

TreasureChest Case Study

Introduction:

TreasureChest is a software as a service (SaaS) treasury management company that provides treasury functionality via the web to businesses around the world. TreasureChest.com is headquartered in London, United Kingdom. Its operational offices are in Paris, France; New York, New York; San Diego, California; Tokyo, Japan; Beijing, China; and Dubai, United Arab Emirates. The company comprises 600 employees and seven consultants, and 80% of the employees and consultants are in information technology (IT). Although the company is now headquartered in London, it was managed out of Paris for 12 years. The company is 15 years old and considered to be an old start-up, or what is sometimes called a maturing scale-up.

The company is led by a CEO who reports to a board of directors that includes three French directors, four American directors, one German director, and one British director. The CEO has an executive management staff of eight direct reports, including an executive vice president (EVP) of sales, a senior vice president (SVP) of marketing, an SVP of client services, a chief financial officer (CFO), a chief information officer (CIO), a chief operations officer (COO), an SVP of channel sales, and an SVP of distribution. The legal and HR departments report to the CFO. The IT department used to report to a CIO, but the CIO left the company, resulting in the IT department reporting directly to the CEO. The CEO has recently hired you as the new CIO of IT. Your main responsibility is to implement innovative changes and become the direct reportee for IT instead of the CEO.

Company Overview:

TreasureChest has over 3,000 customers, ranging from small to large businesses. Each business size is determined by the definitions provided by the U.S. Small Business Administration. Small businesses account for 70% of TreasureChest's customer base, medium businesses for 25%, and large businesses for 5%. In the last year, TreasureChest has increased its marketing and sales direction to target larger businesses and gain more customers. As a SaaS service, TreasureChest bills customers monthly for each subscription based on the number of users in the account. Each subscription takes approximately the same amount of time to set up; however, larger businesses include more registrations, or users, inside the account, which provides more revenue per account. This makes larger businesses more profitable than smaller businesses.

TreasureChest also offers ProServices, professional services at an additional fee for account configuration and data migration. This is a major revenue stream for TreasureChest because most customers utilize some form of the company's ProServices for new or existing configuration and implementation. Product sales account for approximately 62% of the total gross revenue (GR) per fiscal year, whereas ProServices accounts for 38% of the GR per fiscal year.



Current IT Organizational Resources:

Management team: CIO

- 1 executive administrator

Vice president of Operations and Systems

- Senior manager of Operations
- Director of Systems Engineering and Networks
- 24 full-time employees (FTEs) and 2 contractors

Vice president of Software Engineering

- Lead developer, Minsk
- Lead developer, Paris
- 82 FTEs and 4 contractors

Vice president of Product and Project Management

- Product manager: Cash
- Product manager: Risk Management
- Product manager: Hub Communication
- Product manager: Supply Chain
- Product manager: Fraud Management
- Product manager: Business Intelligence and Analytics
- 23 FTEs

Company Operations:

TreasureChest operates a treasury management software service via a customer-facing website. The company develops and hosts its applications in four co-locations: Philadelphia, Pennsylvania; Phoenix, Arizona; Paris, France; and Singapore. Each co-location site is owned by Equinix Systems, but TreasureChest owns the processing hardware, business software, and the product applications running on them. It also has various wiring closets in each of its major offices—Paris, London, San Diego, and New York—with the Paris office running the enterprise resource planning (ERP), email, and messaging systems.

TreasureChest's original hardware platform was built on non-volatile memory express (NVMe) and standardizing non-volatile memory, such as solid-state drives (SSDs), which are connected to the computer using a disk drive interface, such as Serial Advanced Technology Attachment (SATA). However, SATA is designed for older data storage devices such as hard disk drives (HDDs), limiting its data transfer speed. For processing, TreasureChest is using the Intel Core 2 Quad Processor Q6600. TreasureChest's databases are built on a SQL standard using a variety of open-source and Microsoft versions. The operating systems for TreasureChest are not standardized and contain several versions depending on the needs of each department, including Apple Mac OS X 10.4, Ubuntu Linux 7.04, Microsoft Windows 2000 running in Parallels Desktop at near-native speed, and Microsoft Windows XP. The current IT Department has not been able



to keep up with the project demands of the different departments in the company, resulting in these departments creating their own shadow IT solutions. This includes OpenOffice.org, which handles both DBF and SQL style formats.

