Audit Report

HELP AG
an e& enterprise company

Project Cost and Effort Management: "Firewall and EDR solution for a banking customer"

Content

14/03/2024   7873694-8105807-7871569

Executive Summary

In this report our team will audit the project cost and effort management aspects of a cyber security project done by Help AG. The project my team has chosen to audit is "Firewall and EDR solution at a banking customer", in which Help AG implemented F5, Palo Alto, and Zscaler proxy and undertook both hardware and software security solutions for their client to have a safe and secure firewall and network.

HELP AG is a cyber security company previously founded in 1955 in Germany, and now based out of the United Arab Emirates. They have worked on multiple different projects with a variety of clients, working primarily with high level entities in the government and banking sectors, helping over 260 clients. This has helped them build themselves the name and reputation they have today, holding one of the top spots for the most reputable cyber security companies in the MENA region. With their great success Help AG got acquired in 2019 by Etisalat, in Etisalat's vision to grow out of just being a telecommunications company and providing more services.

Our team will audit the cost and effort management of Help AG during their project, by splitting up the auditing process into small sectors. Starting with the initiation of the project, then the cost and budget control, resource management, financial reporting, risk management, documentation management, compliance, training and development, and finally post project evaluation.

In addition to our comprehensive auditing process that will be applied onto Help Ag's project, our team will also conduct a SWOT analysis, Cost Matrix, and identify any limitations or difficulties Help Ag faced during this project.

Introduction

Help AG have embarked on a project to implement firewall and endpoint detection and response (EDR) solutions for one of their prominent banking clients. This report will dive into the critical aspects of cost and effort management associated with our chosen cyber security project Help AG has taken on.

The main purpose of this report is for us to provide an in-depth analysis of Help AG's project management efforts. We will focus specifically on cost and effort management. We will accomplish this by examining various factors such as initiation, budget control, resource management, risk mitigation, and post-project evaluation.

We have targeted this report towards readers who seek a comprehensive understanding of project cost and effort management in the field of cyber security. This report offers valuable insights and recommendations derived from our in-depth auditing process. The structure of this report will follow a logical sequence. Starting off with an overview of the project and its context, followed by an analysis of strengths, weaknesses, opportunities, and threats (SWOT), a cost matrix, and an exploration of limitations, difficulties, and areas for improvement.

Audit Plan

The audit's goal is to measure the project's success in meeting the cost and effort by analysing and assessing Help AG's project management efforts on a project for a private banking client where they had to implement F5 and Palo Alto (Hardware) along with Zscaler (cloud delivered product). An audit plan's requirements are to specify the business goals, parameters, and procedures for audits.

Project Audit Plan: Cost and Effort Management

Item	Attribute	Relevence (How relevant each attribute is to this project)	Practice (An indication of each attribute's strength or weakness)	Assesssment
1	**Budget and Cost Tracking**	Critical	Well covered	x
1.1	**Original Budget:** **a.** Hardware (F5, Palo Alto) **b.** Software licences (Palo Alto, any F5 add-on modules) **c.** Cloud subscription (Zscaler) **d.** Professional (HELPAG consulting hours, potential external vendors) **e.** Implementation labor (internal IT staff hours) **f.** Contingency buffer	Critical	Adequate	x
1.2	**Actual Costs:** **a.** Track annual expenditures against each budget line item. **b.** Document reasons for any variances (overages or underspending).	Critical	Adequate	x
2	**Resource Allocation and Effort Tracking**	Moderate	Adequate	x
2.1	**Resorce Plan:** **a.** Original staffing plan: roles, team members, estimated hours allocation. **b.** Skills matrix ensuring the team had the expertise for F5, Palo Alto, and Zscaler technologies.	Moderate	Adequate	x
2.2	**Time Tracking:** **a.** Mechanism for accurate time tracking by individuals against tasks. **b.** Comparison of actual hours expended vs. estimated hours per task and for the overall project.	Critical	Adequate	x
3	**Procurement and Vendor Managaement**	Moderate	Well covered	x

