

## The Evolution from Project to Business Manager <sup>1, 2</sup>

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### ABSTRACT

Project success is no longer just delivering the scope on time and within budget. What clients want from project managers and teams is delivery of the expected business benefits. Project managers who also have business skills greatly increase their value since they can assist the client in defining and delivering the project benefits. This paper will review key strategic planning concepts, including goals and objectives and how the project manager can support the client in selecting the projects that provide optimum value. A major focus of this paper is the importance of establishing a business case based on quantitative benefits, along with key performance indicators for defining project success. In addition, value achievement—that is, ensuring the project benefits are realized post-implementation—will be discussed. This paper provides a roadmap for project managers to evolve into business managers by describing the skills needed to help define and deliver the project benefits.

### TYPES OF PROJECT ORGANIZATIONS

Project managers work for one of three types of project organizations:

1. **Owner Businesses:** These are public or private companies and educational entities that produce consumer products and services and do projects to support business objectives. Examples include IBM, Wells Fargo, DuPont, Pfizer, Marriott, Disney, and the University of Maryland. Project managers have a vested interest in delivering project benefits since they help both the business and their careers to flourish. They should therefore be fully aware of the project business case and should ideally be involved in building the business case.

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<sup>2</sup> How to cite this paper: Lukas, J.A. (2020). *The Evolution from Project to Business Manager*; presented at the University of Maryland 2021 Virtual Project Management Symposium, College Park, Maryland, USA in April 2021; republished in the *PM World Journal*, Vol. IX, Issue VI, June.

2. **Government Agencies:** These are federal, state, or local agencies that provide services to citizens and do projects to support new or existing services. Examples include the Department of Energy, the Environmental Protection Agency, the Department of Transportation, and the Department of Parks & Recreation. Projects in this environment can be influenced by politics, but project managers with financial analysis skills can still influence the cost effectiveness of the solution approach.
3. **Project Suppliers:** These are public or private companies that exist solely to provide project services to owner businesses and/or government agencies. Examples include engineering, construction, software development, and data management companies. Project managers who work for project suppliers often have profit/loss responsibility for projects, and their career progress is tied to delivering successful projects for clients. In addition, these project managers may be asked by clients to evaluate solution alternatives to determine the approach that is most cost-effective, which requires financial analysis skills.

Regardless of the type of project organization that employs the project manager, having business skills makes the project manager more valuable. In all types of project organizations, the project manager should be involved in the pre-project phase, assisting in the solution approach and the business case, and involved in the post-project phase to ensure that the project benefits are achieved.

## **STRATEGIC PLANNING AND PORTFOLIO MANAGEMENT**

Organizations typically develop a strategy to move from the current state toward a desired future state (vision). A good strategy contains goals, which are general statements of desired achievement. For each goal there are one or more specific objectives, which are the steps to move toward the future state. Objectives lead to the identification of problems and opportunities, and from this potential projects are identified.

An example of how a goal and objectives lead to projects is shown in Figure 1:

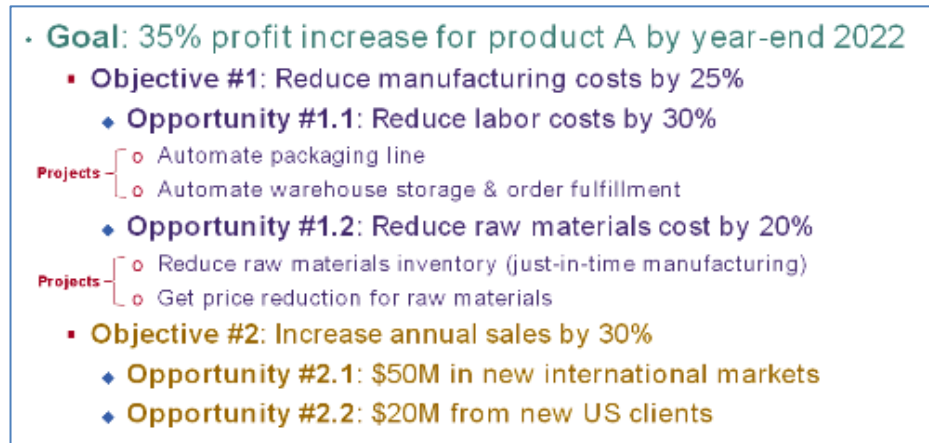


Figure 1. Goals, Objectives, and Opportunities Example

In this example only two projects are shown for each opportunity tied to objective #1. In reality, each opportunity typically generates a long list of potential projects. Unfortunately, the many potential projects typically exceed the available resources and money within the organization. Therefore, a project selection process is needed, and potential projects go through a selection filter that considers things like strategy alignment, financial return, success probability, and customer reaction. This “road to projects” is shown in Figure 2. The goal is to pick the projects aligned to the strategy that will add the most value and have the highest probability of success.



