Revise a Company in The Making

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IT20: Introduction to Information Technology

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February 11, 2023

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I run an automotive brand-named revise, where we make electric powered cars in the shape/designs of older sports cars ranging from the 1960's to the 1990's and recently we have been having discussions in our board room meetings about increasing productions and building a few new manufacturing plants in the U.S. We based this on the increased sales of our cars in the last three years, which is in part thanks to the information system we had implemented into our facility to keep track of everything and figured that it would be a good move, however this brings up a problem, in that production needs to increase in order for the demand can be met and to do this we have to look at the four-step process. We already know what the problem implementation is, being the lack of cars to meet demands, so then the solution design had to be thought up and we had to consider every possible solution to the problem, from hiring more people to outsourcing to manufacturing of part to other countries and finally the build of a few new manufacturing plants, which leads us to the choices/solution evaluation, which wasn't that hard to make consider our financial revenue for the past three years had been extraordinary high thanks to the increase in sales so we decided to not go with the outsourcing plan as we wanted to also give lower skilled workers in our country a job opportunity, so finally the implementation of our plan has already been in effect for the past six months and with two plants built we have already seen an increase in production, as well as an increase in workers. In the end we were able

to not only solve the problem of increasing production, but we were also able to give more people jobs and give customers a product they will love thanks to these four simple steps.

Global E-Business or Collaboration

At the company I run, we use business intelligence systems in conjunction with DSS, MIS, and ESS to determine the sales figures and future projections for the company in the upcoming quarter. Running a company like mines is difficult, it requires you to stay ahead of the competition and develop new and innovative designs and technics to not only get the most electric efficiency product on the market, but to also make sure that the designs and the materials that make said design are aerodynamic and safe enough for the customers, without compromising the core ideas of our designs. In order to do this we incorporated the enterprise system into your company so that I (senior management) can keep an eye on everything that goes on within the company, from new design plans made by the middle management team, productivity reports from the operational management team and also keep up with the relationship between our company and supplier are going and I can do it all in a system that combines everything into one. To give an example of all of these systems coming together, we have a new line up of cars that have been in development for about a year now and we've used MIS to gage the organizational performance and we consolidated with each other on DSS to determine a estimate on what time the new products are released so that we can maximize profits as people are more likely to spend money on a new car during a specific time of the year. This will allow us to gain the most out of the release and better maximize profits.

Collaboration and social business are something that our company tries to strive for, to keep our employee's options flexible in case they want to work from home. With the use of collaboration applications like zoom and google meet, we can communicate with managers on the fly and save time and money within our companies to spend on more research and materials. We also try and incorporate this innovation within the field, more specifically within the actual factories. As you know we are a car manufacturer, and it's not possible to have our manufacturer employees working from home, as their job titles demands them to be within the factories to begin with and the same thing goes to our research team, but more in the since that precious information about the manufacturing process and design blue prints for our cars cannot fall into the hands of any other manufacture, the risk is too great, so we require them to also work from within the company so that everything is monitored under lock and key. However, this does not stop us from trying to incorporate the systems within our factories and office complexes, as we use well trusted applications to conduct meeting with other managers, staff members with the research and design departments about the new breakthroughs and we also conduct meeting within the factories every month to let the employees know about the work they do is apricated and that working safe should be the number one goal.

Achieving Competitive Advantage with Information Systems

In my business we use the value chain model to break down what our primary and secondary activities are. These activities then help use determine where we should implement the

information system in depending on the problem we might be currently facing. For instance, our company had an issue with sales and marketing our products, which is one of the primary activities on the value chain. The issue we faced in the early start of the company was the fact that while these designs were different from the norm at the time, they were too alienating for the public, who didn't take interest to the idea of driving something that to them seemed too bulky and ugly. So, as a company we had to think about marketing and sales strategies, and about new cars that might appeal more to the younger more impressionable consumer base.

