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HOW TO ACHIEVE A COMPETITIVE ADVANTAGE THROUGH YOUR SOFTWARE SYSTEMS

INTRODUCTION

To achieve competitive advantage, businesses need to offer potential and current customers greater value than their competitors.

There are a few different ways to achieve this competitive advantage. The first is through lower prices. While sales and discounts can attract new customers, competing solely on price usually results in a "race to the bottom", and this is unsustainable in the long run.

Alternatively, businesses can better compete by increasing productivity, staff engagement, business intelligence, product delivery, and customer satisfaction through digital improvements- providing additional services or benefits to justify a higher price and a higher likelihood of being chosen over competitors.

Since it costs much more to attract a new customer than it does to keep a customer you already have, turning your customers into fans and advocates who will spread the word about your business is a sign that you're on the way to achieving competitive advantage.

HOW CAN SOFTWARE SYSTEMS HELP BUSINESSES ACHIEVE COMPETITIVE ADVANTAGE?

The continual growth and change of technology has altered the way that businesses compete in almost every industry.

These technologies have changed the way that companies collect data and interact with customers, revolutionised the way that employees work, collaborate, and interact, and helped businesses save money and increase productivity.

While some companies have continually embraced these changes and benefited from embedding this new technology into their business, others are struggling to compete in a world that continues to become more connected. Regardless of where a company is currently positioned on this spectrum, there's little doubt that emerging technology will continue to affect the success of businesses in every industry going forward.

In the 2012 IBM Global CEO study, business leaders ranked technology as the leading external force that would impact their organisations- above any other factors, including the economy.

And in the IBM study *The software edge: How effective software development and delivery drives competitive advantage*, the company surveyed 435 executives in 58 countries within 18 different industries. While 54% of respondents believe that software development is critical, only 25% said that they were leveraging it effectively.

Of the companies that were effectively leveraging software development, almost 70% were outperforming their competitors based on profit. The problem? Although most businesses recognise that software systems go hand-in-hand with competitive advantage, the majority are dealing with an execution gap due to ageing legacy software systems.

THE PROBLEMS WITH LEGACY SYSTEMS

A software system becomes "legacy software" when the technology platform becomes obsolete, or it simply is unable to keep up with the demands of a growing business.

Legacy software systems are also sometimes created when there is no longer anyone available to maintain or alter the code, or when the code has been modified so many times that current developers can no longer completely understand the code.

Legacy systems can prevent your business from achieving competitive advantage in the following ways:

LACK OF SUPPORT

Anytime software is changed, 'entropy' occurs, which is a measure of the amount of unclean, complicated code. Eventually, the code will often become so complex that it can no longer be effectively changed- or it is incredibly expensive to do so.

Unfortunately, as the software language becomes obsolete, developers are no longer trained to work with these systems as employees experienced with the legacy software leave the company or retire. Australia is already facing a skills shortage in the IT industry, and a report released by The Australian Computer Society (ACS) and Deloitte Access Economics indicates that while Australia currently has approximately 600,000 people employed in ICT, over the next five years we can expect a demand for 100,000 more IT professionals.

Recruitment firm Greythorn surveyed more than 2500 Australian IT professionals working in a variety of industries across the country and found that 60% are planning to change roles within the next year. Qualified developers and IT professionals are now being headhunted, and while most of these professionals were once looking for new roles because they wanted a better salary, career development and progression is now seen as more important for the majority of developers.

This means that many of these professionals will be uninterested in working with a legacy system, and it's also likely that the people who are most experienced with your legacy system will eventually leave your company - either to retire or to seek out opportunities elsewhere.

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HIGH MAINTENANCE AND STAFF COSTS

Research from International Data Corporation (IDC) has found that in the United States, a staggering 77% of IT government spending is used for maintaining legacy systems.

Legacy systems are difficult to update, and a small change will often break another part of the system - so any changes or updates will require significant time and effort. The underlying infrastructure for your legacy system also gradually becomes more expensive as it ages, and since it's harder to find and retain IT professionals with the skills and expertise to update or fix legacy systems, business owners eventually find that the cost of maintaining their system is equal to, or more expensive than upgrading or replacing the system.

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SECURITY ISSUES

Older systems have a greater chance of being infected with malware and are less resistant to harmful programs and cyber attacks. If the software has been around for many years, it's likely that attackers are already familiar with the system's code and vulnerabilities. A system software example is Windows XP, which, compared to newer versions of Windows, is six times more at risk of being infected with malware.

