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1.0 Introduction

The goal of Taylor University's Athletic Department is to provide competitive experiences to promote achievement and Christ-like character. A crucial part of being successful in competition is athletic training programs. Currently, Taylor's football program, specifically the Strength Coach, is unable to analyze workouts to help assist in comprehensive strength training. Taylor University's football program as a whole is too overworked to analyze previous workout data or verify current workout data. This lack of analysis is a serious gap in strength training that needs to be addressed. We don't anticipate this problem to grow because roster sizes will remain fairly consistent amongst the different sports. This problem will not be solved, as Taylor University has no plans for increasing the Athletic Department workforce. In order to encourage competition amongst their athletic teams, the Athletic Department must implement an electronic solution to increase their productivity in viewing, analyzing and assigning athlete training regimens.

The purpose of this business proposal is to analyze and compare available solutions as well as to introduce our solution. This document will provide information on the possible solutions that we decided would best fit the problem at hand. It will include general information, benefits, and costs for each alternative. This document will also include what we decided to be the best possible solution from the provided list of alternatives.

2.0 Business and Project Details

2.1 Customer Details

The Taylor University's Athletic Program is located in Upland, Indiana and is a part of the NAIA Crossroads League. Each of their programs strive to win National Championships, which none have yet accomplished. Their mission statement reads "The mission of the Taylor University Athletic Department is to provide comprehensive and competitive experiences that promote the achievement of excellence and the building up of Christ-like character for the purpose of developing lives of eternal significance." Much like the university's academic program, Christ-like character is their primary goal.

This project has been designed specifically with the information provided from T.J. Ragan, Taylor University's Assistant Football Coach, who also works as the Strength Coach for the team. Coach Ragan is serving as a representative for the customer as a whole--Taylor University's Athletic Department. Coaches, athletic trainers, and athletes are viewed as customers when treating the Athletic Department as the primary customer. The project has been created for use primarily by Coach Ragan with each of the players on his football team. The expansion of the system to other teams within the university has been considered along with commercial use of the system, but these actions are not seen as primary goals of the project.

The Athletic program's money mainly comes from a combination of tuition and donors, in addition to a small amount of income from gate receipts. The money brought in funds athletic scholarships, the various needs of the program's 16 different collegiate sports, and the salaries of the coaches and directors. Due to fiduciary weakness in the program, the new system that is implemented must be very cost-effective, preferably free. The system would increase coach effectiveness, which enables strength improvements for the athletes. As a result, the benefits of

the system would likely outweigh the costs. In order to stay competitive with other athletic programs, and eventually win a National Championship, is it critical that the university update their athletic training system.

