

# Software Buyer Basics

Important Information for Prospective  
ADVANTAGE 360 Customers



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## Start with the Basics

If you are in the market for new operational support solution, there are a few basic yet important considerations that can make the difference between a profitable right choice and a potentially expensive mistake.

## Can Do vs. Does Do

These commonly used phrases appear in most software sales presentations. However, they describe the ability of existing features and functionality to meet buyer expectations in two very opposite ways.

While It is true that, with a large enough customization budget, most software can do anything, in comparing applications, it is best to look for the one that already does do the greater portion of the business-critical functionality required by your daily operations.

After all, why train a software company to cater to your requirements, pay for customization, wait for it to be delivered and struggle through the testing and refining processes when another application has already been through these processes and is mature, refined and ready to go? In other words, “can do” is another way of saying “does not do”, and is a risk that should be carefully weighed against additional costs, time to market delays and the potential for receiving deliverables that will require additional extra-cost refinement. Even so, “does do” does not always mean done elegantly. So, for the most critical of functionality, contact vendor references and ask their opinion regarding the completeness, operational value and reliability of such functionality. Otherwise, “does do” can prove to be more a matter of vendor interpretation than of actual requirements fulfillment.

## Price vs. Cost

All operational support software has a “price” and a “cost”.

While its “price” is usually the purchase amount, its total operating “cost” (TOC) can easily become an entirely different amount. This is because the true TOC of software is determined by the + / - sum of the following factors:

- |                        |                                      |
|------------------------|--------------------------------------|
| 1. Purchase Price      | 7. Required Third-Party Applications |
| 2. Customization Costs | 8. Accounting Accuracy               |
| 3. Migration Costs     | 9. Process Automation                |
| 4. Training Costs      | 10. Support & Operational Costs      |
| 5. Staffing Costs      | 11. Scalability                      |
| 6. Revenue Impact      | 12. Integration                      |

### 13. Product Life

All too often, these potentially costly / cost-saving factors take a backseat in the purchase decision making process to the quoted price or discounts offered. In fact, some buyers repeat this mistake multiple times. In reality, most vendors are aware of the price, capabilities and support levels offered by their competitor's products, and they position their own solutions accordingly. So, while not always the case, the least expensive and most highly discounted solutions may ultimately prove to be by far the most expensive to own over time. It's all a matter of the true cost behind each of the considerations listed above.

For example, let's assume that price of Software A is \$1.20, and its annual cost of support is \$0.20. Meanwhile, its included functionality, process automation and operational support capabilities result in a staff reduction savings of \$0.15 and in increased revenue, good will and new and retained customers equal an additional \$2.00. If amortized over 5 years, its TOC would be  $\$1.20 + (5 \times \$0.20) - 5 \times (\$0.15 + \$2.00) = \langle \$8.55 \rangle$  (profit).

Now, let's assume that the price of Software B is \$1.00, and its annual cost of support is \$0.18. However, its moderate functionality adds \$0.30 to purchase business-critical add-ons and customization, and additional annual costs of \$0.25 for additional staff, \$0.35 for revenue, customer and good will leakage and \$0.05 to support add-on software. If amortized over 5 years, its TOC would be  $\$1.00 + \$0.30 + 5 \times (\$0.18 + \$0.25 + \$0.35 + \$0.05) = \$5.45$  (loss).

This is a net return on investment (ROI) difference over 5 years of \$14.00. Furthermore, if well-supported, Software A could have useful life in excess of 20 years or more. Meanwhile, once the escalating unforeseen costs of Software B become apparent, it could require full replacement in as little as 3 years or less.

When the example figures are scaled up to the price of typical telecom operational support software, many millions of dollars could be at risk. In addition, whenever multiple migrations become necessary due to a mistaken choice, the toll on staff and stain on customer relations can add immeasurable costs as well.

None of this is meant to imply that buying the most expensive software guarantees the best ROI. That would rarely be true. Instead, the goal is to get the best software for the best price.