With the increased demands for higher functionality and reliability, TreasureChest is at a critical juncture as to whether they should continue with their hybrid SaaS operations solution (e.g., co-location data center and web service), go completely with a web service that embeds their software, or take over the operation in their premises, including networking, security, data management, and infrastructure (i.e., their own data center). The IT operations team includes 14 system analysts and system administrators, two database administrators (DBAs), and two network engineers. This team uses OnsOne Ltd, a banking network provider located in Paris. OnsOne Ltd monitors TreasureChest's computing systems and networks from 1800h to 0700h Monday through Friday and 1800h Friday to 0700h Monday because the French Labour Law prohibits the operations team from working on weekends, 18 French national holidays, and after-business hours on weekdays (considered to be 1800h or 6:00 p.m. CET). Together with OnsOne, TreasureChest monitors and manages its SaaS systems 24/7 and attempts to achieve 99.995% uptime availability for customers to comply with customer contracts promising 99.95% availability.

The company's treasury software application was first developed in 2007 and has been continually enhanced up to the present version. The condition of the application is an issue as the architecture has become monolithic. TreasureChest recognizes that the application needs rebuilding or re-architecture.

A growing customer base and an increase in enterprise customers have led to an escalation of demands for the SaaS service and increased reliability of the service's functionality. TreasureChest writes its own applications software in Java and its communication protocols in Python. The company has two development centers: one in Paris, France, and one in Minsk, Belarus. However, the Paris center is agile-driven, while the Minsk one is Waterfall-oriented. The software engineering team includes all developers and testers in Minsk and Paris for a total of 82 people: 45 in Minsk and 37 in Paris. Each product engineering team is led by a technical team leader and includes several software engineers, quality assurance (QA) testers, test automation programmers, and Scrum masters. Scrum is the current agile methodology the engineering teams use. The cost of software development production in Minsk is approximately 76% lower than that of Paris, with a majority of the cost in Minsk being salaried labor. TreasureChest hires few contractors and has a policy that a contractor in place for more than one year must be hired on as a full-time equivalent (FTE), or the role itself must be converted to a FTE position.

The sales and marketing departments have taken it upon themselves to select Salesforce (salesforce.com) for both sales automation and customer resource management (CRM). Both departments have separate instances of Salesforce.com with a series of custom HTML5 and Force.com applications already written for their instances. At this time, there is no connection between Salesforce.com and the company's business services and



ERP system InTrack, which runs on a server in the Paris office building. There is no formal CRM ticketing system in place; customer service is outsourced to ServiceNow, a cloud-based customer service provider. ServiceNow sends the CIO (you) a daily incident report for the last 24 hours, but the rest of TreasureChest does not see customer service tickets. The previous CIO found it challenging to understand and collaborate with the various internal executives and external business partners, which may have been why they separated from the company.

TreasureChest Strategic Goals:

Strategic Goal #1: Create a targeted revenue growth plan.

- Create additional net revenue of £70 million (M) in the first year, £100M in the second year, and £140M in the third year.

TreasureChest is breaking even with a slight annual profit, but it must reach a higher sustained revenue number to avoid another round of venture capital funding.

Strategic Goal #2: Enhance product for larger customers.

- IT and Product Development will scale to meet a 30% increase in demand by larger customers and maintain or improve the current customer service levels.

TreasureChest recognizes that larger customers are more profitable, but in order to service these customers, the product must be able to handle transaction loads 30% higher than the current load. The Sales Department is getting ready to concentrate on larger subscribers with more users per account.

Strategic Goal #3: Update the technology operational workflow.

- Maintain a 24/7 follow-the-sun (FTS) monitoring capability with current staff.
- Build out a network operation center to showcase to customers.
- Disengage from OnsOne Ltd and establish an internal monitoring capability within TreasureChest.

The IT Department must revisit the operational workflow for a faster, more efficient operation. This involves examining technical operations and changes to hardware, software, operating systems, networks, and databases.

Strategic Goal #4: Restructure and update the organization of the IT Department.