2.2 Customer Organization Chart

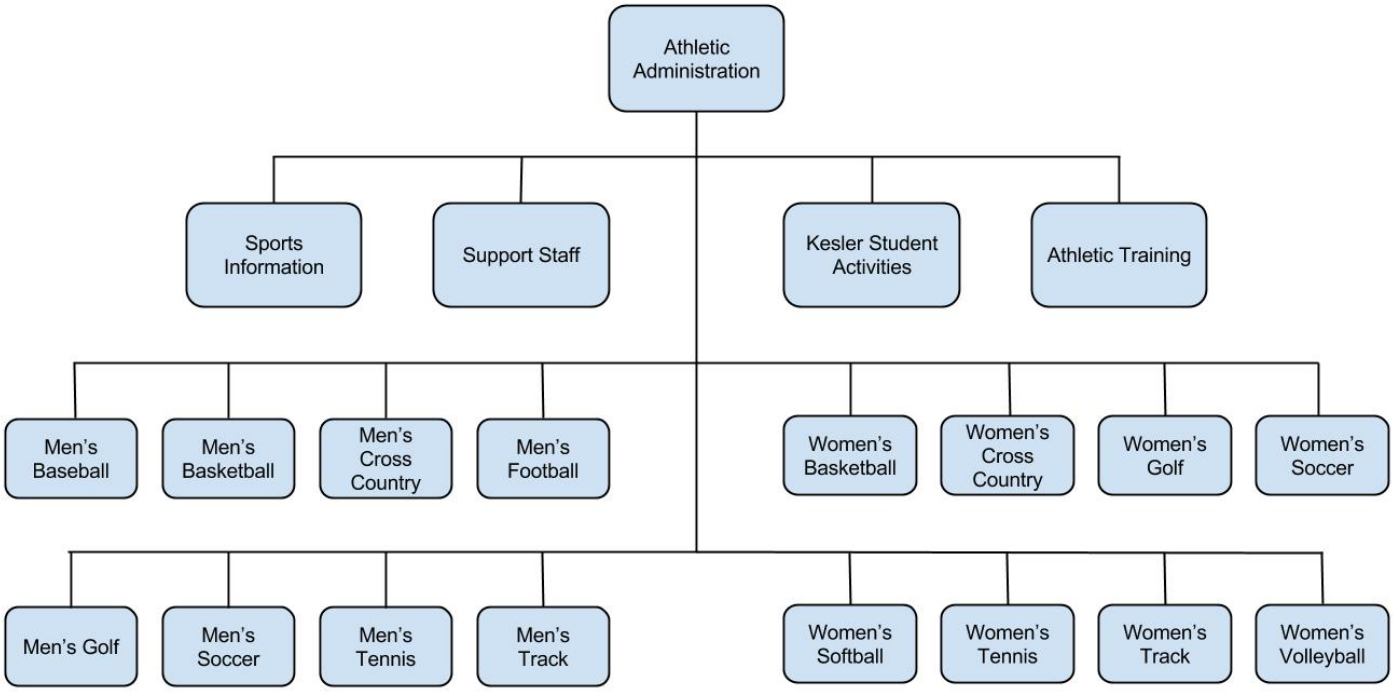

Figure 2.1 - Customer Organization Chart

2.3 Non-Customer Stakeholders

By viewing the Athletic Department as the customer of this system, it is important to note that players are viewed as a part of the customer. As such, the parents of these athletes will be a primary non-customer stakeholder. The parents will be very concerned with the welfare, success, health, and overall enjoyment of their children while acting as Taylor University student athletes. This system will undoubtedly play a role in determining each athlete's experience while at Taylor.

Taylor University as a whole is another non-customer stakeholder. At the collegiate level, athletics are of high importance. Athletics can attract more students, be an invaluable marketing tool, and be a major factor of campus life. Thus, Taylor University as a whole is directly influenced by athletics.

Lastly, donors to the athletic program would also be stakeholders, as their money would be used in different ways as a result of the project. Donors are, in most cases, interested in knowing exactly how their money is being used as well as knowing the outcomes of their donation. This system, and its success, will certainly be of interest to donors.

2.4 Project Motivation

The goal for this system is simple: to help the Taylor University Football team win a national championship. In pursuing this end, the system will be a tool to help each athlete be physically prepared to succeed, and allow the coach to analyze the team and the individual.

The existing process used by the program meets the basic needs in workout communication and completion, but can be greatly improved upon. Currently, the Taylor University Football Program uses a document-based process for strength training. When the coach assigns a workout to be completed by his athletes, a workout is created, printed, and placed in a convenient location for the athletes to grab. When athletes are ready to complete their workouts, they take a printed workout with them, allowing them to reference exercises. This document provides information about the exercises and includes space for the athlete to write their specific workout data. Upon completion, the document is turned in to the coach who can then analyze the data. This process is repeated as often as the coach desires.

This document-based system has serious limitations. Currently there is time wasted with athletes waiting in lines to grab a workout sheet, as well as time wasted when coaches input workout data electronically for better analysis. Due to amount of time required to input data, coaches rarely do so and therefore are not always able to analyze data well enough to make

appropriate coaching decisions. With the current system, athletes are unable to see previous workout data if desired, unless a special request has been made to the coach for old workout documents. Having access to previous data can be very beneficial for athletes as they complete current workouts. The motivation for this project is to address these limitations. If the limitations are addressed properly and effectively, the team will have a tool that will allow them to take a big step closer to winning a national championship.

2.5 KT Situation Appraisal

List Concerns	Clarify Concerns	Severity	Urgency	Growth
Letting athletes see what they've done in the past	• Athlete needs to know previous workouts with specific information (reps and weight)	High	Same	Increase
Coach being able to analyze data	• Having time to do so • Coach needs to be able to look back on previous workout data for any athlete • All workout data needs to be recorded	High	Grows	Flat
Coach being able to update data	• Having time to do so • Coach needs to be able to interact well with software and input all workout data	High	Grows	Flat
Athlete being able to log the data	• Concerns with athlete losing sheets or forgetting to log data	Moderate	Same	Flat
Time to access and file workout log (paper)	• Don't want athletes to waste time • Athlete needs to file data correctly	Moderate	Same	Flat
Athlete knowing workout	• Athlete needs to know workout specifics each day	Low	Same	Flat
Enforcement	• Coach needs to know when athletes do not enter workout data	Low	Same	Flat

3.0 Solution Alternatives

3.1 Commercial Software

There are two commercial pieces of software that are suitable for fulfilling the customer's requirements. Both options require annual payments, but require minimal personnel to maintain the system once implemented. Commercial software will also be able to provide better long-term support than a student-made system. However, one must consider that commercial software is made to appeal to as many potential customers as possible, and therefore may not meet the customer's requirements to the extent a custom-built system would.

