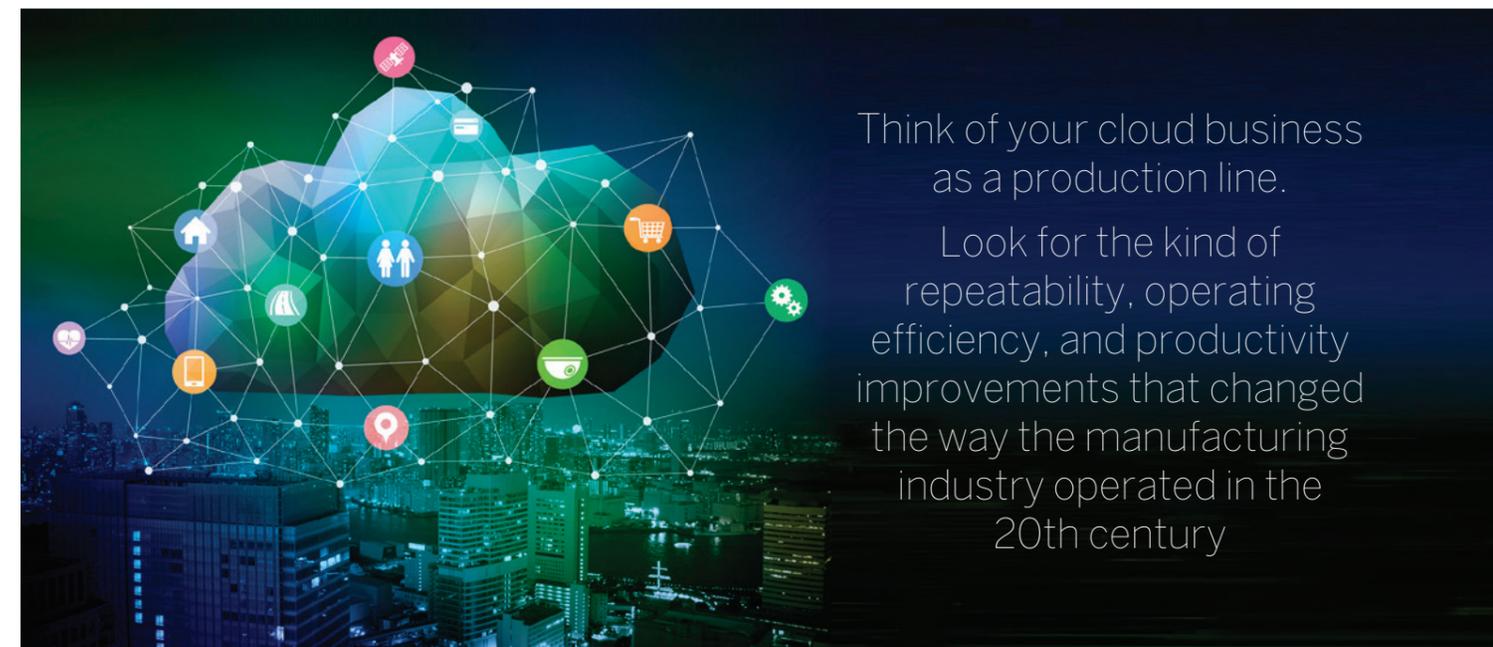
Efficiency Can Be Your Differentiator

During the Industrial Revolution the businesses that thrived:

- Analyzed the production process and looked for areas of improvement
- Identified operating efficiencies
- Removed unnecessary manual labor or wasteful activity
- Improved productivity through better sequenced, faster processing
- Looked for repeatable tasks, documented them, and removed duplication of effort
- Introduced automation wherever possible
- Constantly monitored processes and improved in the light of advances in the market, client demands, and available technology

From day one of your cloud business, instill a discipline of process workflow documentation, from marketing to pre-sales to post-sales support. Ensure that teams work to create, reuse, and adjust/refine their working processes. In this way, tried and proven standard methods can be used for each new client, and bringing new staff on board is faster and easier.

Remember, one of the key drivers of a successful cloud business is SCALE. To achieve the volume of repeatable client acquisition required, it's vital to remove any unnecessary repetition of tasks during client engagement. One of the easiest ways to do this is to be obsessive about identifying, documenting, socializing, and "mandating" the use of standard processes.



Think of your cloud business as a production line.

