Case Study

Acme Financial Services

A study in Enterprise Computing

By Victor Stachura

Introduction

Medici Financial Services had a long and successful history in the Financial Services industry. The company was founded in 1632 by Giovanni di Bicci de' Medici - who's innovative banking practices survive to this day. In 1866 Acme was run by Sam Medici - the latest in the Medici family to run the business. An American entrepreneur (William Acme) was on vacation in Sweden when a chance meeting occurred at a local pub. Sam Medici was enjoying a pint and boasting of his long standing banking empire – "It's a cash cow" he would say, while entertaining the crowd and handing out cash like it was candy!. William Acme was always on the lookout for a business venture and befriended Sam that night. After a long night of drinking, a lifelong friendship was forged. Sam was looking for a business partner in the United States – William Acme was it. In 1866 the United States Medici Financial Services Company was formed and became the sole provider of financial services to high net worth individuals and institutions. In 1867, on a whim of the founder, William Acme changed the name of the company to Acme Financial Services – because he could.

Through the years the company grew into an international conglomerate, supplying high quality Financial Service products to accredited investors, Private Equity, Hedge Funds and Financial Services professionals across the globe. Acme Financial Services expanded their product line to include over 50 Financial Service products related products, a network of financial planning offices and tax preparation services. Their expansive product line met the needs of an ever expanding industry base – from investors with \$100k to \$100M to invest. Acme also provides high volume trading software to various stock exchanges across the globe and to high frequency trading firms..

Acme Financial Services was run by Alan Acme - the great, great grandson of William Acme. Although Alan was able to grow the company to its present size and stature, Acme Financial Services was starting to experience problems with costs growing faster than revenues and inefficiencies in their software development practices, causing missed deadlines and poor quality for some very large orders. When several cases of large financial losses, the board, stockholders and state authorities were not happy. "You can't lose people's money due to software errors!," said the Governor in a press conference. It was clear that Alan had to be replaced. Some even said Alan could not handle the pressure of running a large international corporation — causing him to indulge in vices that may have affected his on-the-job performance.

After a lengthy executive search, Laura Confute was selected as CEO and president of Acme Financial Services. While she had limited experience in the Financial Services industry, she had 30 years' experience successfully running large multinational companies. Within her first 60 days, Confute met with the regional and division presidents as well as middle managers and key clients and government officials — all aimed at understanding the corporation, the internal problems they're encountering and getting the pulse of their customers.

What she found was unnerving and unsettling. She even started to wonder what she got herself into. How could a company with such a long history, a great product, have so many issues?

The CEO Issues a Directive

Laura Confute was at a recent Gartner conference where every other presentation and discussion at dinner was about Artificial Intelligence and Gen AI in particular. Laura realizes there are problems with Acme that need to be fixed - maybe, just maybe AI can solve our problems.

Laura issues a directive to all her direct reports "I need you people to figure out how to implement this thing I heard about called 'Generative AI or Gen AI'. What is it? How does it work? Implement it here to solve our business problems! I want something implemented in 6 months, if not sooner. If you tell me "it can't be done", then I'll find someone that can get it done! So, if you like your paycheck and overly large bonuses, I suggest you find a way to GET IT DONE! Understand? Good, that's what I thought!"

Organizational Structure

While much of Acme's growth was "organic" stemming from sales growth on existing product bases, expanding geographically or innovating new product lines, a larger share of the growth came from acquisitions of competitors or an attempt to purchase Acme's way into a new market space. International expansion was driven primarily through acquisition of smaller Financial Services companies in country. Acme currently sells to most countries around the globe and does tax preparation on five continents.

While Acme's 'growth through acquisition' model has allowed Acme to expand its marketplace geography and expand into new product lines at a pace that would have been impractical through pure organic growth, it's left the company with several challenges. Acquired companies were often left with the existing management teams, but systems were integrated into a core set of Financial Services systems such as their Electronic Financial Services Records, Trading System and settlement systems. Business processes were optimized as best they could be and communication between systems was "pretty good"

Business Processes

A legacy of Acme's growth through acquisition model was challenging, but like an Amoeba, the systems of a purchased entity were absorbed into the standard corporate applications. Business processes were also changed to conform to the corporate standard for administering Financial Service products, accepting patients and dispensing medications

Understanding the performance of different parts of the organization was fairly simple since standard company-wide metrics exist. For example, there was only one calculation measuring revenue generated per patient

Many organizations within Acme have documented their business processes and there is much standardization and sharing of best practices across the company.