Figure 2. The Road to Projects

A key in project selection should be the business case evaluation using financial analysis techniques, which looks at the future revenue and future expenses associated with an investment, minus the initial cost of the investment. This concept of life-cycle cost analysis sums all recurring and one-time costs and revenue over a specified life span of a product or service. This includes the initial project cost, operating costs, maintenance and upgrade costs, revenues, and any remaining salvage value at the end of the product's or service's useful life.

Financial analysis also uses the time value of money, which recognizes that money received in the future is not the same value as money received today, and is dependent on the interest rate. For example, \$1,000 today is equivalent to \$1,050 in one year at 5% interest, and \$1,100 at 10% interest.

Using the life-cycle cost analysis and time value of money permits the evaluation of investments for money flows that occur at different points in time. Financial analysis is used to determine whether a project investment is justified. The two most commonly used techniques are (Lukas, 2014, p. 4-5):

- **Net Present Value (NPV):** present value (PV) of all current and future cash outflows & inflows for a given cost of capital (interest rate). If the NPV is positive, the investment will add value to the organization.
- **Internal Rate of Return (IRR):** interest rate at which the PV of all future cash flows of an investment equals the cost of the investment. If the cost of capital is 5%, and the IRR is calculated to be >5%, the investment will add value to the organization.

There are limitations in using financial analysis for making project selection decisions. First, the accuracy of financial analysis is dependent on the accuracy of the cost and benefit estimates. Ideally, only quantitative benefits such as a decrease in operating costs or an increase in product sales should be considered since they are more easily estimated. Qualitative benefits, such as a productivity increase for software developers with new computers or higher customer satisfaction, are subjective and very difficult to measure.

Second, financial analysis can easily be done for projects such as expanding manufacturing capacity for existing products, introducing new products, and productivity projects. However, financial analysis is not as helpful for legal and regulatory projects, social needs, environmental projects, and technology improvement projects. For example, Figure 3 shows the business case summary for a project that was regulatory required. Even though the NPV was -\$212,000 and had an IRR of <0%, the project had

to be done to meet new regulatory reporting requirements. In this case, alternatives were investigated to find the best solution with the least negative NPV.

