Bishop Rock Software

Software-as-a-Service in Law Enforcement

Whitepaper

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Introduction to Software as a Service – The Future of Software

A huge tidal wave is sweeping over the software market in the form of software-as-a-service (SaaS) companies displacing traditional high-cost, on-premise software applications. Leading IT industry analyst Gartner predicts that by 2013, 75% of all commercial contact centers worldwide will be using software-as-a-service (SaaS) products rather than traditional on-premise software.[1] CSO Insights published a 2006 study comparing the costs of SaaS vs. on-premise Customer Relationship Management (CRM) applications. CRM applications play the same role in business that CAD and RMS systems play in law enforcement—handling the dispatch of customer requests and recording customer interactions. The study had the following findings:

Area	On-Premise	SaaS
Significant performance improvement vs. prior system?	21%	40%
Implementation in 3 months or less?	15%	59%
Implementation on budget?	44%	77%
Overall customer satisfaction	34%	67%

Commercial organizations share many of the same security and ownership concerns that the public sector (including law enforcement) has. The trend is clear—expensive on-premise software solutions are giving way to nimbler software as a service companies.

What is SaaS?

Software as a Service (SaaS) is a service delivery model that dispenses with huge upfront licensing costs in favor of a "pay as you go" pricing model. The infrastructure, support, upgrade, and related costs are bundled in with the service fee a customer pays. The result is that the software is available for use via a subscription much like a utility, cable television, or phone service.

What are the benefits of SaaS?

Customers immediately realize many benefits from SaaS:

Lower Price of Entry

Instead of a huge multi-million dollar purchase, SaaS customers pay only a few hundred or thousand dollars per month. This increases affordability and reduces risk by allowing you to prove the basic value of the software in steps before making larger commitments.

No Hidden Costs

Traditional on-premise software has many associated hidden costs that go well beyond the initial license fee. The example below shows what a typical enterprise system might cost in on-premise and SaaS modes (this example is not from Bishop Rock):

Total Cost of Ownership	On-Premise	SaaS
Application License and Subscription	$300,000	$180,000/3 years
Support and Maintenance@15%	$45,000	0
Implementation and Customization	$600,000	$50,000
IT Infrastructure Costs	$125,000	0
IT Personnel Support	$150,000	0
Total	$1,200,000	$230,000

The total cost of ownership savings of SaaS become apparent once you add in the hidden costs of on-premise ownership.

Faster Deployment – By Orders of Magnitude

Because our infrastructure is already set up, there is no need to ramp up expensive consultants, our application is already built for you, and there is no desktop client software to deploy, you can be up and running with our software in *weeks*, not months or years as with traditional software. And as our library of prebuilt CAD and RMS adapters grows, we will be able to bring new customers online in *days*.

Frequent Updates That Keep Up With Your Changing Information Needs

Most traditional software vendors provide upgrades every 12-18 months. Every time you upgrade, the customer incurs additional cost, pain, and downtime.

For an analytical application such as Bishop Rock ForceSIGHT, this lack of update frequency is especially painful. The information demands of a mayor, city council,

police chief, and sector commanders are dynamic and change rapidly. They can't wait 12-18 months for a new software release.

Bishop Rock is enhancing the software our customers use every week. Every customer is always on the latest version of the product. If a customer requests a new feature or report, we may be able to turn that around in a few days, not months or years. Not only your requests, but when one agency requests a new report, then all of the other agencies have access to a new type of crime or productivity analysis that they might not have even considered before. The collective creativity and analysis needs of all of our customers are thus harnessed to create a product that is much better than any individual agency could achieve through customization of a fixed on-premise solution.

Less Expensive Implementations

In traditional enterprise software, implementation costs of 2x to 3x the cost of software license are expected. This is very lucrative to consultants and integrator firms. Some "software" companies actually earn the majority of their revenues from selling consulting services after they sell in their software product. The longer an implementation takes, the more consulting hours tick off, and the more profitable an engagement becomes.

A SaaS company, in contrast, is incented to get its customers up and running as quickly as possible. We generally don't get paid until you are up and running satisfactorily. Bishop Rock invests heavily in technology to automate and ease the setup of new customers, which translates into faster deployments, less expensive deployments, and greater satisfaction for you as a customer.

No Need to Develop In-house Expertise

Supporting a major enterprise application requires you to hire additional IT resources to manage it. If the Bishop Rock software suite were hosted locally, you would likely require 4-5 additional FTEs to support it. With a SaaS model, you don't.