First, prioritize your options by their percentage of match to your daily operational requirements, without going overboard on a product with a lot of additional functionality that you may never need. This can be done through printed and on-line material, product demonstrations, GAP analysis, and by contacting existing users. Next, carefully compare the product differences across the factors above.

The right choice will usually be very obvious.

## Infrastructure Vendor-Provided Solutions

For many years, vendors of switching and other network elements have offered billing systems as “Package deals”, and often include the cost in the overall system financing offer or make it appear to be “free” to help close the infrastructure sale.

For an industry newcomer and / or a lightly-funded startup, this may appear to be attractive. However, while the “big name” of a top vendor may add credibility to the software offered, historically, such vendors have acquired and re-branded low-end solutions. Often, this has included buying out and losing the brainpower behind the product’s development.

Furthermore, when such a loss has occurred, the necessary evolution of these solutions has almost always immediately gone stagnant, and customization requests by users have often been met with high costs and long lead times.

This is where it is important to do your homework.

Special offers aside, most carriers cannot afford cost and business disruptions associated with replacing their billing & OSS software within only a few years of implementation. So, do some comparative shopping to make sure that the software you choose is the best solution for both your current business model and growth plans over a period of at least five years. This should include contacting several existing users who have been operational for at least 5 years.

In addition, while OSS developers like Advantage 360 provide provisioning and mediation interfaces to over 140 switches and infrastructure elements across vendors industry-wide, it seems unlikely that infrastructure Vendor A would go out of its way to make its OSS compatible with Vendor B. So, another consideration would be what happens when system evolution requires either replacing or adding to the existing infrastructure with that of a different vendor?

If the infrastructure vendor’s solution scores high in each important area, GREAT! If not, keep in mind the rules of Price vs. Cost, because what appears to be a good deal now could have a serious impact on profits later.

Furthermore, while sales people are there to make a sale, most believe that honesty is the best policy. So, if you are considering a package deal that includes infrastructure and a billing and OSS solution, it’s fair to ask the associated sales person a question that is somewhat similar to that of the following:

“I am considering recommending that our company look favorably upon your infrastructure offer.

However, once everything is launched, our on-going cost of operations and our success in the marketplace will be largely dependent upon the capabilities of the operational support software that we implement.

Since our future success could directly translate to more business for you, and given that the OSS solution proposed in your package is not the deciding factor in our infrastructure purchase, can you completely assure us that it is and will continue to be the best solution for our future growth?”

The answer might surprise you.

## Temporary Solutions

In the world of recurring billing and OSS, good software can make great things happen. By contrast, a solution that is mediocre or poor by comparison can easily have the opposite effect, losing revenue, opportunities and customers. As a result, when business or financial considerations are leaning towards acquiring a less than perfect temporary solution, it is a good time to thoroughly consider the consequences. A point that is often lost in this process is that good software provides a better and faster return on investment than lesser software.

By way of comparison, By comparison, you can start an earth moving company with a shovel and a bucket as a temporary way of doing business. However, a skip loader and dump truck would be a better choice. Operational support software works the same way.

Meanwhile, the process of replacing a temporary solution can be costly, time consuming and taxing on both staff and customers alike. It almost always requires data migration, replication of configuration settings and additional staff training. This can take as much as 6 – 12 months or more and tens or hundreds of thousands of dollars to complete, and can impact daily operations throughout the migration period. The question is, is the presumed savings of starting with a temporary solution worth it, or are there other options that both fit the budget and eliminate the interim step of a temporary solution?

One possible option is to negotiate payment terms that allow the benefits to pay for themselves. For example, let's assume that the monthly cost of permanent software (Software A) over 36 months is \$25K, and temporary software (Software B) is \$15K over that same period. The vendor of Software A may be willing to extend the payment period to 60 months, thereby reducing the monthly amount to approximately \$19K and / or to take a one-time balloon payment at the end to reduce that amount even further. Alternately, the vendor may be willing to match the lower payment in the first year and escalate the amount over the remaining years.