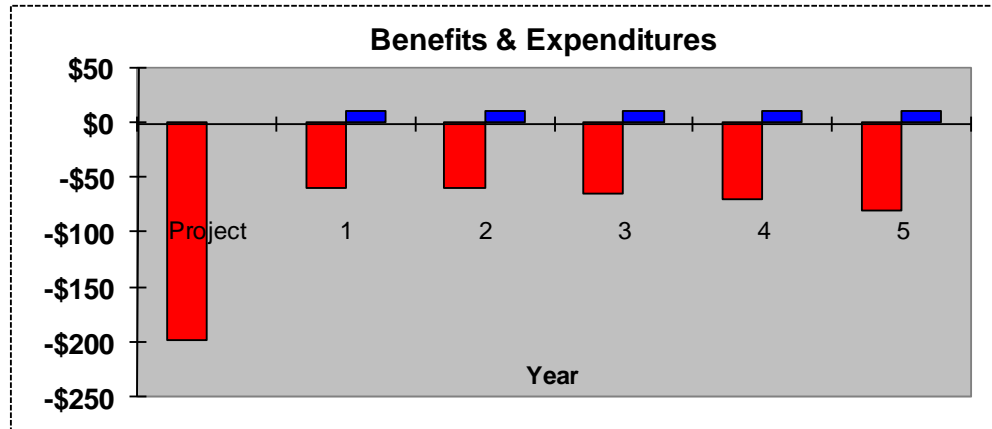


Figure 3. Cash Flows Timeline for a Regulatory Compliance Project

### WHAT CLIENTS WANT...AND WHY

What clients want are successful projects that deliver the expected benefits. Unfortunately, numerous studies done over the years still show that successful projects are not the norm. The Standish Group studies done over the years still show most IT application development projects are challenged or failed, which means the project does not meet the schedule, cost, and/or scope (Mersino, 2018). Forrester Consulting did a study in 2013 that shows almost half the time product solutions fail to meet the real needs of the customer (Forrester, 2013, p.5). Finally, the Project Management Institute (PMI) has done multiple studies and continues to find that, on average, money wasted runs over 10% of the project investment due to poor project performance (PMI-2016).

In 2013 the Project Management Institute conducted a study of directors, managers, and practitioners who design and/or administer talent management for their project organization (PMI-2013). This study identified the three critical skillsets project organizations want from project managers to deliver successful projects. The three skillsets are:

- Technical project management
- Leadership
- Strategic and Business Management

This is a role change from the project manager being responsible for “doing projects right”. Now there is some responsibility for “doing the right projects”. What clients want is talent with a broader range of skills to support strategic goals and objectives that contribute to the bottom line of the organization, and this requires a role in the pre-project and post-implementation phases.

This involvement can be called business analysis, which includes (5-PMI, 2015):

- Determine problems and identify business needs
- Identify and recommend viable solutions for meeting needs
- Elicit, document, and manage stakeholder requirements in order to meet business and project objectives
- Facilitate the successful implementation of the product, service, or end result of the project

The International Institute of Business Analysis (IIBA) was formed in 2003 to support the business analysis community. IIBA provides global practice standards and certification as a business analyst. However, in many organizations the role of the business analyst is limited to requirements definition, with little or no involvement in the pre-project or post-implementation phases. Business analysis is a clear requirement wanted by client organizations, but how it gets done today is frequently not optimal. The void needs to be filled, and the PMI talent management study suggests this could be a role for the project manager with the requisite skills.

## **KEY PERFORMANCE INDICATORS**

Key Performance Indicators (KPIs) for a company or organization are quantitative measures on how effectively the company or organization is achieving business goals and objectives. Examples include growth in revenue, gross or net profit margin, operational cash flow, inventory turnover, customer and/or employee satisfaction, and employee retention.

KPIs can also be established for projects, and should provide specific quantitative measures indicating how effectively the project team is achieving both the project and product goals.

Project KPIs typically include measures for cost, schedule, quality, and functionality. Cost and schedule measures are easy to quantify, but more thought may be needed for quality and functionality to ensure the measures are quantitative. For example, stating that all scope items must be successfully completed is broad and non-specific. A

functionality KPI stating the water recycle system must demonstrate a flow of 100 gallons a minute is quantitative. Other project KPIs may be appropriate, such as safety on a construction project, measured by the number of loss-time accidents.

Product KPIs should relate to achieving the planned benefits, meeting the business requirements, and operational criteria. Another very useful KPI is user satisfaction, which can be easily measured using a concise survey.

Some project managers have the opinion that their role is confined to just “doing projects right”, which means finish on time, meet the budget, and deliver the functionality meeting the quality standards. Taking that viewpoint would suggest product KPIs are not a concern of the project team, but that is a mistake. There have been projects that meet or beat the measures for cost, schedule, quality, and functionality, yet are deemed failures by the client. How does this happen? One possibility is a poor relationship between the team and client, which relates to stakeholder management and is a responsibility of the project manager. However, the more frequent reason a project is deemed failed by the client is because the product benefits are not realized, which can result from incomplete, missing, or even wrong requirements. It is easier for the client to take the position that the project team should have caught this problem during project definition.

The best way to understand project and product KPIs is to see actual examples. The example shown in Table 1 was a call center renovation project, which included a renovated work area, new office furniture, new hardware, and new customer support software. The project KPIs covered cost and schedule, which are commonly used. The unique KPIs were having no scope changes, which meant obtaining all requirements before defining the project scope and plan; and completing all training on the new customer support hardware and software before implementation.