3.1	**Hardware and Software:** **a.** Procurement process documentataion (RFQs, vendor comparisons, selection criteria) **b.** Negotiated pricing and contract terms for harware and software. **c.** Review of any changeorders or additional costs during procurement.	Moderate	Adequate	x
3.2	**Cloud Services:** **a.** Detailed breakdown of Zscaler subscription costs (user-based, bandwidth-based, feature add-ons) **b.** Assessment of the pricing model's suitability fo r the customer's usage patterns.	Critical	Well covered	x
3.3	**Professional Services:** **a.** Contractual agreements with HELPAG or other vendors. **b.** Clear scope of work and deliverables outlined in the agreement. **c.** Invoicing and payment tracking against contracted services.	Moderate	Adequate	x
4	**Change Management (Financial Impact)**	Moderate	Adequate	x
4.1	**Scope Changes:** **a.** Documented process for approval of scope changes. **b.** Analysis of cost and schedule impact of each approved change. **c.** Updated budget and timeline reflecting approved changes.	Moderate	Adequate	x
4.2	**Unexpected Costs:** **a.** Tracking of any unexpected expenses (eg: hardware failure, emergncy support). **b.** Documentation of reasons for those costs and their budget impact.	Moderate	Adequate	x
5	**Project Reporting and Analysis**	Moderate	Adequate	x
5.1	**Financial Reporting:** **a.** Regular cost reports comparing budget to actuals (ideally visualized with charts/graphs). **b.** cost variance analysis and explanations	Critical	Adequate	x
5.2	**Effort Reporting:** **a.** Reports on hours worked compared to estimates, higlighting areas of deviation. **b.** Analysis of bottlenecks or any tasks that significantly exceeded estimated effort.	Moderate	Adequate	x
5.3	**Lessons Learned:** **a.** Summary of factors contributing to cost overages or savings. **b.** Analysis of effort estimation accuracy. **c.** Recommendations for improving cost and effort management in future projects.	Critical	Adequate	x

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Project Audit Checklist Rubric: Cost and Effort Management

Project Audit Area	Questions	Feedback
Budgeting and Forecasting	•Was there a comprehensive, detailed budget created at the project's outset? •How were cost estimates derived? •Were contingency factors built into the budget, and were they sufficient? •Was the budget formally approved by all stakeholders? •How frequently was the budget reviewed and compared to actuals? •What factors besides estimated costs drove budget creation (hardware, customer budget, services)? •Were there key points of debate or negotiation surrounding the budget? •How were contingency reserves determined? Is there a clear process for accessing these funds?	The cost of hardware and services along with customer budget. Some of the major points were to provide an optimal cost and ensure that we can deliver it with more quality than our competitors and to possibly offer it at a lower cost. Yes, we had planned for project risk, and this was taken care of by our finance team. We have financial and project policies that drive this.
Cost Tracking	•What systems and tools were employed to track expenses? •How were cost categories structured? Did they provide enough granularity? •Were there clear procedures for reconciling invoices, purchase orders , and actual costs? •How quickly were discrepancies between budgeted and actual costs identified? •How were those discrepancies between budgeted and actual costs identified? •How were those discrepancies resolved?	We check the utilization of the total number of man days to ensure that the deliverables are on time, and we still have remaining budget. In this project, we had two configuration items that took more time than planned and we tracked those in our risk register to ensure that these did not cause cost overruns. We have a lessons learned activity after every project to understand if anything went wrong. Our corrective actions are mainly towards fixing our processes and improving on future projects.
Resource Planning and Allocation	•How was the project team staffed? Were internal resources contractors, or a blend used? •Was there a formal resource plan outlining required skills, roles and estimated hours? •How were potential resource bottlenecks or skill gaps identified and addressed? •Did the project team have adequate technical expertise in F5, Palo Alto, and Zscaler technologies? •Was the balance between specific expertise and its associated cost considered? Does the company have strategies to optimize skill utilization?	We have a training plan which ensures that all team members are trained on technologies that we work with to ensure that an adequate backup resource is available when needed. We are happy to be quite good at this as we have strong project time and cost trackers that track all activities. We look at these towards the end of the project to see whether our estimates were good and if any adjustments are needed. We cross-reference these with different customers too, to ensure that we are spending time efficiently.
Effort Tracking	•What was the mechanism for individuals to report time spent on project tasks? •Were there processes to ensure accurate and complete time reporting? •How were actual hours compared against the resource plan estimates? •How were significant deviations in effort investigated (eg: task complexity underestimated)? •What are the challenges in accurately capturing team effort, and how does this affect cost reporting?	The project used a dedicated project management or timesheet system to track time against tasks. Accuracy was prioritized with regular team reminders and individual follow-ups when needed. Weekly comparison of actual hours vs. estimates allowed for early identification of deviations. Deviations were investigated through team discussions, with solutions involving re-estimates, additional support, or scope adjustments.