Look for the kind of repeatability, operating efficiency, and productivity improvements that changed the way the manufacturing industry operated in the 20th century

Rethinking Standardization and Automation

Four Ways to Rethink Standardization and Automation

Tight margins, the requirement for scale and efficiency in delivery, and the need to constantly adjust working practices mean that introducing automation into your cloud business will not only enable you to maximize revenues, but also deliver the faster, slicker, holistic, more productized/packaged solutions that will differentiate you from your competitors.

Make standardization attractive: Wherever possible, help your customers stick to the vanilla solution provided by the vendor. Moving away from the standard solution set increases cost for your client and probably your business too. Remember that your customers are looking to you for guidance. Promoting standard SaaS implementations and the use of industry standard tools and best practice implementation and support methods can make your pricing more competitive as well as being a differentiator.

Segmentation: Consider segmenting your offerings, prospects, and customers into different tiers based on ease of implementation. For example, customers that fit the standard package can be priced quickly, will use predictable implementation resource, and will require less planning and attention. At the other end, the more complex customizations may drive more long-term revenue, but the projects may need custom planning, development, and the provision of non-standard products and services.

Bundle and package standardized offerings: When everyone in your organization is working to the same hymn sheet, not only will it improve operational efficiency, but it will make it easier to sell your solutions. Marketing will be able to price and promote specific discrete software and services packages. Articulating choices and options to your customers and prospects will be simpler. Creating documentation and presentation materials will be easier. You will be able to include examples of your own differentiators as a partner/preferred supplier, whether that be process or IP. Using common terms and processes will also make internal communication faster and less error prone.

Specialize: Financial accounting is a universal “horizontally” focused application. But partners may decide to build “packages” of software and services to target specific industry verticals. This includes interfaces and/or specific functionality related to a defined industry. For example, interfaces could be to a business application or a data source often used in that industry. Taking this a step further, partners may set up a center of excellence, or CoE, for a specific industry, to include staff with a particular understanding of terms, practices, technology, and concepts in a specific vertical. This is a powerful competitive sales and marketing tool.