With the thought of reaching a wider audience on our minds we went to work implementing our information system to see what the consensus were on our vehicles. Besides finding that most people though our cars were too bulky and old looking, we found that on average the people buying our cars from dealerships were mainly older men in their late 40's and early 50's, with a slight margin of younger adults in there mid – late 20's also buying these cars as well. So, to target them, we decided that having advertisements of tv and the internet, targeting this demographic of people would make the most since in getting more eyes on our products. By using our information system, we tapped into a niche market of potential consumers that might have never even realized that there was an electronic car company out there bring older designs back into the market and now we are making more money thanks to just tweaking our marketing just a little bit. Thanks to information technology and the value chain model we were able to increase sales on our product without having to waste too much time and resources.

Ethical and Social Issues

Here at Revise, we strive to provide the most efficient and reliable customer services that our company can provide, while being transparent and honest with the customer as often as possible, and to do that we rely on the ethical principles of the golden rule, Immanuel Kant's categorical imperative, slippery slope rule, utilitarian principle, risk aversion principle and ethical no-free-lunch rule. Our company will stick by the tried-and-true method of building customer trust within a business by using the golden rule of not lying to the customer and the Immanuel Kant rule of being as transparent and honest with the customer about our products, because if it's not right for everyone it's not right for anyone, this is to keep customers from feeling like we deceived them to make them pay more for one of our car then what it's really worth, because we would want a sales person or manufacture to dramatically increase the price of a car when there is nothing significantly different between this year's model then the previous year's model (i.e., we will not up charge the consumer to make a quick buck). We want to innovate the way we do business over time without falling into predatory tactics, therefore the slippery slope rule, and the utilitarian principle are so important to us, because without the utilitarian principle we wouldn't have been able to improve the safety features of our car to have it be up to the standards of the National Highway Traffic Safety Administration (NHTSA). You see back when we were first starting out with the original line up of cars, be sold them on the bases that it was going to be essentially going to be a 1-1 remake of some of the old car models from the 50's, with the only difference being it would be based on blue prints that we came up with along with it being completely electric, and when we showed it off at trade show to revile to company to the public, the general conscious was positive as they were taken aback by the

classic design of a modern car with the metal boxed framework, but after the show and before production could start the NHTSA sent out a notice saying that our vehicle need to be changed, as if it were to be in an head on collision, the metal framework would be insufficient in fully protecting the individual, this led us to construct the body of the car not solely on metal, but a mix of fiberglass and metal, while also putting in extra safety measures to make sure that it was safer than before. The change was seen as a positive change for the most part, but some people were disappointed that the all metal design couldn't have been kept, but we assured the consumers that we would no longer change the designs of our cars in such a dramatic way anymore, unless our vision for a new line of cars is being produced.

Our company was created because we wanted to make cars that were different from the rest of the car lines available on the market. That being said, the risk aversion principle is an easy ethical principle for us to follow as we never really step outside the boundaries of our niche, unless it's to bring in a new niche crowd, which allows us stay steady and not risk too much money in production cost on a product that we don't know if it's going to work. Seeing how we already know that there is an audience out there that is willing to pay for the products that we already provide, taking smaller risks here and there without neglecting the other consumers, keeps us from harm financially. Finally at our company we believe in the ethical no-free-lunch rule when it comes to the designs of our cars, because as you might be able to tell, our cars would not be considered the most original designs ever created for cars, so we have to look at the designs on a case-by-case basis and make sure that the designs of our new line up of cars is not

too similar to that of a design of a older car from one of our competitors like Chevrolet or Mustang. So, in the end this is how our company stays clean and keeps consumers happy and legal troubles at bay, so that we can provide and serve the people who enjoys our cars.

IT Infrastructure: Hardware and Software

At Revise, we all sort of different computers to complete tasks and to calculate the different areas within our cars that should be improved before we roll them out onto the market. We took a page from our competitors and decided to invest our company's money into building a facility to house our very on supercomputer so that we can simulate our vehicle collisions in real time and make adjustments to them accordingly so that they can be ready for mass production. Workstations are used throughout our engineering department so that detailed blueprints and schematics for our cars, without this piece of technology there would be no company. Servers are used within our company to share information from one department to another so that we can all be kept up to date on the recent changes and discoveries made so that they can be either approved and moved forward on or be denied because of budget constraints. Finally, we invested in a cloud-based system of our own so that in case of an incident or disaster we can easily recover our data and not be set back by it, with these tools by our side, we will be able to create new and exciting vehicles that our customers will sure love.