A number of companies have recently fallen victim to hacks, breaches, and security problems. In September 2016, Yahoo revealed that at least 500 million of its user accounts had been hacked two years earlier, and then revealed that a separate hack in 2013 had gained the data of one billion of its users- the largest hack in history. And who could forget the Democratic National Committee's breach, with Wikileaks publishing almost 20,000 emails from DNC staff, arguably influencing the results of the election in the United States.

With every newsworthy hacking incident, it's evident that it's becoming more important than ever for businesses to ensure the safety of their customer's private information, and failing to do so can cause irreparable damage to the reputation of businesses at the mercy of cybercriminals.

LOST OPPORTUNITIES FOR INNOVATION

When businesses are spending the majority of their IT budgets on support and maintenance for legacy software systems, they have less room for innovation. Instead of leading the pack and adopting new business models and technologies, they're stuck with "dinosaur" software, meaning competitors have more opportunities to take over market share and attract their customers.

A study by Fiserv found that banks offering mobile banking services could generate 72% higher revenue with mobile banking compared to branch-only customers. Therefore, a bank with an intuitive mobile app could lure away customers from a competing bank without an app, giving one bank competitive advantage over another.

Unfortunately, legacy software systems often limit productivity and efficiency, hindering innovation and ensuring that IT staff spend so much time rewriting and maintaining legacy code that they have little time available to improve business processes.

INTEGRATION ISSUES

While many business owners would like to add new software solutions and applications, connecting a third-party service or tool to a legacy software system will often require a huge amount of custom code, and the final integration still may not work as seamlessly as intended (or may not work at all).

The latest programs are usually cloud-based and/or using state-of-the-art technology. It's not unusual for this to cause huge problems when it comes to integrating with legacy software systems, and the necessary workarounds are often time-consuming band-aid solutions that may cause future problems down the line.

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SOLUTIONS:
THE TWO WAYS TO GAIN COMPETITIVE ADVANTAGE THROUGH YOUR SOFTWARE SYSTEMS

Business owners have two main choices when overcoming the legacy issue:

1 A COMPLETE REBUILD

There are many reasons why businesses may choose to completely rebuild their software and shut down their legacy system. For businesses operating in industries dominated by legacy systems and decades-old technology (particularly insurance firms, banks, financial services, militaries, airlines, and travel agents), a complete rebuild is an opportunity to outperform competitors with a simple yet sophisticated, modern software solution.

Since design standards and user experience have greatly evolved over the last few years, businesses introducing sleek, intuitive, user-centric systems will find that customer satisfaction and employee performance is likely to improve, which will lead to an increase in revenue. Legacy IT faults will also be removed, which will mean faster, improved service, reduced risk of outages, and happier customers.

Once a legacy system has been replaced with a modern solution, your business will be ready to grow and evolve, and keeping up with the latest technology will help create a culture of innovation within your company.

Shutting down your old system and building a new one may seem extreme (and expensive), but often it's better, in the medium and long term, for businesses to completely retire their legacy software to avoid downtime, security breaches, lost data or too heavy a reliance on key personnel. Since developers will no longer be working within the limitations of legacy code, software can be tailored for your business, ensuring it meets the current and future needs of employees, suppliers, and customers.

However, there are both pros and cons when it comes to a complete upgrade. New systems cost a lot of money, can create changes in workflow that can take a while to adapt to.

2 A PARTIAL FIX OR ADD-ON

With legacy software systems causing so many issues for organisations, why do so many business owners and CIOs hesitate to upgrade?

Unfortunately, upgrading isn't as simple as you might think. Legacy software systems will often run a company's most critical business processes, and many business owners and CIOs find it hard to justify the upfront expense of a complete rebuild, along with the extra employee training and potential downtime during the upgrade.

That's why many businesses choose to go with a partial upgrade. Since developers will still need to work with complicated legacy code, business owners can't expect to receive the same benefits as a complete upgrade, but fixing key components usually won't disrupt major business processes, meaning less risk and lower costs.

Businesses choosing a partial rebuild need to be careful that they don't end up with "bandaid" solutions, where small problems are solved but the underlying factors causing the problems are still there.

In some cases, it is actually possible to create a new function or component in a newer technology, and integrate this with the legacy software. You should ask your technology consultant to analyse the feasibility of this approach, which is at least a step in the right direction.