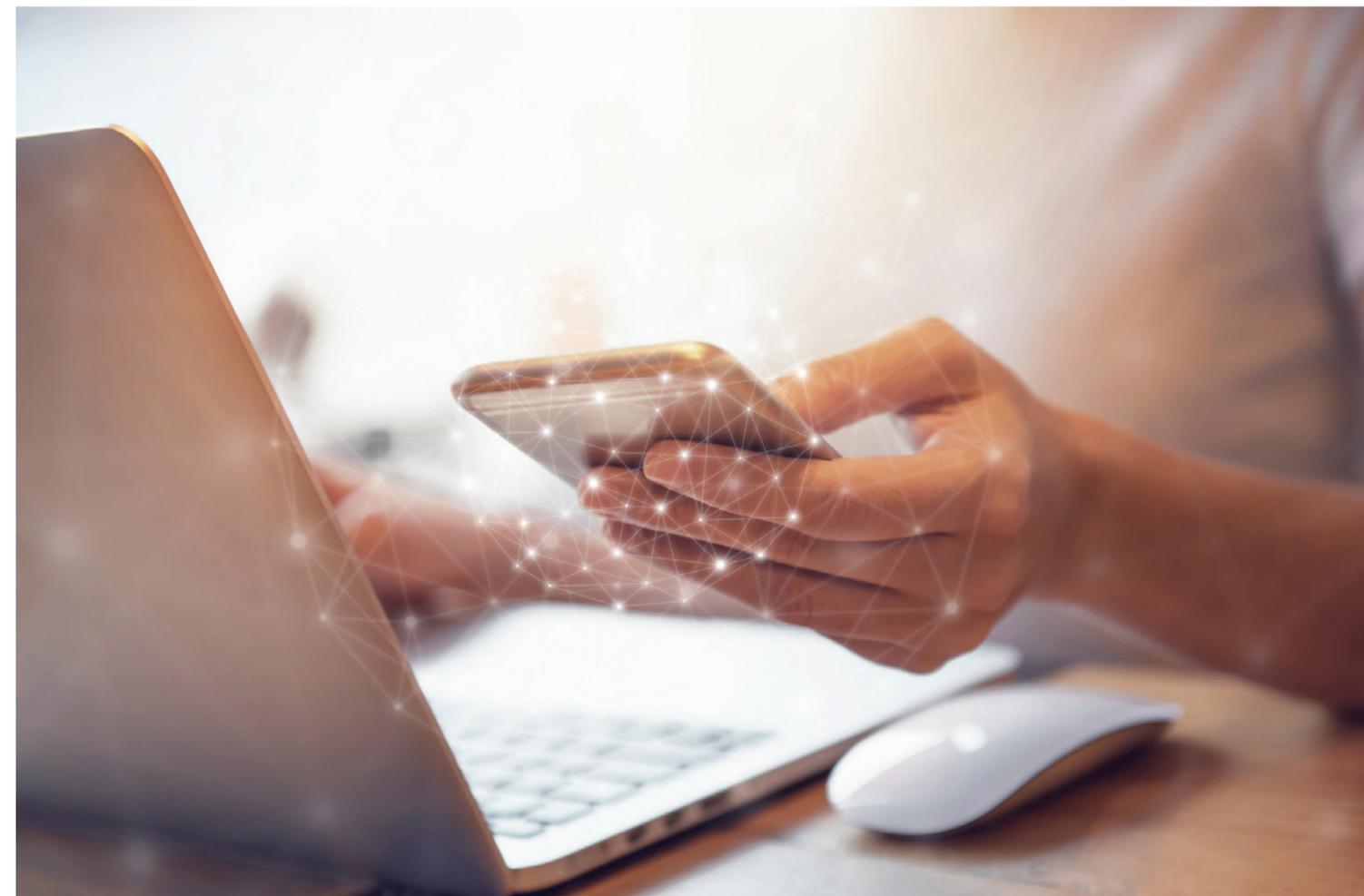
Rethinking Templates and Tools

Investment in Templates and Process Accelerators

As much as standardization is appealing, in reality, not all your customers will have identical business operations, processes, and solution requirements. Each new client may have some non-standard requirements, but there are certain issues that will be common to all customers — interfaces, data transfer/uploads, user training, and so on.

As you develop your cloud sales models, project estimation, planning and pricing rules, it's important that you create working reusable templates that can drive the behavior of your consultants, reduce project cost, and drive increased profit to your business. Document, reuse, and constantly tune questionnaires, scripts, onboarding schedules, and client dialogues to improve productivity.

Wherever possible, create preprepared templates to assist staff in guiding customers through the requirements definition process. This same template-led approach can be used to clarify, itemize, price, and document deliverables as part of the contractual agreement.



Use Third-Party or In-House Tools for Improved Productivity

Rapid application development (RAD) tools, code reuse, and the concepts of polymorphism and object-oriented programming have been around for a long time — all designed to cut the time taken to develop, maintain, and update applications, and to “clone” components across applications. That same paradigm should be used to use third-party tools, as well as your own home-grown software IP, to speed up projects and avoid reinventing the wheel with each client onboarding.



Use tools to automate as many client interactions as possible, from identifying initial purchasing requirements to pre-implementation, requirements gathering, training, application monitoring, service questions, and so on. Many of these activities can be handled online, minimizing the cost of human interaction.

There are many third-party tools on the market specifically targeted at cloud/SaaS projects — for example, in application development/customization, project management/documentation, application deployment, monitoring, CRM, customer service, and online training. Search the market and find the tools that will make you more competitive and profitable. Also, consider developing reusable tools, as part of your own cloud IP, that can be used to increase monthly billings or cut operational cost.

“ We have built a package that can be sold to many customers in a repeatable way, and that is easily attached to enable cross-selling and up-selling

Francisco Civit and Manuel Jimenez, Dos Control, Sage Business Partner, Spain



Rethinking Intellectual Property

Writing down the steps involved in doing a job or building templates for deliverables is the way to create intellectual property (IP). It’s as simple as that. It’s a way of preserving corporate knowledge and value and documenting specific skills that highlight your unique offer.

Leveraging Your Own Operational IP

- **Workflow models for processes in customer interaction.** For example, this could be in client acquisition, requirements definition/pricing, onboarding, project planning and services delivery, user training, support and query handling, or ongoing management service. In all of these areas, you can productize and document the processes, bringing efficiency and cost savings to your operations. In addition you can differentiate your offer from the competition by demonstrating and “selling” the value of your thorough, detailed, and systematic approach to engaging and working with customers that are new to cloud operations.
- **Software modules may be developed as part of a specific client project but be of value to other customers with the same challenges in terms of integration, functional enhancement, or other customization.** Business partners that operate with a mindset of repeatability and efficiency may come to contractual agreement with the client that enhancements are retained by the partner, as partner IP. You may choose to use this code to speed up delivery, or add functional value to future client projects. In some cases you may decide to productize and sell the code as a standalone software module.