Seeing how we are a car company, the prospects of us delving into mobile applications for the business might seem pointless, but you would be wrong. Our company is designing a

mobile app to monitor your cars health from batter life, tire pressure, video feed, etc. so that you can always be kept up to date on the condition of your car though a touch of a button. For us to do this we must look at the market research and technology that we currently have and implement that same technology into the app in a user-friendly manner. We would then need to make sure that the app is secured so that manipulation like remote hacking can't take effect from any outside forces trying to get into the phone. We would have to link either the user though password identification, or through a biometric system, nothing too crazy, just on the level or a figure print reader, we want to make sure that no one decides the owner can access and use the app for they specific car, so that there is no chance of an attacker getting their hands on the customer's information on their car. After the app is developed, we need to the application hosters (Apple's app store and the google play store) for various phones to have our app be approved for their marketplace so that it can run on their devices and once their download it, there will be a prompt to link their car up with the mobile app and their ready to use it.

Business Intelligence

At Revive, we use our databases to stay organized, informed, and efficient within our business, to make sure that the customers are satisfied. We use systems like Online Analytical Processing (OLAP), which "supports multidimensional data analysis" (Kenneth Laudon & Jane, 2021, p.195) this helps us to see when and where the most vehicles were sold, so we can adjust accordingly, and maybe put out a few more cars on the lot in the places where we see the most growth. For instance if we used OLAP and we saw the sales of our vehicles were selling more in

the west during the month or June then they were in the east during that same time period, then we will be more inclined to ship more cars out west to gain the most sales, the following year in the month of June and ship less cars in the east to save up on money. The database is an amazing tool to keep up with customers complaints, feedback, and engagement to our overall brand. We use tools like web and text mining to see customer feedback and engagement too see if the products were selling and the support were giving though our websites is sufficient for the customer to feel satisfied and while we use the databases for sales and customer service, there is another aspect of databases we tend to use to keep the company afloat.

We use the database on a continuous basis to update the statice of our company with useful information, like if we change our old supplier with a new supplier over a disagreement, or it we wanted to update the type of parts we use for our vehicles with another part, because it works better. Our databases are always being filled up with information on customers information, supplier information, changes in the design and parts, financial, legal, and employee information. We end up with a ton of big data, which forces us to use Hadoop, “an open-source software, that enables distributed parallel processing of very large amounts of data across inexpensive computers” (Kenneth & Jane, 2021, p.195), to store that information. Customer information is something that we take extreme caution on, for ethical reasons, as we don’t want user information that was given to use by the customer to be leaked out into the open, we tend to keep the database under a watchful eye so that compromises can be kept at a minimum. But with all of that said, our database is the life blood of our company and one that cannot be compromised under any circumstances.

Telecommunications, the Internet, and Wireless Technology

At Revise, we tend to use the internet in a very liberal way, and we try and find ways to incorporate the internet into our business practices and customer services, so that we can stay ahead of the competition. We have been integrating the internet without business practices since we first started, with simple techniques like, advertising and building our website to show people curious in us that we were a legitimate car manufacturer with dealerships in (at the time) a few selected places all over the country. The website also gave an overview of our goals, ambitions, and moto of wanting to revise older model cars for a future market and we also added contact information for the company and hiring detail, so that the company can find new workers and grow. As mentioned before, the recent events of the pandemic has affected the way we look at working from home, and we have used this to try and make the process of working at home from some of our workers possible with the power of the internet, and to also conduct important business meetings with shareholders and regional managers from all over the world, by using applications like zoom and google meet, so that the work and communication is not compromised too much by unpredictable events, that's out of our control. In the end, we also use the internet for our GPS navigation systems in our vehicles, along with other components and applications like the car health tracker app we developed, to make our cars comparable to the standards of other cars on the market, but we will still try and figure out ways to further improve

our integration with the internet, so that we can provide the most practical means of work, for our employees and the best service to our customers.