For some organisations, change represents risk, and many people find change unpleasant- meaning businesses trying to replace legacy software systems will often meet resistance from employees and customers. This can make a partial upgrade or fix the more attractive solution.

THE UPGRADE QUESTION: WHICH OPTION IS RIGHT FOR YOUR BUSINESS?

Since each business is different, it's important to carefully consider the risks and benefits of both a complete and partial upgrade. Here are some things to think about:

CUSTOMER EXPERIENCE AND IMPACT

How do your customers currently feel about your system? Are you dealing with complaints about usability, user experience or bugs? Have you been experiencing outages due to your legacy software? How modern and user-friendly is your current system?

If you're thinking about a complete upgrade, how will this impact your customers?

CHANGING BUSINESS NEEDS/ PREPARING FOR THE FUTURE

Does your legacy software system currently meet your business needs, or are you already finding functionality gaps that are frustrating employees and/or customers? Do you have a solid business plan in place for the next few years? In order to decide whether a complete software upgrade will be worthwhile, business owners need to have a firm grasp on where they're heading in the future and whether they're planning to compete with startups and innovative companies.

OPPORTUNITIES

Are there opportunities to increase productivity, staff engagement or accuracy by updating systems? If you miss these opportunities, will your business be at a serious disadvantage when competitors upgrade, therefore achieving a competitive advantage over your business?

SUPPORT

It's not just developer support that business owners need to worry about. One of the biggest problems with legacy software is a lack of vendor support- vendors will eventually cease offering any type of help for companies using older software. Most vendors are focussed on implementing features requested by their largest customers, which means that business owners may find themselves stranded with a huge software problem, no vendor support, and IT staff that are unable to fix the legacy system.

Do you get sufficient attention from your current vendor or developer? And do you see this lasting for years into the future or are you expecting this support to end within the next couple of years? (Often the writing will be on the wall when your legacy support has an expiry date as vendors slowly become less and less responsive to your needs).

EMPLOYEES

Do your people have the skills to use the current system? Will you meet resistance with a new system? Are staff stressed or frustrated with the current system?

When you replace your legacy software system, you may find that few people are happy about it. Often a new system will change job descriptions, potentially making some roles redundant as key tasks can be automated. Staff will need to be trained with the new system, and this can be a huge learning curve that some team members may find stressful (particularly if they've been working with the old system for years).

However, in the long run, a new system is likely to help employees be more productive and reduce mistakes. A good example is AFEA, which needed an online system to manage their nurses and support offices. Their custom system reduced administration time, improved customer experience, and automated a number of processes- reducing double entry, all of which enabled them to handle increased volumes and grow quickly.

THE PROCESS

TIME

When should you upgrade your legacy system? Is it worth upgrading now, or could you keep using it for a few more years? This will depend on the functionality you currently have with your system, the security risks to your business, and the likelihood of your business being able to quickly recover from a sudden bug or prolonged downtime.

SECURITY

When legacy software systems are no longer supported by vendors, they will no longer be providing patches which keep these systems safe and compliant with security recommendations and requirements. It's important to carefully consider the security risks to your company and the impact a breach could have on your customers and reputation.

COSTS

The cost to completely replace your legacy software system will be hugely different compared to rebuilding key parts. However, it's not as simple as a comparison between both options since many businesses are spending large sums of money on simply maintaining their legacy software each month, or worse, losing revenue or reputation from poor customer service. Since a complete upgrade will remove these costs, you may find that after crunching the numbers it makes more financial sense to upgrade, even though the initial costs will be higher.

THE SOFTWARE

How old is your legacy software? Was it custom built for your business? If you're still using off-the-shelf software that no longer has any vendor support, this will often mean that it's even harder to find workarounds or partial fix solutions. You may find that a new piece of software already exists that can help solve some of your legacy problems short-term, but ultimately, if your business is growing fast, it is likely to see better ROI from a new software solution that can easily handle your future requirements.

LEAD THE PACK

- **Did you download this eBook to learn more about opportunities with your software systems?**
- **Are you looking for a cost-effective solution to upgrade a legacy software system?**
- **Or, are you grappling with a decision to conduct a partial software fix versus a complete re-build?**
- **We have a lot of experience with these kinds of projects and would be happy to offer some advice.**

To request a call-back or to book
a free consultation, please contact us.

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