Another possible option is to ask the vendors of potentially permanent solutions to demonstrate unique features or functionality that might immediately generate tangible revenues that can close cost the cost gap with a temporary solution. For example, let's assume that the monthly cost of permanent software (Software A) is \$25K, and the monthly cost of temporary software (Software B) is \$15K. If Software A had just one unique feature that could generate \$5 per subscriber monthly more than Software B, it would only take 2,000 subscribers to that one feature to make up the difference. The rest is money in the bank.

The point of these options is to start with solid software that encompasses current requirements and future growth now, without the waste and compromises of a throw-away temporary solution.

### Documentation That Speaks Volumes

In general, complete, voluminous and easy to understand and reference documentation is a clear sign of a mature and well-supported product.

Furthermore, when it comes to operational support software documentation, the more descriptive the text and the more screen shots and examples, the better. It is also usually better to have documentation that is imbedded in the software, rather on media stored in some a filing cabinet.

At Advantage 360, we could not agree with these principles more.

All user documentation is full color, and is both imbedded in our software and supplied separately on media. It consists of 19 department-specific chapters and more than 3,500 pages of well-organized and easy-to-under-stand step-by-step instructions, feature descriptions, operational steps and applicable recommendations and cautions. This includes over 1,800 screen examples.

In addition to user documentation, we provide two 40+ page quick-reference user guides that cover front office sales, activation and payment receipts processes and back office accounting processes. We also provide over 150 task-specific work-flow documents that include hundreds of annotated screen shots and cover business-critical functions step-by-step.

We also provide thousands of pages of technical documentation that is designed for system administrators and IT staff. In total, this provides an invaluable reference library that can educate and guide staff through thousands of processes on a 24 x 7 x 365 basis, without the time or cost of additional training.

Needless to say, documentation is an important and valuable metric in comparing software suppliers.

## Premise vs. Cloud - The Choice is Yours

Software that supports the daily operations of a modern communications service provider (CSP) must be exceptionally feature-rich to maintain the competitive edge of its users. It also must be robust in its ability to move volumes of data to and from servers, users, web sites and external systems. So, choosing the right infrastructure is every bit as important as choosing the right software.

That's why we offer a choice.

## Rental Software

With some solutions, the term "cloud" and rental software are synonymous. This is known as Software as a Service (SaaS).

At this point in time, neither SaaS nor its IP-based service providers, have enjoyed the same wide telecom industry acceptance and global requirements exposure as licensed solutions. As a result, available SaaS solutions tend to be far less feature-rich, and often struggle or even fail altogether in meeting the evolving challenges of a competitive telecom marketplace. Furthermore, much like any other rental, telecom SaaS software does not typically receive business-critical and evolutionary updates at the same pace as licensed applications.

**Pros:** The idea of renting software may make a certain amount of sense because it can spread the cost over time. Meanwhile the full benefits can be enjoyed immediately.

**Cons:** The rental payments never stop.

We have a solution.

Since 1984, Advantage 360 has only offered licensed applications, backed by world-class support, a continual flow of new feature-rich enhancements and free updates at least twice a year. We also offer the payment options of both closed-end leasing and an outright purchase. Both options eventually pass full title to our customers without further payment thereafter. This keeps our applications fresh, while catering to the financial needs of customers and eliminating the pay forever model of rental software.

## Our On-Premise Solutions

An on-premise installation is one where the solutions reside on servers that are under the full control of the customer, and are usually at a location provided by the software owner or lessee.

This requires appropriate hardware, floor space, electrical power, environmental controls, infrastructure, software licenses, disaster-proofing and redundancies. While it may also require dedicated IT Staffing, Advantage 360 offers optional off-site staffing and remote management services that can reduce or eliminate this requirement.

**Pros:** Users retain control of all sensitive data and are not charged a recurring per user fees. Also, they have reasonable control over user connectivity and data transfer speeds, such as EDR / CDR downloads and with interfaces to third-parties such as credit bureaus, print vendors, sales agents, SMS and MMS solutions, business analytics, etc.