Information Architecture

During her research of the company, Confute was looking for sales data for a product that she knew was sold in multiple regions and countries – the U.S Gold Trust Bond. The problem was, she could not get a consolidated view of sales for this product. She was told that she had to first run reports from multiple, independent, sales systems, export the data to excel and then create the summary view that she needs.

The director of IT was happy to have someone build the report for her. The report was delivered 5 days later and contained the information she was looking for. The only problem was that she needed the sales data for a board meeting 2 days prior.

She quietly thought about firing the director of IT – but decided not to make personnel changes so early in her tenure.

Confute was also amazed at how easy it was to search and find information on their network. "It's just as easy to find information within our own company as it is on the internet!" she said. In order to find anything, only one tool was used – 'Acme Search'. Acme Search indexed email, file shares and multiple databases. Search results were often accurate and of much value.

During her 2nd month on the job, Confute was trying to research Finacial Services sales productivity data – she was interested in which plants Acme Financial Service branches sold which products and the monthly volumes for the past 3 years. To her amazement, their ERP systems (there are multiple) did not have this history nor was there one place to search for the information. The Director of IT explained it like this: "We have limited storage so we export the data and send it to each of the branch managers. They maintain the trend data on their own and store the reports on their laptops. If we need a consolidated view, we email all the branch managers and hope to get all their reports – we usually get all the data in about a week and it takes a few calls by one of my analysts to get the reports from the 'stragglers'".

Problems with data and information were more systemic than she originally thought when one day she inquired about their brand. The Acme *brand* stood for something – now their brand value was eroding in the marketplace and their internal organizations could not even agree on the definition of brand. Some business units considered 'Acme' as the brand, others thought of "Acme Bonds" as a brand and others considered each product category as a brand. To make matters worse, each internal system implemented their own definition of brand along with their own data format definition. Some systems stored brand as a short cryptic string of characters, while other systems implemented long text descriptions – making data interchange between systems nearly impossible. Corporate level reporting was also impacted – Confute was not able to report on the sales for one particular *brand* without having an analyst spend several days sifting through reports and interpreting data from multiple systems.

The IT Organization

The CIO (Charlie 'cypher' Smith) was always a supporter of corporate change, especially if the change involved artificial intelligence. Charlie figured it was only a matter of time, before he was asked to "build something" Ai related. "I realize Gen AI may have some issues, but I like to address the issues as the arise versus ignoring the technology."

Previously, the CIO commissioned the Enterprise Architecture team to become educated on Gen AI. This EA team is up-to-speed on how the technology works and has identified several use cases and pilot projects. They've built a small chat-bot prototype to test out basic Gen AI functionality. They're looking for the right timing to approach the CEO and look for business partners for a full prototype.

But, the IT departments are struggling to keep up with operating their current systems while building new systems and capabilities - even though they're optimistic about AI. Again, there is little interaction between the IT departments and business counterparts. IT deploys systems that few people use and there are rampant issues with data quality.

Every night several hundred computer programs also known as "batch jobs" run to extract, process and move data between systems. Occasionally, these jobs run without any issues. On most nights computer operators working 3rd shift have to restart jobs, correct data or call programmers in the early hours of the morning to fix problems. The operating environment is taking a toll on the staff and people are starting to look for other jobs. This too could be a problem since most documentation of business rules and processing steps are out of date. The most critical knowledge is in the staff's heads and could easily walk out the door – putting the company even more at risk.

There was strong strategic planning at the corporate level and divisional levels. High level plans were developed and communicated to the regions & divisions. The divisions spent the time to develop specific, actionable strategic plans and when they did, each division was interested in their domain, but remained consistent with the overall corporate strategy.

There was little need to "roll-up" or consolidate divisional business plans due to their overarching consistency. Most divisions selected Oracle as the preferred database system while other groups selected MS SQL Server and others used Mongo DB! This was a large problem since integration between systems was poor, at best. All Acme financel and Tax prep branches used a version of home grown software for all their administration and tracking needs. This software was developed in the 1970's, written in Cobol and still in use today!

The legacy IT environment did not support the business units well and Acme was not able to rapidly respond to new regulatory directives - many systems had to be changed and databases updated in order to comply with regulation changes.