“ Intellectual property is a profitability accelerator. Don’t underestimate the value of custom software and tools developed by your services teams. Remember the importance of reuse and consider each development project as a potential addition to your own IP. ”



Rethinking Optimization

Incorporate Measurement and Analytics

Put processes in place to monitor, record, and analyze the performance of your services operations. Build key performance indicators to align your operations with your profitability objectives — for example, compensation models that reward services management for improvements in areas such as:

- **Billable markup rate (BMUR):** the profitability of billable resources. This figure is calculated by dividing the mean billing hour rate by the mean hourly loaded salary cost.
- **Staff utilization:** hours on billable work divided by billable hours per person per year.

Schemes will need to be refined and adjusted, but having this discipline implemented will drive business performance.

Constantly Evaluate — and Take Action

The cloud business is dynamic. You need to constantly evaluate your business mix, identify which products and services are delivering profit and which aren't, and be brave enough to drop failing components.

Use analytical tools to identify hotspots in the numbers and take appropriate action. Embed the discipline of constant fine tuning of your systems and processes for maximum efficiency and profitability. Remember the “factory production” paradigm. Ensure that efficient processes are documented and standardized and that anomalies are acted on.

To do this, you need to be able to efficiently identify where to make changes and anticipate new drivers of future profit. Some of today's innovative products and services may become the cash cow over a few years. On the other hand, think about whether or not certain products or services are worth keeping or should be discontinued. Also ensure that you keep tabs on the cost of your sell-through software licenses, particularly as license prices change over time and your cost base is impacted.

Efficiency drives profitability by delivering more with less. Managing more customers while expending at the same cost base allows you to scale. Drive efficiency by leveraging tools and methodologies and introducing repeatable processes and therefore lowering labor costs.

Create a Continuous Feedback Loop

Make sure that your staff understand the concept and importance of the continual evolution of your processes and offers. Templates, workflows, and processes should all be dynamic and subject to constant review and adjustment. Business partners that instill this kind of corporate culture and encourage their staff to be proactive in questioning current practices and recommending changes will stay ahead of the curve.

Think about introducing a reward system for staff who propose beneficial changes to process or IP. Encourage customers to provide feedback on their experience during the sales process, onboarding, or ongoing support. Again, these can be things that are documented and automated.

Encourage a corporate culture of constant improvement. Be obsessive in your search for ways to be more productive and efficient in all areas of your business. Capture and document reusable processes, and standardize and automate wherever possible using third-party or home-grown tools.

“ We've had to evolve all three business models: sales, operational, and marketing. The biggest change was operational and we've adapted some of our own business models and processes, specifically our internal skillsets and sales processes, to better support the SaaS model. ”

Marcus Leathwood, Acuity Solutions Ltd., Sage Platinum Partner (U.K.)



Rethinking Skills and Resources

Skilled Cloud Resources are in Short Supply and High Demand

Although the cloud business is growing exponentially, it is still relatively immature compared to the legacy on-premise world. As such, experienced cloud specialists are in high demand, especially those familiar with leading-edge, newer cloud applications, platforms, or development tools.

Effective Use of Highly Skilled Resources

Look carefully at how you utilize highly skilled resources, and look to automate low-value, repeatable tasks. For example, monitor your support calls and look to automate those that are easy to resolve and high in frequency (for example, password administration). If the business is correctly managed, an experienced architect or project manager can be used efficiently across multiple projects in the cloud space. Using automation and online tools for support, training, and maintenance can free up your higher-skilled resources to focus on planning, integration, and ensuring that client SLAs are met.

Hire for Versatility

Successful companies in the cloud space recognize that you need to adapt your skills to the different requirements of the cloud world. In traditional software companies, for example, the service desk was usually staffed by relatively junior employees. The service desk was there to log calls, handle simple queries, or redirect them and set up appointments for onsite services personnel to attend. In the cloud space, they will be expected to do much more. This includes immediate handling of client technical or application functional questions online and/or real time. It also means they need a comprehensive understanding of applications, processes, platforms, and networks to be of use to the customers. Business partners must consider the need for versatile, multiskilled personnel in their training and hiring programs. A willingness to learn should be a key hiring criteria.



“ We made the decision to cross-train a diverse group of heritage consultants, and we cherry picked them from the team based on their attributes, their understanding of technology, and their desire to learn something new. ”

Francisco Civit and Manuel Jimenez, Dos Control, Sage Business Partner, Spain



82%

of partners surveyed said they were currently or considering investing in cloud technical people and/or skills development to support the cloud business.