**Cons:** Initial hardware and server license costs may, at first, seem pricy, and some form of IT staffing is required to maintain the servers, install updates, etc.

In addition, demand-based system expansion typically requires immediate payment for any required additional hardware and software, and may be subject to unexpected lead times.

## Our Cloud-Based Solutions

Companies such as Amazon, Microsoft, Dell, Rackspace and others operate and manage large hosted server and server software “farms” that can handle virtually any size requirement. This is known as Infrastructure as a Service (IaaS). Unlike SaaS solutions IaaS providers do not usually rent telecom software. They simply offer the facilities to host it. In fact, many SaaS vendors use IaaS providers, rather than host the applications themselves.

Because of the large corporation IT and security expertise that stands behind many IaaS companies, they are reasonably secure data depositories and offer various redundancy, disaster-recovery and IT staffing and management options for a single monthly cost.

Keep in mind that IaaS typically only eliminates the need for in-house servers and related server software and hardware, such as UPS’, routers, backup devices, operating systems, databases, etc. Users must still acquire and maintain their own client-side hardware, software and infrastructures.

Also, the amortized costs of in-house server components is usually much lower than IaaS rent over the same period which, like rental software, goes on forever and without a break.

Whether purchased or leased, when IaaS makes sense to one of our customers, our software can be installed there almost as easily as on on-premise hardware. We will even size the system and solicit competitive quotes from various providers without remuneration. Once in place, a client workstation or handheld device can be deployed anywhere in the world in under three minutes.

**Pros:** Clients often benefit by master IaaS licenses that have been negotiated for operating system, database and other required software. IaaS systems can expand to meet capacity requirements on a moment's notice and can provide a very secure repository for sensitive data.

**Cons:** The total cost over 3 – 5 year term could be significantly higher than an in-house system. In addition, as current (EDRs / CDRs) and long-term (historical) data storage requirements grow in size, along with a growing user community and flow of data volumes increase connectivity bandwidth costs, IaaS-related costs could grow exponentially.

Then, there is the issue of reliable end-to-end connectivity. If users cannot be 99.999% sure that CDRs and other data will flow into the system on time, bills will flow out on time and users, customers and sales agents will have access to the system 24x7x365, IaaS is probably not a good solution.

## Internationalization & Speaking to a World-Wide Market

Whether you are an operator in the US, Canada, Latin America, Europe, Africa or Asia, your customers probably speak a range of languages and dialects. So, each of our solutions has been designed to fully accommodate the operational requirements of the international user community and the convenience of its customers.

This starts with our development tools and SQL database, which are nearly 100% Microsoft and enjoy world-wide use and support in most languages. Next, we provide a Language Table that includes all of the 140,000+ words and phrases used in our software.

In addition to English, our spelling checker also supports Afrikaans, Basque, Catalan, Danish, Dutch, Faroese, Finnish, French, Galician, German, Icelandic, Indonesian, Italian, Malay, Norwegian, Portuguese, Spanish, Swahili and Swedish and Systran 7 bulk translation software. The language table can also be created and edited manually. Either way, it provides full control over the text of every caption and system message, even English.

When a user first logs in, we look up their preferred language and load the corresponding table into memory, which then populates all screens. However, users can easily switch their caption language, field data language or both, and can do so at any time throughout their day.

In fact, we are very big on providing ways for our customers to communicate with their customers, in whatever language they speak. In fact, we include a data entry field level spelling checker that supports multiple languages and, in addition to the ability to generate letters, e-mails, text messages (SMS) and bill inserts, we allow each to be created in multiple languages.

We then look up the preferred languages of recipients and send the correct variant without the need for user intervention.

This sends a strong “We speak your language” message that promotes customer loyalty.

## Multiple Currencies

Our Currency Table accommodates conversion rules for all world currencies, and our task scheduler allows users to define rules for automatic updates from a monetary conversion web site. In addition, reports can be generated in two simultaneous currencies and users can individually define their local currency, their EDR / CDR rating currency and their billing currency. At the contract level, users can override a given customer’s billing currency.