3.1.1 TeamBuildr

TeamBuildr is a comprehensive solution that is focused on simplicity and design. It has a well-designed web app that works on iOS, Android and Blackberry, as well as a web view that is accessible by any Internet browser. TeamBuildr specializes in a social approach to workouts with a team-wide communication center which displays completed exercises by certain athletes, messages and 'fist bumps.' It excels in easy, user-friendly workout design and scheduling for coaches, with copy and paste and exercise templates. Coaches have the option of inserting a YouTube video or a tutorial file for the athletes to observe. TeamBuildr displays athlete progress through a series of charts that can be sorted in many different areas or amongst different sports/teams. As part of TeamBuildr's social focus, they have a leaderboard that allows users to see where they rank in order to enhance competition. According to the software engineer, the next feature in the system's development will allow workout uploading through Excel, which will be an invaluable feature for coaches. TeamBuildr is very simplistic but contains all the necessary customization for coaches. TeamBuildr requires an annual fee, specified in the following budget description.

Budget

No setup fee.

Annual subscription fee of $500 per year for up to 500 athletes.

Total Initial fees:	$0
Total Annual fees:	$500

**Annual fees include maintenance, support and training.

3.1.2 XPS

XPS is one of the most comprehensive training software on the market. It is extremely detailed in almost every aspect, although it is missing an online Interface. Instead, it has a mobile app and an application for desktop platforms, both PC and mac. While it lacks an online interface, it makes up for that with detailed information entry. XPS keeps detailed logs of workout data, nutritional information, drills and exercises, all of which is sent back to a server for the coaches to view and analyze. The graphs are not very user-friendly, but they are extremely detailed. This software is well developed and is potentially very expensive, as it is on a pay-per-user basis. Although it can be costly, it allows for advanced features such as connecting users to external personal trainers. Coaches can stay in good communication with trainers using XPS. XPS allows video upload for different exercises or competition footage and animated diagrams to show different sports formations and plays. XPS also requires an annual fee, specified in the below budget.

Budget

No setup fee.
Annual subscription fee:
- $85 per year for a coach
- $15 per year for an athlete

Total Initial fees:	$0
Total Annual fees:	
Athletes	$4815
Coaches and Administration	$5525
TOTAL	$10340

**Annual fees include maintenance, support and training.

3.2 Trojan Trainer

Trojan Trainer is the proposed system that will be custom made to fit the customer's requirements. As a result, it has an advantage over commercial software in that it will include everything the customer needs without a multitude of other unwanted options.

Another advantage to consider is that this system will be created and implemented free of charge and does not require any annual fees. The major downside to this option is the lack of support offered upon system completion, and as a result some amount of training would be required for future maintenance.

It will be able to be implemented upon completion. Trojan Trainer will be browser based with touch screen and mobile support. Our customer had also expressed interest in marketing the created system, which is possible with Trojan Trainer but not with commercial software.

Budget

No setup fee.
Annual subscription fee:
    $0 per year for a coach
    $0 per year for an athlete

Total Initial fees:	$0	
Total Annual fees:		
Athletes	$0	
Coaches and Administration	$0	
TOTAL		$0

4.0 Cost Benefit Analysis

4.1 TeamBuildr NPV

TeamBuildr NPV				
	Year 0	Year 1	Year 2	Year 3
Initial Project Cost	0			
User/Licensing Fees		-$500	-$500	-$500
Benefits				
Paper and Ink Savings		72.64	72.64	72.64
Cash Flow		-427.36	-427.36	-427.36
Discount Rate: 5.5%				
Present Value:		-405.08	-383.96	-363.95
Net Present Value:	-1,152.99			

4.2 TeamBuildr Soft Benefits

TeamBuildr clearly improves communication between both athletes and coaches, which improves performance. In addition to the great communication it has leaderboards, which would encourage athlete performance and training. It has ‘easy-join’ codes, which would drastically reduce time adding athletes each semester and allow the time to be spent elsewhere improving the organization.