Securing my Business from Hackers

At Revise we use many security practices to keep our information secure and protected from external and internal attacks. We use basic prevention measures like firewalls and intrusion detection systems to prevent people from gaining access into our companies' main servers, and to also alert use to any foreign software/programs that might be lurking within our system. We also use anti-malware software on our system to help with basic low level malware removal as well, but even with all of these software in place, we do not solely rely on them to keep the entire company protected, this is why we do deep dives into the companies systems twice a year to see if there is anything in the systems that needs to be removed as it poses a threat to the company. Along with software we also practice safe practices at the company and make sure that employees are incorporating the acceptable use policy to ensure that no one is going on unauthorized sites on the company computer that could lead to a breach in the companies' systems. With these practices we can deter attackers from targeting our company with malware that is meant to steal or destroy/disrupt our work, but we also have plans for protecting our companies' physical assets as well.

We know that our company is not safe from the natural and unnatural elements of the world, and we must do everything in our power to mitigate as much damage as possible. This is

why we have a disaster recovery and business continuity plan, which “focuses on how the company can restore business operations after a disaster” (Kenneth & Jane, 2021, p.286), in case of an unforeseen event were to take place. For instance, about three years ago a factory of ours in Nebraska was severely damaged in a EF5 tornado, and we had to incorporate both disasters recover, to recover and replace any equipment that need to be replace after the storm had hit and business continuity plans to see when the site would be back and operational. It took us millions of dollars to replace and repair everything and in the end, we lost about two months’ worth of work in the process, but we were lucky that the structure held up as well as it did and that none of the employees were injured or killed. Thanks to use planning issues like these in advanced, we were able to not loss too much money in the long run.

Achieving Operation Excellence and Customer Intimacy

At Revise we try and establish a strong relationship with our customers, without harvesting their data to use against them. We try our best to only collect the essential data from our car vendors like the phone numbers, emails and addressed, to promote our new line of cars and to send out important recall alerts, so that our customers are not riding in a product that could put their life at risk. We use employee relationship management (ERM), which “deals with employee issues that are closely related to CRM” (Kenneth & Jane, 2021, p.321) for our employees in every branch of our operations, requiring sales goals for our salesmen and enforce training for everyone else to ensure that they understand that putting their entire best foot forward can really make a difference when creating a vehicle for the customers. For me and quite

a few other people out there, when we own a car that has lasted quite a while and has been reliable for years, we tend to stick with that cars company, as they have proven themselves in our eyes to be reliable enough for use to stick with them for so long. We want Revise to be the new generation of that reliable car company that people can look back on years from now and know that that's the company that will treat them right and provide the best experience.

E-Commerce: Which products will be available through my online store?

Using e-commers at Revise has helped our company out ten-fold in the past and continues to help us in the current year, as we use it to not only promote our brand to our customers but to also keep in touch with our business partners in the manufacturing industry. To start off, we have implemented social media in our e-commerce venture, originally to get the word about our company out to a wider audience, but over time we started to add more of an interactive approach to the advertisement, and allowed people to take part in surveys to see which design for the upcoming line up they would want to see. During the earlier days of our company's implementation of advertising on a social media platform, it helped increase our customer quite a bit as people were interested in seeing a return of the classic car look in the modern age. In a business-to-business implementation the modern-day e-commerce implementation, has helped our company out a lot, as it has allowed us to automatically buy materials from our part manufacturer in bulk, which has made cut down on cost for us and the parts manufacturers, as most of the complex processes in between have been skipped over. These

are the two biggest ways in which e-commerce has helped our business out for the better and without it our business would not have been able to stay afloat.