As payments are applied, users can right click on any amount entry field to invoke a pop-up that allows applications in up to 10 different currencies simultaneously and provides users with a summary total in the local currency.

## All Address Formats

Our Postal Address table allows users to create country-specific formats to ensure compliance with local postal regulations, and our interface with Melissa Data provides automatic address validation and normalization for over 240 countries.

## World Format Toll Tables

Our Toll Tables can be set to automatically import and update changes in NPAs, NXXs and phone prefixes world-wide. Meanwhile, all entered phone numbers and rated call numbers are stored and displayed in a “World format”.

## Localized Date Formats

Dates are stored in a universal format. So, if one of our customers enters 10 January 2014 as 10/01/14, and has a related question, we see the entry as 01/10/14 or January 10, 2014. This same automatic conversion carries across reports as well.

## World-Wide Tax Compliance

Our Tax Tables accommodate world-wide taxation rules, including minimum, maximum, flat and variable amounts, as well as tax on tax. Tax rates can be entered manually or automatically updated by a tax rates service provider. Geo Code tax calculations are also supported.

This all ensures international out-of-the-box operation without customization.

## Partnerships that Make Sense

While we develop most functionality in-house, as can be seen by our website's Partners page, we also maintain API-level compatibility with a very long list of third-party solutions. Integration is usually seamless, and allows users to perform related tasks in our software while, API's provide a "black box" integration that they never see or worry about.

In addition to over 140 switches and devices, this includes various third-party products in the following major areas of operations:

### Credit Bureaus

In addition to internal scoring mechanisms, our credit approval and treatment processes give users real time interaction with Equifax, Experian and Trans Union credit scoring bureaus.

### Online Charging

Integration with Volubill and other OCS vendors gives our customers on-line charging and data throttling capabilities.

### Printing Service Bureaus

While our solutions are capable of simultaneously managing and load balancing printing to up to 99 printers, including color, font and insert management, some customers prefer to have their bulk printing done by a service bureau. We currently offer compatibility with OSG, Source Corp, Island Press and EverTek.

### Address Verification

To limit subscription fraud and address-related typos, our address entry processes integrate with Melissa Data. It provides address validation, normalization and cleansing for addresses in over 240 countries. We also integrate with Mailers +4, which also integrates with our address entry processes to provide US Postal Service CASS certification.

### Tax Calculations

While our solutions include internal tax tables that can meet the taxing requirement of customers worldwide, we also integrate with CCH. This provides monthly updates for telecom and POS tax rates and address-based geo code calculations across approximately 70,000 US taxing jurisdictions. In this interface, we import CCH tables and geo code calculations directly into our OSS database and then use that data in our internal taxing engine. This lowers the initial cost of CCH and improves speed and ease of use of invoicing and other taxed and tax-reversal accounting processes.

## Credit & Debit Card Clearing

While the numbers are dwindling, there are still a few products available that facilitate the clearing of one-up and bulk credit card and debit card charges without collecting processing fees that ACHs charge in addition those charged by banks and credit card providers. These include PAYware and PC Charge by Verifone. We integrate seamlessly integrate with both solutions. Also, with IP Pay.

## IN Prepay

In addition to prepay and metered billing functionality provided by our Terms360 module, we also currently provide integration with IN prepay platforms by Primal, Huawei and ZTE. Our normal post pay-like interface is all that users see when they add customers, activate and manages services, look up balances and recharge balances.

## Apple Care<sup>®</sup> Warranty Processing

Our activation, sales order, service order, invoicing and accounting processes integrate directly with Apple Care to provide our customers with a convenient way to manage Apple warranty processing.

## Facilities Management

Our fulfillment, mediation, provisioning and billing processes integrate at various levels with mapping, staking, CABS and facilities managements by StellarRAD, MapCom, CadTel and CHR. Of these, our highest level of integration is presently with StellarRAD and MapCom.

## CIBER & TAP Clearing

For wireless operators, we provide in-collect and out-collect roamer record clearing house integration with Verisign, Mach, Syniverse and NetGen.