Support for Government Regulations

Each region & division has their own regulatory group – focusing on the regulations for the countries in their region. Each year the regulations change and there is significant money spent on lobbying efforts with local & state officials.

The divisional IT departments are keeping up with all regulatory changes and new reporting requirements that have to be implemented. Typically people in the business groups are talking with

officials and are alerted of any regulation changes. There is poor interaction between the IT and business groups – development managers are notified late in the year when regulatory changes are announced. Acme Financial Services typically files for extensions because they are late in meeting state mandated deadlines.

Customers

The Chief Customer Officer (Sally Smith) was very enthusiastic about the CEO's directive. "I've been educating myself on Gen AI and think there's lots of potential in my department. Our customer service is fragmented and a sore point with our customers. I wonder if Gen AI can help?"

Acme Financial Services enjoys a large and diverse customer base. The Private, Institutional and Commercial divisions have large customers that span the globe and as well as industries. About 25% of sales are to various institutional organizations around the world.

Coordinated account planning across regions and divisions is somewhat fragmented, but not a huge concern. Oftentimes, a customer is contacted by several Acme sales teams representing different parts of the Acme organization. Some customers are confused and there is never a 'Single point of contact' for a customer. More distressingly, different parts of the company give different answers to the same customer questions.

There are separate customer service groups for the various customer types. Customer support is inconsistent at best and often frustrates customers.

Sales & Marketing

The Chief Sales Officer (Bill Smith) is cautious but somewhat optimistic about Gen AI. All my CSO friends at the golf club are talking about their "Gen AI pilot projects" and they have 'high hopes' for their success. I'm not so sure about Gen AI, but I like my bonus and want to be a team player. I'll fund a small project, but I don't want to be the first!"

The sales and marketing groups are always looking for information about their products, customers and current sales. The problem is the data in the corporate systems is not easily obtained in a usable format for the sales team. The sales team uses ipads and their phones.

Institutional Investments

The Director of Institutional Investments (Sam Smith) is dead set against Gen AI. "Well, I'm going to pretend to be "all for it", but I'm going to drag my feet and quietly not participate for as long as possible. I feel Gen AI is too risky of a technology right now and will probably go away next year. I jumped on the blockchain bandwagon and was burned! Look where that got me! Nowhere! I'm not falling for another fad".

Acme sells financial products in countries on five continents. Institutional Investment operations report into geographic regions. While the financial products sold around the globe are relatively common, the IT systems and data are not. For example, the same Financial Service products sold around the globe will

have similar characteristics but different internal material codes depending on which region sells it. This makes it cumbersome to track sales around the globe.

Acme Financial Services is having a quality control issue and not sure of the source of the problem. The software engineering function is not very strong and the developer teams could use much training and help. The development teams are just not as strong as you would expect for a financial services firm.

Many of the branches track their products using various systems - some paper, many use disparate systems that don't talk to each other. Finding the source of a problem is a time consuming process and often error prone. Acme prides itself on the process they use to produce their Financial Service products. After many years of research & experimentation, a formula was developed which produced very profitable financial products - for Acme, that is!

Many institutions have approached Acme for the capability of AI powered Algorithmic trading platforms. Acme has been reluctant to pursue this capability due to limited in-house expertise with AI.

Finance

The CFO (Suzie Smith) is all for Gen AI. "Like some of us, I've been reading and learning about this technology and am very excited to give it a try. My team has also been using tools like ChatGPT and Gemini ai and I've seen productivity improve! I'd like to know how other CFO's are using Gen AI and how I can really make a difference in my operations!"

Suzie further laments during one happy hour: "Change at this company is awful! We want to adopt a change, but there's no real sponsorship or support from the leadership team. We tried putting in a Service Bus, but could not get the buy-in from business units. We tried blockchain, but the developers said "it was too difficult to learn". So what are the chances Gen AI will work?"

Each region maintains its own financial reporting structure. There is no common chart of accounts and financial reporting at the corporate level is simply a roll-up of regional and country level P&L's with little underlying data.

Exhibit A. Company Organization

Acme Financial Services is organized in several Regions and Divisions

Regions: The Americas

Europe, Middle East & Africa

Asia / Pacific

Each Region was organized by the following divisions:

Institutional Investments

Retail Investments

Trading Systems

Tax Preparation

Each Division also contained:

Sales

Marketing

Finance

Operations

R & D

Legal & Regulatory

Information Technology

HR

Corporate Functions:

Corporate IT

Finance

Operations

HR