4.3 XPS NPV

XPS NPV				
	Year 0	Year 1	Year 2	Year 3
Initial Project Cost	0			
User/Licensing Fees		-$10340	-$10340	-$10340
Benefits				
Paper and Ink Savings		72.64	72.64	72.64
Cash Flow		-10,267.36	-10,267.36	-10,267.36
Discount Rate: 5.5%				
Present Value:		-9,732.09	-9,224.73	-8,743.82
Net Present Value:	-27,700.65			

4.4 XPS Soft Benefits

Because XPS is advanced network for personal trainers, XPS allows people outside Taylor's Athletic Department to help coach individual athletes (for an added cost). Detailed nutritional information allows athletes to view, track and manage their eating habits improving speed, strength and health. XPS already has an extremely developed collection of exercises, so this allows for coaches to easily assign workouts and find new ways to strengthen or improve players.

4.5Trojan Trainer NPV

Trojan Trainer				
	Year 0	Year 1	Year 2	Year 3
Initial Project Cost	0			
User/Licensing Fees		$0	$0	$0
Benefits				
Paper and Ink Savings		72.64	72.64	72.64
Cash Flow		72.64	72.64	72.64
Discount Rate: 5.5%				
Present Value:		68.85	65.26	61.86
Net Present Value:	195.98			

4.6 Trojan Trainer Soft Benefits

Trojan Trainer allows for injury input and use, which encourages special treatment for athletes. When injured workouts are on special regimens, they are more likely to heal faster and less likely to injure themselves. It also implements a excel-like interface, which will allow coaches to learn the service quicker and with more accuracy.

4.7 Adverse Consequences

Implementation of a new system will require more work to be performed by workers in the IT department, but will not likely result in higher salaries for the workers.

5.0 Final Recommendation

5.1 KT Decision Analysis

The Kepner-Tregoe Decision Analysis method is used here to determine the best possible alternative. The “Must” category denotes what features the alternatives have to have in order to pass on to the “Want” requirements. “Want” requirements have been weighted based upon their relative importance to each other and to the system as a whole, and are given a 1-100 score as determined by how well they meet the requirement. The best scoring alternative (after determining weighted scoring) is therefore the best possible solution from those listed in the KTDA.

Decision Statement:
Choose best solution for Athletic Department

		XPS			TeamBuildr			Trojan Trainer		
Must		**Comments**	**Y/N**		**Comments**	**Y/N**		**Comments**	**Y/N**	
Accessible through PC or Mac			N			Y			Y	
Athlete access workout			Y			Y			Y	
Athlete record workout			Y			Y			Y	
Coach Create/communicate workout			Y			Y			Y	
Allow athlete to see previous workout and workout data			Y			Y			Y	
Coach see previous workout			Y			Y			Y	
Supports different Users			Y			Y			Y	
Allows different Sports			Y			Y			Y	
Allow for different positions			Y			Y			Y	
Cloud Server/Based			Y			Y			Y	
Wants		**Comments**	**Score**	**Wgt'd Score**	**Comments**	**Score**	**Wgt'd Score**	**Comments**	**Score**	**Wgt'd Score**
Price	15		20	3		60	9		100	15
Looks like excel	15		50	7.5		20	3		90	13.5
Organized, accessible data	15		90	13.5		100	15		90	13.5
Multi Platform	15		100	15		100	15		100	15
Messaging Log	5		70	3.5		100	5		0	0
Video/Picture Demonstration	5		100	5		80	4		0	0
Injury Integration	10		70	7		0	0		100	10
View-only user	10		30	3		0	0		100	10
Nutritional log	10		100	10		0	0		70	7
Attendance report										
Total Score	**100**			**54.5**			**42**			**84**

5.2 Conclusions

Our recommended solution for this problem is to use proposed system, Trojan Trainer. This option is most suitable for meeting all of the customer's wants as well as providing as many needs as possible without having an excess of features. As seen in our Cost Benefit Analysis, Trojan Trainer's free pricing proves to be of great benefit as time goes on. The desired system remains in effect without annual fees while TeamBuildr and XPS require thousands of dollars to remain running. Combining this information with the results of our KTDA, it is clear that Trojan Trainer would be the best possible solution to the problem.