Type	Key Performance Indicator	Value
Project	1. Finish at or under the project cost target	\$2,550k
	2. Project completed before next budget year	Dec-31
	3. Good requirements obtained – scope managed	0 scope changes
	4. All training completed before implementation	Dec-1 completion
Product	1. Software availability goal met	99.99% available
	2. Response time for pulling up client account	< 3 seconds
	3. Call center productivity increased	25% more calls/person-hour
	4. Call center operators knowledge on new system (based on average score from the training review quiz)	>90% avg. score
	5. Software easy to use (survey after one month use)	>8.5 avg. score

**Table 1. KPIs for Call Center Renovation Project**

There were five product KPIs for the call center renovation project including software availability and response time for pulling up a client account, which was a major issue with the old system. The project was justified on achieving a productivity increase measured by the number of calls handled per hour. The increased productivity would allow a decrease in the number of contractors used to supplement the full-time employees. An unusual product KPI was measuring the knowledge of the call center personnel on the new system, and this was measured using the scores from the review test at the end of the training class. The final KPI is one that should be included on all projects—a measure on user satisfaction with the product. For this project it was a ten question survey with a maximum score of ten for each question.

The KPI example shown in Table 2 was for the purchase and installation of a new polyester shredder in an existing polyester recovery facility. This was a design-build project, and on this project the KPIs were weighted and values established for scores of 20, 40, 60, 80 and 100. The prior example of KPIs for the call center renovation were pass-fail, and each KPI was either met or not. On the polyester shredder project a weighted final project score was calculated, and the overall total score was 86 out of a perfect score of 100. The main reason for this extra level of complexity was that the profit earned by the engineering and construction firms were tied to the final project score. A minimal profit was achieved for a total score of 70 (just passing), and the maximum profit was earned for a perfect score of 100.



	KPI	Weight	20	40	60	80	100	Final Value	Final Score	Weighted Score	Total Score
Project	Cost Performance (Budget / Actual)	20%	0.90	0.95	1.0	1.1	≥1.1	1.04	70	14	86
	Completion Date	20%	11/3	10/27	10/20	10/13	9/29	10/13	80	16	
	Shutdown Duration (weeks)	25%	12	11	10	8	6	6	100	25	
Product	Feed Rate, lbs./hour	5%	3,000	3,500	4,000	5,000	6,000	5,075	4	4	
	# Streams handled w/o pretreatment	15%	1	2	3	4	5	5	15	15	
	Noise Level, db	5%	>82			82	<80	<80	5	5	
	Operator Rating	10%	2	4	6	8	10	7.1	7	7	

**Table 2. KPIs for a Polyester Shredder Project**

There were three project KPIs tied to project cost, project completion date, and the duration of the facility shutdown for equipment installation and start-up. The red circles and final value column in Table 2 show the results at project completion. For example, the cost performance (CP) was a measure of project budget divided by the actual costs. Perfection (a score of 100), meant none of the approximate 10% contingency was spent. The final project CP was a 1.04, which “earned” a final score of 70. This was then multiplied by the KPI weight of 20%, which resulted in a weighted score of 14 (70 x 0.2).

There were four product KPIs for the polyester shredder project. The first two were the average feed rate the shredder could handle, measured in pounds per hour, and the number of streams handled without any pre-treatment. Polyester waste came in five different forms such as chunks, slabs and ribbons. The third product KPI was noise level, with a goal of the operators being able to work without hearing protection.

The final product KPI was the rating of the new equipment installation by the operators. As mentioned earlier, this is always a good product KPI to include, but it was probably unfair on this project. The polyester recovery facility was a waste facility with no air conditioning, so it was always dirty and also hot in summer weather. Getting a high operator rating was not obtainable. However, notice the weights on this project, with 65% for project KPIs and only 35% for the product KPIs. That was done since the design-build companies had total control of the project KPIs, but limited control over the product KPIs since the client specified and bought the polyester shredder with the involvement of the design-build companies.

One logical question on product KPIs is why not include the financial measures (NPV, IRR) used to justify the project? This can be done, but in both of the examples covered

in this paper the project teams were not employees of the owner organization. In both cases the owner company shared a high-level summary of the business case with the project team, but did not want the business case details showing up in the project documentation.

Establishing project and product KPIs is an important step on every project, and involves collaboration and negotiation between the client and project team. KPIs should be defined during the project planning process. The one caution is to keep it simple, no more than 3-5 KPIs for product and for project KPIs. Also, the KPIs should be measurable within three months of project completion.