Change Management	•Was there a well-defined change control process in place? •How was the cost and schedule impact of proposed changes evaluated? •Who had the authority to approve changes with financial implications? •Was there clear documentation of approved changes and their budgetary impact? •How does the change control process ensure cost impacts are considered? Can you provide an example where change implications led to budget/scope re-negotiation?	A formal change request process was followed, capturing proposed changes, their rationale, and cost/schedule impact. Impact assessments considered additional labor, materials, and timeline effects. Approval authority was tiered, with the project manager handling minor changes, and larger ones requiring sponsor and steering committee buy-in. Documentation was centralized and included a change log and updated project plans.
Risk Management	•What were the risks identified for this project, and were contingency plans in place? •How did you realistically account for uncertainty and potential risks?	Key risks were identified along with contingency reserves. Mitigation strategies included alternative plans to address potential vendor delays. A risk register was used for tracking and prioritizing risks, with qualitative and, where possible, quantitative analysis informing the risk response.
Vendor Management	•How were the vendors (for F5, Palo Alto, and potentially others) selected? Was a competitive bidding process used? •Were contracts negotiated effectively, ensuring favourable pricing and terms? •Were service level agreements (SLAs) in place to ensure vendor management? •How were vendor invoices managed and reconciled with contracted rates?	Our costs for training are based on Vendor partnerships and what technology is in demand to ensure that the team is trained on the right technology.
Reporting and Communication	•What financial and effort reports were generated, and how often? •Were stakeholders provided with clear and timely updates on project costs and progress? •Was there a process to escalate cost overruns or schedule delays?	Weekly cost and effort reports provided budget vs. actual comparisons and progress updates. Regular status meetings plus a stakeholder-accessible dashboard ensured clear and timely updates on costs, progress, and issues. Defined thresholds triggered a formal escalation process to the project sponsor and steering committee for significant cost overruns or schedule delays.
Lessons Learned	•What were the key challenges in managing the project's cost and effort? •What factors contributed to successes in this area? •Did the original budget and resource estimates prove accurate? If not, why? •How can cost and effort management processes be improved for future projects?	The project manager will provide specific challenges and successes related to cost and effort management in the project. The project manager will analyze the accuracy of the initial estimates and reasons for any deviations. The project manager will provide actionable recommendations for process improvement in future projects, informed by the insights gained during this specific project.

Main Constructs Analysis and Discussions

SWOT Analysis

Strengths

- **Cost Control Processes:** Established processes for cost management including estimation, budgeting, monitoring, and change control.
- **Risk Management:** Proactive risk identification and contingency planning.
- **Resource Optimization:** Emphasis on efficient skill utilization and training to keep resource costs balanced.
- **Scope Management:** Success in avoiding scope creep, ensuring the project stayed within budget.
- **Timely Delivery:** Project completed to customer satisfaction within the planned timeline.
- **Positive Cash Flow:** The project boosted the HELP AG'S cash flow status.

Weaknesses

- **Cost Tracking Granularity:** Focus on overall spend rather than specific aspects like labour, hardware, etc. might hinder fine-grained expense analysis in the future.
- **Limited Formal Cost Metrics:** Reliance on scope and time to infer cost success, rather than using dedicated tools like EVM, makes precise cost performance measurement difficult.
- **Estimation Reliance on Experience:** While valuable, lack of more structured estimation techniques could make repeatability a challenge.

Opportunities

- **Enhanced Cost Tracking:** Implement detailed resource-specific cost breakdown (hardware, labour, etc.) for greater insight and reporting.
- **Standardized Cost Analysis:** Introduce Earned Value Management (EVM) or similar tools to provide richer cost performance indicators.
- **Formalized Estimation:** Adopt estimation techniques with clear calculations and assumptions for better project replicability and predictability.
- **Documentation and Knowledge Sharing** Ensure lessons learned and best practices are captured and shared to improve future projects.