Decisions Making in my business

Augmented reality (AR), “enhancing visualization by overlaying digital data and images onto a physical real-world environment.” (Kenneth & Jane, 2021, p.391) is a concept that we have been throwing around for the past few years ever since we heard that one of our competitors had been using it for analytics purposes for the past year or so. We have come up with a few ways in which AR can be used effectively in our company, the first being the use of AR in the design stages of the vehicle, which we can show off to investors and get real-time feedback on any design decisions that might not work, which will save us time in receiving feedback, which we can then use to create these improvements before deadlines crop up. We can also use it in the final development stages of production for our cars in where we can use it to scan and determine what needs to be fix, because something wasn’t put together properly during a stage in production and the same also goes for our factories in that we can incorporate AR technology to give us a scan of the factories machines to see which ones needs maintenance or needs to be replaced. This reduces risk of injury at the company caused by faulty machines and production won’t be compromised either from subpar machinery. There are many more ways in which AR can be applied in our company, like in the research and planning sectors and the parts warehouse, and we hope to implement to our fullest extent in the very near future as it will save us a ton of time and money, while also helping innovate new designs in the process.

Managing my business through Agile project management

At Revise, information is one of the many aspects of our company that we try and get right on a continuous basis, but it seems that recently we have been lacking in our ability to provide said information in an efficient way too many of our employees. Our chief information officer, released this after our design team expressed their frustration with the fact that the research development teams new break though in the vehicles technologies aren't reaching them fast enough, for them to implement in the new blue prints, so they have to either make an entirely new blue print to implement the new technology changes, or they have to wait until they hear something back from the research development team, which takes up productivity time. So for information to run smoother, the CIO, the board of directors and myself (the CEO) decided to make a information system plan to alleviate this problem and to fix issues like this from happening in the future, So first of all the purpose of this plan was to make communicating information back and forth from one department to another was going to be the primary focus, because without fixing this issue, our companies primary goal of selling cars will be compromised in the future. Next, we looked at the current systems that were implemented in our company and tried to figure out why these two teams where having so much trouble communicating information to one another. We noticed that though out the company the primary way of communicating was through email and nothing else, as employees were not allowed access to their personal phone while on the job, only on break and lunch, so we figured out that

communication might be slow, especially if a department manager wasn't looking at their emails on a regular basis.

Now that we have a better understanding of the situation, our next concern was figuring out what new developments we could implement into our company that would help alleviate this issue, and after some consideration we all agreed that letting everyone (companywide) have access to a company cellphone, would not only fix the issue with managers communicating with each other about new developments, but it will also help the employees communicate with each management on issues and questions they might have had within the company. After this, we discussed management strategies and decided that we needed major training initiatives to see that this implementation was a success, while laying down rules and restriction, when it comes to using the phones, and that every manager should relay this information to their team and/or ground floor employees. We decided to implement the plan and see how it would affect the overall work flow within the company, and what we found, was that information almost immediately started to flow from one team to the next without any problems and while this seemed to fix the overall issue, we still had cases of people trying to slack off and talk to other employees with causal conversation while using these phone, which was expected, but overall the production and work flow reports after the implementations came in very positively, as we seen an increase in production and money thanks to this. Budget wise, we didn't go above our normal budget, seeing as we didn't get the latest and greatest phones on the market. We gave employees basic phones, so that they can make calls within the company and that's it, while the managers got touchscreen phones that allowed them to check states within the company without

being at the computer at all times, this way they can view and changes on the fly and with this, we are hoping to see more improvements to our information systems as time goes on.

Conclusion

In conclusion, our goals here at Revise have never changed and we have to this day continued to stay committed to providing customers with quality vehicles that will stand the test of time. And while our goals have stayed the same, the ways in which we are committed to achieve those goals will continue to evolve over time, to adapt to the current landscape. We will continue to use new technology to broaden our reach in advertisement, while saving money in the process. We will also continue to use technology to continue to help us make informed business decisions, so that we can provide our customers with the quality vehicles that they have come to know and love over the years. While also using the same technology and information to systems to continue to help automate our warehouses and factories, so that we can get our products out and into the hands of our customers faster without compromising our products and this is the standard we will continue to uphold for the foreseeable future.

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