Rethinking Enablement

Never Been a Better Time to Ask for Help

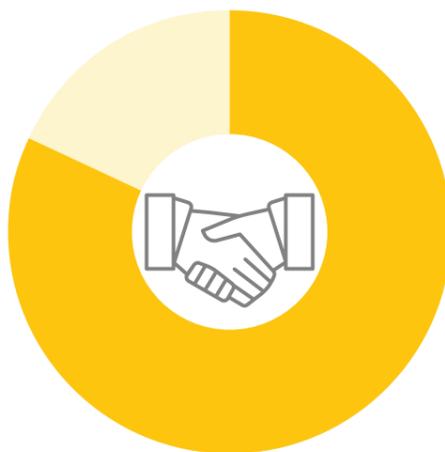
The shift in customer buying patterns toward SaaS solutions is accelerating dramatically. Sage is committed to and is investing heavily in developing new SaaS applications and in enabling existing installations of on-premise software with cloud extensions and access. In addition Sage recognizes the need to support its channel partners in the adoption, sale, and rollout of next-generation SaaS applications. For help in creating or fine-tuning your approach to cloud SaaS processes, don't hesitate to contact the partner team at Sage and they will be happy to help you get the guidance, material, and training that you require.

Ongoing

As Sage brings new SaaS products to market and updates existing ones with new functionality, it will continue to make channel partner training classes available. We recommend that you build in time for technical team training each year and coordinate with Sage release dates and your own expectations on implementing and delivering these solutions. Make sure that your sales and technical staff are up to date and trained in the most recent product versions to ensure that your customers recognize your investment in their future.

Use the Sage Ecosystem as Well as the Broader Cloud Community

Remember that there are already many Sage technical partners that have tools that can deliver value for you and your customers. In addition, generic tools, not specific to Sage, may improve your sales, implementation, or managed service processes.



81%

of partners said they are currently creating or considering **alliances with other business partners** to complete their own offering.

Call To Action 'Starting Out' 0-6 Months

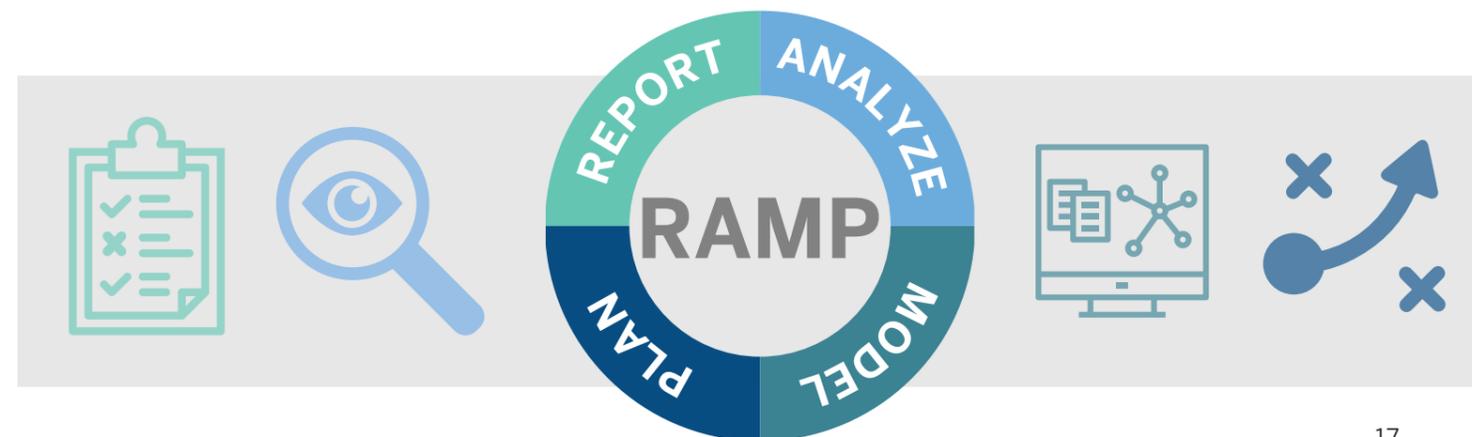
Top Tips for Optimizing Processes and Skills for Cloud

Audit and Assessment

- Take a look at the current state of your business operations. Using the [Cloud-Readiness Assessment Tool](#) referred to in this ebook is a good start. Evaluate how you compare to your competitors and to where you would like to be.
- Using this **gap analysis**, focus on the areas which need immediate improvement, given your position on the readiness timeline, and **build a plan** to get you where you want to get to, outlining the changes required and a target agenda for achieving it. With a view to your short-term, mid-term, and long-term skills requirements, you should look to understand where you are falling behind and where investments need to be made. Start the process of building a training plan by individual department: technical, marketing, and sales, for example.
- **Start to implement cloud-specific KPIs and metrics** for operations. Socialize the plan within your organization. Emphasize its value and importance. Ensure that everyone understands the drivers of cloud and starts to manage the business according to the outputs of your set KPIs and metrics.