Threats

- **Unpredictable External Factors:** Market changes, global events, etc., could impact future project costs and estimations.
- **Shifting Customer Budgets:** Customer budget pressures could force renegotiations on otherwise successful projects.
- **Competitor Actions:** Competitor pricing and technology strategies can disrupt carefully designed project cost structures.

Cost matrix

Below is given a cost matrix compiled through the interview and estimated.

Cost Category	Estimated % of Total Project Cost	Notes
Hardware	45%	This is stated explicitly in the Q&A
Labor (Implementation)	35%	Stated in the Q&A
Project Management	20%	Stated in the Q&A
Training & Development	Not directly extractable	Reasons explained below
Contingency Reserve	Not directly extractable	Reasons explained below

Cost Breakdown Structure
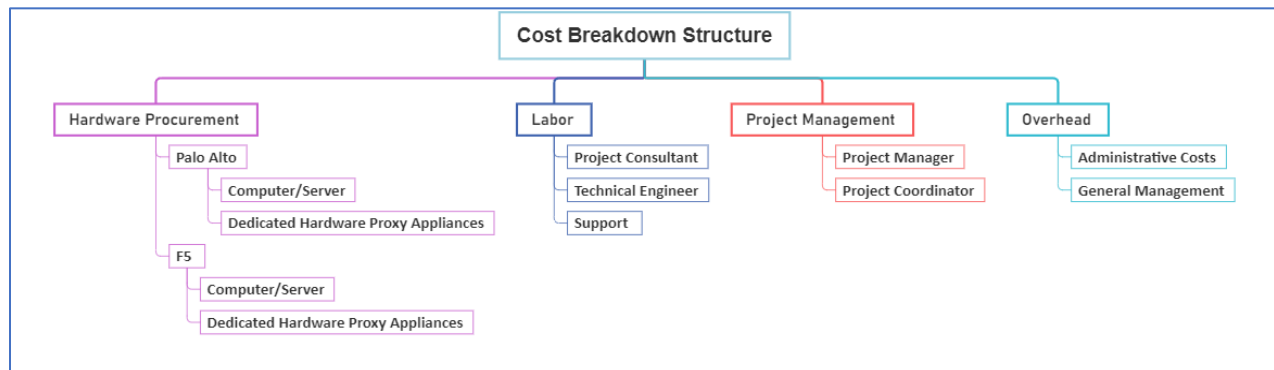
Earned Value Analysis

Planned Value (PV): AED 267,000
Actual Cost (AC): AED 249,050
Earned Value (EV): AED 193,600

Schedule Variance (SV)
EV – PV = -AED 74,000

Cost Variance (CV)
EV – AC = -AED 55,450

Schedule Performance Index (SPI)
EV / PV = 0.73

Cost Performance Index (CPI)
EV / AC = 0.78

Task	Planned Value (PV)	Actual Cost (AC)	Earned Value (EV)	Schedule Variance (SV)	Cost Variance (CV)
Project Planning	AED 36,700	AED 31,245	AED 33,030	-AED 3,670	AED 1,785
Hardware Procurement	AED 165,150	AED 154,020	AED 165,150	AED 0	AED 11,130
Software Licenses	AED 55,050	AED 58,780	AED 36,700	-AED 18,350	-AED 22,080
Configuration & Deployment	AED 91,750	AED 88,080	AED 55,050	-AED 36,700	-AED 33,030
Testing & Validation	AED 18,350	AED 16,515	AED 3,670	-AED 14,680	-AED 12,845

Recommendations

Root Cause Analysis: Deep dive into the causes of the low SPI and CPI to identify areas for improvement.

Corrective Actions:

Schedule: Crashing or fast-tracking tasks if possible, renegotiating deadlines, or adjusting project scope.

Cost: Identify areas to reduce costs, explore ways to increase work efficiency.

Monitoring: Track EVM metrics closely to assess the effectiveness of corrective actions.