## **VALUE ACHEIVEMENT**

Organizations need to verify that the project product, once implemented, provides the expected benefits. This is called value achievement, but also goes by other names such as benefits realization, post-implementation review (PIR), solution performance evaluation, and post-implementation assessment. Around the same time PMI was developing the talent triangle in 2013, Forrester Consulting released a study of product development and marketing based on information from business-side decision makers. One topic was the percent of projects where the problems listed below were encountered in bringing the project product into use (Forrester, 2013, p.8):

- The expected and actual value of the product do not match – 30%
- Product value is not communicated within the organization – 29%
- An effective go-to-market strategy is not used – 27%
- Product value is not communicated to the customer – 26%

Only 27% of the projects reported no problems in bringing the project product into use. What this implies is that on most projects there is no plan for ensuring value achievement after project implementation. The business sponsor has accountability for the project benefits, but this person often needs help with the planning and implementation of activities to ensure the project benefits are realized. Project managers have that skill in project planning!

As shown in Figure 4, there are really two parallel projects and both need to be planned. The first is the project to create the product. The second is the value achievement project, which is the plan to ensure the benefits are achieved. Planning for value achievement should start when the project plan is prepared, and should be finalized before project implementation.

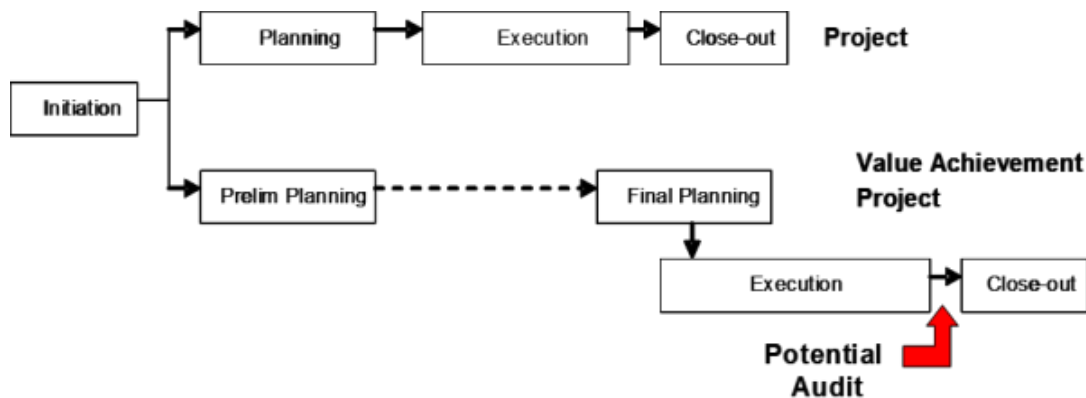


Figure 4. Parallel Planning for the Project and Value Achievement

A value achievement plan should include what needs to be done (scope), when (schedule), who (resources), plus any resource costs. The plan should also include plans for communications, dealing with any post-implementation risks, and metrics to show the progress in achieving the project benefits. Figure 5 shows the contractor staffing level by month for the call center renovation project. After implementation of the new hardware and software, the business needed fewer contractors than planned and was able to make the reductions sooner. Having the graph made progress on reaching the desired staffing level visible.