Package and Automate

Standardize process, methods, tasks, and products wherever possible and drive efficiency and productivity within the business. Create a corporate culture that encourages and rewards innovation and sharing of ideas on process improvement. Constantly look for processes which can be turned into **standard documents, scripts, or templates** across the business. Incentivize staff who contribute to the pool of reusable standard tools with bonuses and internal kudos. Fully document and publish these templates and scripts and make sure your staff are all fully versed in the corporate standards.



Call To Action “Growing The Business” — 6–18 Months

Top Tips for Optimizing Processes and Skills for Cloud

Analyze

- Build **advanced metrics**. Capabilities in analytics should continuously evolve across relevant business functions: finance, sales, service delivery, marketing, and CRM. As you progress to the next stage of maturity this will be a key differentiator.
- Metrics should be introduced across the organization and externally to the customer site. Look into how customers utilize, optimize, and assess cloud solutions. **Track KPIs** like gross margin, utilization, billable markup rate, direct sales cost, average calls per customer, and others that are relevant to your specific business. Set targets for performance and be ready to make changes if you fall short.
- **Training/training/training!** Ensure that regular training is in place to continually enhance the capabilities of your staff. Greater versatility and ability within your services teams will drive up rates, billings, and profit, and improve your competitive positioning.
- **Identify your profit pools**, in other words the activity in your business that generates gross profit. Allocate budgetary resources based on contribution to profitability.

Measurement, analysis, and action on key metrics will be vital to the success of your cloud business.

Refine Operating Processes

- Wherever possible, tie your processes to **internationally recognized standards** such as ISO, ITO, CEN, and ANSI. There are also vertical industry standard bodies, and adherence to their standard (or certification by them) may have value for certain customers. This attention to detail makes your solutions more competitive.
- Ensure that wherever possible, custom code can be kept for future use, either as **project accelerators** or as **standalone software IP** for resale. Remember to set up client contracts to facilitate this level of “packaging” of code.
- While your cloud business is still small, the impact of limited automation is not felt. As it starts to scale, however, your organization will need **reusable cloud methodologies and delivery mechanisms** to ensure profitable delivery. Start by **testing and trialing automation tools** while the business is still small enough to manage without it. This way, you can plan for the future.