Limitations

- **Cost Reporting Granularity:** Your team appears to lack detailed cost tracking software, relying on CRM and SharePoint systems. This might limit precision in project-specific cost analysis.
- **EVM Adoption:** Earned Value Management (EVM) isn't actively used for comprehensive project performance monitoring.
- **Specific Profit Margin Sharing:** There's an understandable reluctance to share exact profit margins due to confidentiality.

Difficulties

- **Resource Availability:** Projects sometimes encounter a shortage of specialized personnel, leading to potential delays.
- **Risk Management Documentation:** While risk planning is carried out, it's unclear to what extent the risks and associated mitigation strategies are formally documented.
- **Customer Readiness:** Customers may not always be fully prepared for the project, impacting smooth initiation.
- **Scope Management:** Changes in scope can occur mid-project, necessitating careful negotiation and potential adjustments to cost and timelines.

Constraints

- **Cost:** Project operates within financial constraints, balancing cost-effectiveness with quality and deliverables.
- **Time:** Project has time constraints; the time-and-material model indicates a close watch on time spent to avoid overruns.
- **Scope:** Project has a defined scope; major changes can lead to renegotiations potentially impacting budgets and timelines.

Insights and Areas for Improvement

- **Costing Software:** Consider a dedicated cost management tool for more accurate tracking, analysis, and reporting of project-specific costs.
- **EVM Exploration:** Explore how Earned Value Management (EVM) could provide more robust performance metrics and aid in proactive course correction.
- **Transparency (Within Limits):** While confidentiality is essential, explore the possibility of sharing some high-level profit margin trends (e.g., the typical range).

- **Resource Planning:** Proactive resource planning, including cross-training and knowledge sharing, can help mitigate risks associated with resource shortages.
- **Risk Register:** Consider a formal risk register to capture identified risks, mitigation strategies, and their potential cost impacts clearly and consistently.
- **Improved Client Onboarding:** Develop a more structured client onboarding process to ensure readiness and minimize delays caused by unpreparedness.
- **Change Control Rigor:** Refine the change control process to ensure a thorough evaluation of cost, timeline, and resource implications before approval.

Conclusion

In conclusion this report has thoroughly analysed the cost and effort management aspects of Help Ag's cyber security project for their banking client. Our team has conducted a meticulous examination of various components including cost control processes, resource optimization, risk management, and project delivery. Several strengths and weaknesses have been identified.

Help Ag has demonstrated exceptional strengths in the cost control processes, proactive risk management, and timely project delivery. However, there are opportunities for improvement, particularly in enhancing cost tracking granularity, adopting standardized cost analysis tools like Earned Value Management (EVM), and formalizing estimation techniques. Moreover, there is room for refinement in areas like cost reporting granularity, risk management documentation, and client onboarding processes.

Overall, we believe that with Help AG implementing these insights and areas for improvement, they can further enhance its project cost and effort management capabilities, ensuring continued success in delivering high-quality cyber security solutions to its clients.

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Declaration of Contributions

Walid

- Reaching out to different companies and connecting with IT project managers.
- Constructing a question sheet to ask the IT manager along with researching the company online.
- Researched Audit plan for cost management using resources and made a checklist.
- Expanded on the audit checklist and tailored it towards the company.
- Formed conclusion and cover designing cover page.
- Peer reviewing the report and its content.
- Involved in main construct analysis and discussions.
- Determined lessons learned.

Basil

- Reaching out to different companies and connecting with IT project managers.
- Constructing a question sheet to ask the IT manager along with researching the company online.
- Made executive summary using the knowledge from the recorded meeting with manager.
- Formatting the report to the requirements.
- Peer reviewing the report and its content.
- Determined lessons learned.

Bilal

- Reaching out to different companies and connecting with IT project managers.
- Coordinating and Scheduling meetings with project manager.
- Constructing a question sheet to ask the IT manager along with researching the company online.
- Constructing motivation in choosing the selected company and IT manager.
- Peer reviewing the report and its content.
- Determined limitations and constraints.
- Determined lessons learned.

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Acknowledgement

We would like to express our thanks and appreciation for Mr. Mohammed Hamad's time and commitment for allowing us to work collaboratively with him for our project report. He is committed to working with us on our project and will provide us with further insight into the projects HELP AG is currently working on and has already completed successfully. We will continue to build and work on our strong relationship with him throughout the duration of our project and will be looking forward to completing our audit together successfully.