These would be no ordinary FTEs, but experts in SQL, database optimization, dimensional modeling, ETL optimization strategies, statistical analysis, geospatial analysis, and security technologies. Does it make sense to try to hire and/or train this internal expertise as a law enforcement agency? At best you may be able to rent it on an ad hoc basis (consulting project), whereas we work as an extension of your organization 24/7.

No Vendor Lock-In

Because of the low cost of entry, if you find that Bishop Rock does not meet your needs, you can easily cancel service and switch to another solution without writing off a huge software and infrastructure investment.

Questions & Answers

Security

The consequences of a data breach are very severe. We can't have our data touching the Internet.

Bishop Rock takes information security as seriously as any government agency. We have a world-class layered security architecture of the same type that is used to secure information at the national security level as well as secure financial transactions world-wide.

- Bishop Rock uses a secure encrypted FTP protocol to transfer data between your CAD/RMS system and our data center. Data files are separately and individually encrypted using 256-bit Advanced Encryption Standard (AES), which is approved by the NSA for secure encryption of TOP SECRET level information.
- Report information moves between server and the users via a proprietary protocol featuring 128-bit RSA encryption. The protocol used is not published and is therefore unavailable to potential hackers, and at no time is information exposed in HTML as is the case with most other vendors' architectures. No temporary data files are stored on local workstations that might be compromised.
- At additional expense, a secure encrypted Virtual Private Network (VPN) can be established.
- The ultimate in security can be provided by a dedicated VPN line established between the agency's data center and Bishop Rock's data center.
- Bishop Rock's data servers are hosted in the same secure environment used by a number of stock exchanges, financial institutions, and government agencies.
- Our databases are encrypted using well-tested features provided by Oracle and Microsoft.
- The data environment is mirrored, backed up, and emergency failover support to data centers throughout the US is provided. This ensures the availability of our application through catastrophes, natural and man-made.
- All of our employees and contractors with access to sensitive information pass the same rigorous background checks that police officers themselves are subjected to.

Very few law enforcement agencies have implemented all of these security measures in their own systems. In many cases, the argument can be made that the data is safer with Bishop Rock than it is in the agency's own premise.

Control

We need to maintain control over the system and its supporting hardware.

Customers are in control of all important facets of the application. Security is administered by customer administrators. Every piece of data that you provide is tagged with its source. If at any time you wish to cancel service, all data that you provided is purged from our system, and we will provide a backup copy of the data upon request.

Bishop Rock provides a more robust security environment (described in the prior section) than most law enforcement agencies have in place on their own systems today.

We contend that most agencies would be prefer to focus strategically on core crimefighting capabilities than having to develop competency in data warehousing and analytical technologies. Very few agencies in the US have had the resources to even attempt data warehousing. The reason is it has been **simply too expensive**, and as a result few law enforcement organizations today have the strategic decision support information that they need. Our software-as-a-service model **changes the game**, by providing a best-in-class ready-to-use application at a price point that is now accessible to large- and mid-size law enforcement agencies across the world.

Integration

How will I integrate this with the rest of the agency applications? How can I integrate with other agencies?

Bishop Rock ForceSIGHT is fundamentally an integration platform. We allow you to switch out any of the underlying components (e.g. RMS, CAD) freely while your critical strategic intelligence system remains the same.

As a hosted service, we make it much easier for you to **integrate with the increasing number of data providers located outside the agency** firewall: weather, GPS tracking, geodemographics, satellite imagery, cameras, license plate readers, shot location systems to name a few. We build the interface to these providers once, and our customers "consume" the information without going through the expense of integrating it themselves.

For applications located within the agency premise, Bishop Rock can provide data back into RMS, CAD, and other systems as needed. In the future we intend to enhance our real-time alerting capabilities in order to close the loop from analytical to operational systems.

With respect to interagency data sharing, agencies who subscribe to ForceSIGHT can elect to share data with other through easy self-configuration in the ForceSIGHT application. It's as simple as a set of screens to pick which data to share with which agencies. **There is no longer a need to engage in multi-year, multi-million dollar interagency data sharing projects** when you can take advantage of this intrinsic ForceSIGHT capability, made possible by our Software-as-a-Service model.

Summary

Software-as-a-Service (SaaS) is currently taking the business IT marketplace by storm. It is starting to gain ground with government IT because of its dramatic advantages for both customers and vendors. We at Bishop Rock believe that SaaS enables us to deliver a product to the law enforcement community at an affordable price, with richer functionality, and to be more responsive to our customers' needs, than we could do with a traditional software license model. Bishop Rock takes concerns about information security very seriously and provides excellent safeguards to ensure that information does not wind up in the wrong hands.