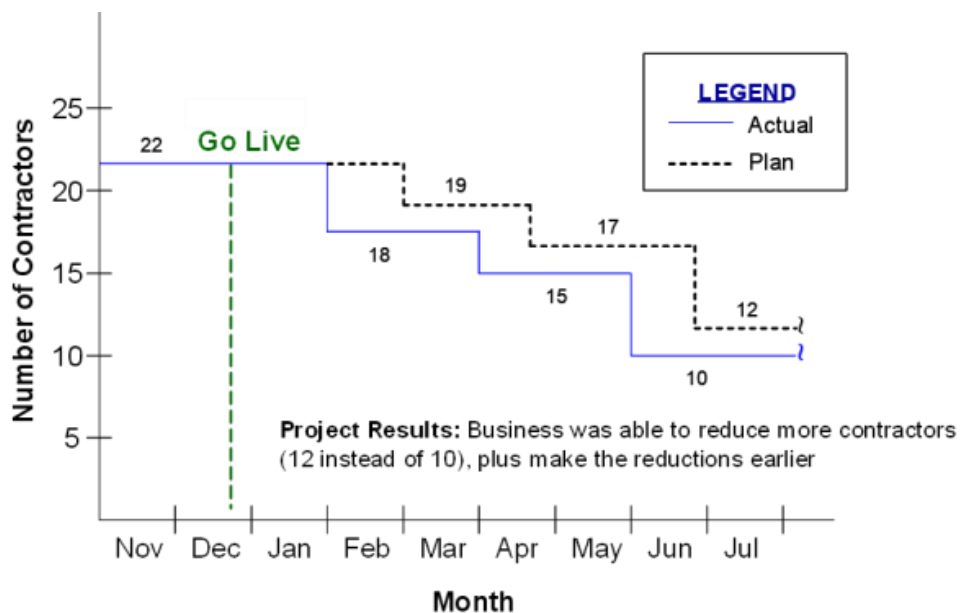


Figure 5. Contract Labor Level by Month Post-Implementation

Note in Figure 4 the use of an audit near the end of value achievement. An audit is appropriate for projects such as expanding manufacturing capacity for existing products, introducing new products, and for productivity projects. This can be done by the internal financial organization or by an outside accounting firm. Information for an audit typically includes a brief report on how the project benefits were achieved, and updated financial information comparing the plan to the actual results as shown in Table 3.

<b>Project Financial Summary</b>	<b>Project Plan</b>	<b>Actual Results</b>
Project Costs	\$605k	\$586k
Operating Costs/year	\$40k	\$20k
Total Expenditures (5 years)	\$805k	\$686k projected
Net Benefits (5 years)	\$750k	\$770k projected
After Tax IRR	86%	98%
After Tax NPV	\$160k	\$195k
Payback Period, years	2.7	2.3

**Table 3. Comparison of Plan and Actual Project Results**

**CONCLUSION**

A project is not successful unless the project benefits are realized by the business, even if completed on time, under budget, and with all functionality delivered per the project requirements. Project managers need to change their role from just delivering the project to delivering the project benefits.

Project managers should have the skills to assist the client in estimating quantitative project benefits and using financial analysis techniques to determine the project business case so sound decisions can be made on whether a project is worth the required investment. Key performance indicators should be established for both the project and product, since this ensures alignment between the project team and client on what defines project success. Finally, the project manager should be actively involved in planning and executing the value achievement phase, which is where the work is done to ensure that all project benefits are realized. Project managers who can expand their role into these pre-project and post implementation phases will deserve the title business manager.

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## About the Author



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**Joe Lukas**, PMP, CCP, CSM, PE, has over 35 years' experience in project management and business analysis spanning numerous industries including manufacturing, product development, information technology and construction. Joe also has program and portfolio management, and international projects experience. His areas of expertise include scheduling, earned value, risk management and interpersonal skills such as leadership, negotiations and personality styles.

Joe has been a member of the Project Management Institute since 1985 and earned his PMP in 1992. While living in Rochester, NY, Joe was active with the PMI Chapter, serving in various board positions including two terms as Chapter President. His efforts in growing

the Rochester Chapter were recognized in 2001 when Joe received the Chapter award for outstanding contributions.

Joe has also been a member of AACE International since 1989 and earned his Certified Cost Engineer (CCE) in 1994. He served on the Genesee Valley Section Board in various positions including Vice-President, President, Nominations and Membership.

Joe has over 50 published articles on project management topics; he has conducted over 300 talks and workshops for companies and organizations across the country. In 2008 Joe received the Jan Korevaar Outstanding Paper Award at the combined 6th World Congress on Cost Engineering and AACE International 52<sup>nd</sup> Annual Meeting. In 2017, Joe received the Technical Excellence award from AACE in recognition of his many publications and talks.

Joe has also been a guest instructor on project management for many universities including the University of Pittsburgh, Stevens Institute, the State University of New York (SUNY) at Brockport, St. John Fisher College and the Rochester Institute of Technology (RIT). Joe is a graduate of Syracuse University with a B.S. in Chemical Engineering and earned his Professional Engineer license in 1979. He can be contacted at [joelukas199@gmail.com](mailto:joelukas199@gmail.com).