- Create a current and future headcount.
- Produce efficiency improvements through a new organizational map.
- Improve intracompany relationships through organizational interchanges.
- Develop a team skill-set improvement plan that addresses the current and future demands of the company.



The IT department has not restructured its organization in several years, but the new operational workflow will require a newer and more efficient organizational structure to represent a fast-paced, relevant department that can meet the needs of the customer base and achieve business goals.

Strategic Goal #5: Improve and upgrade the business system software.

- Reconstruct or replace the enterprise resource program.
- Upgrade or replace a sales automation and customer resource management system to meet the needs of the company.
- Update other business systems (e.g., email, messaging) to achieve efficiency, consistency, maintenance, scalability, and ease of use.

The current enterprise resource program system is old and not scalable for the growth the company needs. The IT department must collaborate with the sales and marketing departments to reconstruct or replace this system.

Issues Facing You as the CIO:

- Shadow IT activities must be consolidated, such as the Salesforce implementation. You must also consider the factors that motivated other management personnel to create their own solutions to address these needs.
- OnsOne Ltd provides a needed monitoring service, but their service is also a competitor for TreasureChest's current customers. You must find a way to eliminate this possible threat.
- The current application process is a combination of Waterfall (SDLC) and agile. You must develop an efficient team organization in order to establish a rapid development and deployment capability to meet the strategic goal of 16 or more releases per year.
- The ERP system is not integrated with other business systems. You must find a way to upgrade or change the ERP or other systems to achieve interoperability.
- TreasureChest has significant market potential that cannot be realized because the onboarding process for new customers is slow and manually intensive. You must improve the customer onboarding functionality to better support the company.
- You are tasked with reviewing the company's computing capability, scalability, and sustainability to make improvement changes for future growth.
- The IT Department's organization and operational workflow have staffing challenges. You must address these challenges with a thorough review and reorganization plan to improve the productivity and efficiency of operational and engineering workflows. The result of these actions should be improved output and service.
- There appears to be no IT strategic plan. You are tasked with reviewing TreasureChest's business goals and developing an IT plan that will direct the necessary department changes for the next several years.



Some Final Thoughts for the CIO

As the CIO, you are aware the company wants to reduce FTE counts and use subscription or recurring services, shifting costs from operational expenditure (OPEX) labor to OPEX expense. This reduces European social taxes and allows the company to scale without significant labor growth. The multiple instances of Salesforce.com mean it is necessary to consolidate Salesforce automation applications and operations to focus resources and reduce costs. The ERP systems must also be able to integrate with other company business systems. You know that a CRM capability, such as a SaaS cloud service, is necessary for future growth and customer management. If you do not implement this, the marketing and sales department will create their own.

You must also improve internal communications reporting and introduce key performance indicators (KPIs) based on performance goals and requirements as determined by formal IT governance processes, such as ITIL and COBIT. Without these, management will lose confidence that the IT Department is achieving its business objectives. The IT Department must reduce or eliminate the cost and operational reliance on OnsOne services. This does not imply outsourcing is wrong, but the existing business relationships with OnsOne are concerning because they could be considered a competitor and a risk to TreasureChest. You know that they must rebuild the company's monolithic application into modular program applications without disturbing the current production application. The company cannot scale with a monolithic application, nor can it focus on specific improvements in certain product areas without altering the entire application program.

The IT department must establish scalability of operations to support quick and simple entry into a new country or region without significant infrastructure acquisition. Scalability is the only way the company can grow organically. The IT department must also develop an operation control center showcase in one or multiple locations in order to directly monitor and manage the company's systems. This provides an opportunity for the quality of an environment to be proudly viewed by customers and the public to positively showcase the company's capability and expertise. You must employ and leverage agile development methodologies to increase the number of application releases and functional implementations to over 16 per year, including customized configurations for professional services. This must be quickly implemented in an iterative style with small pieces at a time, rather than in a balloon or waterfall style. You must also increase operational reliability to 99.999% for all SaaS products and services. This is vital to the company, especially in a SaaS marketplace. Lastly, you must establish a business continuity plan and a disaster recovery plan based on ITIL foundation processes to support business continuance and future strategic planning.