Call To Action: “Moving To Maturity” — 18 Months+

Top Tips for Optimizing Processes and Skills for Cloud

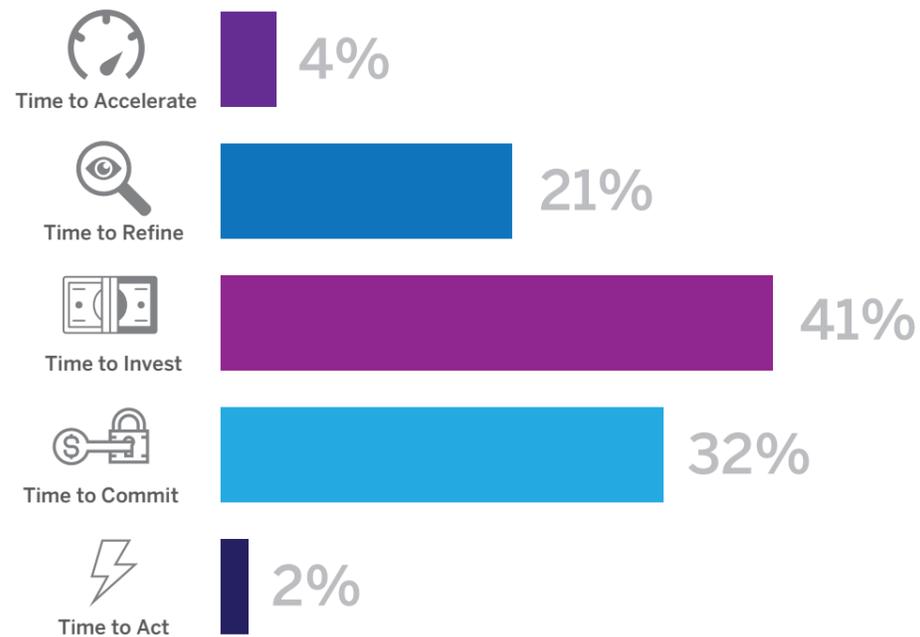
Optimize and Leverage

- **Specialize:** Focus on creating more resellable IP and looking for **maximum process automation**. This speeds up project timelines without impacting quality and generates more profit. **Operating efficiently** at scale becomes the mantra. As you create specific cloud solution sets across vertical markets or territories, look to deepen relationships with key software, services, or consulting partners. Make your cloud solutions a component of a broader **digital transformation proposition** to your customers.
- **Advanced training program:** To fully leverage the partner relationships within your ecosystem it will become necessary to identify key partners and then organize a **structured vendor certification plan** with training targets. This will help build the capabilities needed to advance your cloud business and progress through the tiers with your cloud vendor partners.
- **Continue to refine:** Regularly assess your processes and repeatable methods and fine tune them based on lessons learned. If a standard, price-listed, and regularly used process always requires adjustment, study it and fix it. Continue to look for opportunities to automate or refine existing tools. **Raise the bar on your performance metrics**. Profitability will increase as you build and stabilize your cloud revenue streams.
- **Invest in the revenue streams of the future:** Use analytics and management time to identify areas of future growth. Dedicate resources and effort to incubating potential new products and services that are emerging opportunities.
- **Don't become complacent:** Remember to maintain a healthy balance between running the daily operations of the business and more long-term strategic management task planning. It's important to formally dedicate time to review performance against your cloud business plan along with recommendations for the future.

Success at scale depends on attention to detail and willingness to adjust the business plan on an ongoing basis.

Learn More: Assess Your Cloud Readiness Against Your Peers

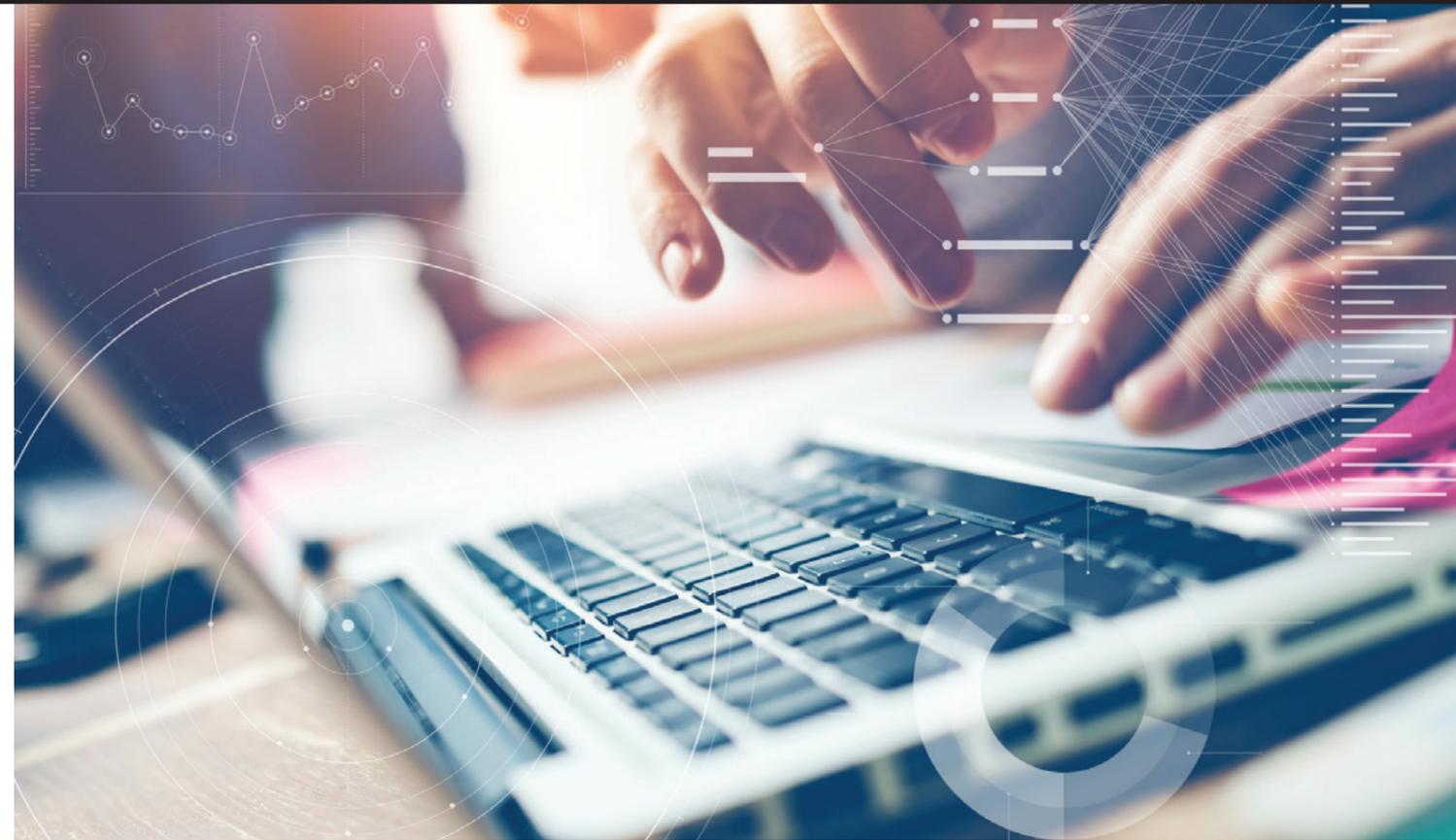
- Over the past year, IDC has been working closely with Sage to understand the implications and opportunities that cloud presents for its partners. We've conducted a global survey of 522 software channels, half of which were Sage partners, to learn how they are building successful and profitable cloud businesses. These findings have been incorporated into a cloud-readiness assessment tool.
- This tool enables you to position your business in relation to over 500 similar organizations across the U.S. and Europe, and provides you with some essential guidance in the development of your cloud business.



- We suggest that you click on the link and spend the next few minutes completing the survey. The results will be emailed back to you with a report which provides you with both context, in terms of positioning your organization against your peers, and recommendations on how to progress your organization toward a profitable and successful future in cloud.
- This online assessment tool helps you benchmark your cloud business against your peers and competitors in the industry across multiple dimensions. These include cloud strategy and vision, cloud processes and skillsets, marketing for cloud, cloud sales, and your business mix. This should enable you to make better use of this ebook and review your own business in the context of the recommendations.



[Go to IDC's Cloud Assessment Tool](#)



Learn More: Research & Assets

Over and above this eBook and assessment tool, additional resources for you to use include:

- Partner of the Future:** A short, succinct report highlighting the importance of incorporating cloud in your portfolio, how to make money from it, and the implications it has for partners in terms of what you do, how you do it, and who you do it with.
- Partner Success Guides:** These short, content-rich reports go a little deeper into some of these elements, essentially acting as a "how-to guide" across three critical areas of building a cloud business: optimizing process and skillsets for cloud; rethinking sales (this ebook), and rethinking marketing.
- Partner Best-Practice Videos:** IDC has also held in-depth discussions with partners that have successfully incorporated SaaS into their business. Highlights from these interviews have been captured in videos that will be available to all Sage partners via your Sage partner portal.



[Click here](#) to see Alan Laing (Sage EVP Partners & Alliances) and IDC's Margaret Adam discuss the cloud opportunity and challenges for Sage Partners



About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact-based decisions on technology purchases and business strategy. More than 1,100 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For 50 years, IDC has provided strategic insights to help our clients achieve their key business objectives.

IDC is a subsidiary of IDG, the world's leading technology media, research, and events company. Further information is available on our websites at www.idc.com



About Sage

Sage is the market leader for integrated accounting, payroll and payment systems, supporting the ambition of the world's entrepreneurs. Sage began as a small business in the UK 30 years ago and over 13000 colleagues now support millions of entrepreneurs across 23 countries as they power the global economy. We reinvent and simplify business accounting through brilliant technology, working with a thriving community of entrepreneurs, business owners, tradespeople, accountants, partners and developers. And as a FTSE 100 business, we are active in supporting our local communities and invest in making a real difference through the philanthropy of the Sage Foundation.

Sage – a market leader for integrated accounting, payroll and payment systems, supporting the ambition of the world's entrepreneurs.

www.sage.com

Copyright and Restrictions

Any IDC information or reference to IDC that is to be used in advertising, press releases, or promotional materials requires prior written approval from IDC. For permissions requests contact the Custom Solutions information line at 508-988-7610 or permissions@idc.com. Translations and/or localization of this document require an additional license from IDC.

For more information on IDC Customer Solutions, visit http://www.idc.com/prodserv/custom_solutions/index.jsp.

Global Headquarters: 5 Speen Street, Framingham, MA 01701 USA

P. 508.872.8200

F. 508.935.4015

www.idc.com

Copyright 2017 IDC.

Reproduction is forbidden unless authorized. All rights reserved.