KSP
Executive Series

The Value of High-Performance Teams

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Introduction

In this paper, we examine the effects of high-performance project teams on the organization's bottom line. Specifically, we examine two overall effects: project duration and product quality. Under project duration, we divide the analysis into three sub-categories: cost, market windows, and the probability of a competitive product introduction. We then conduct a financial analysis of a sample project accumulating the effects of these factors.

Many experts have proclaimed the value of high-performance teams… myself included. Some time ago, I decided to run some numbers to see potential results. Those results surprised even me.

Analysis Overview

Effects of Team Performance on Project Results

For our analysis, we divide team performance into three categories: high performance, typical performance, and low performance. Typical-performance teams are those we classically see in our consulting and training. Team members are skilled and capable, however unseen cultural issues cause delays in projects. Such issues include changing requirements, miscommunications, multitasking, inadequate planning and management, etc. These all contribute to project delays. The cultural issues are frequently unseen as these issues are truly cultural… the way things are normally done.

High-performance team members are equally skilled and capable, however many of the cultural issues plaguing typical-performance teams have been remedied. Clearly-defined and well-thought product requirements and task delegation substantially reduce changes, team members focus on tasks and complete them faster and with higher quality, sufficient planning and management reduce problems caused by inter-task dependencies, clear communication reduces misunderstandings and their resulting rework. The result: projects get done faster and with higher quality. For our analysis, we conservatively estimate that high-performance teams will complete the project 25% faster than typical teams and will have 50% fewer quality issues than a typical team. These estimates are based on results we've seen in our consulting practices. Some results have been higher.

Low-performance teams exhibit the same issues associated with our typical-performance teams, except to a greater degree. Communication is inefficient, projects are poorly planned and managed, and multitasking is rampant.

Financial Analysis Method

The most recognized method for establishing the value of projects is Net Present Value (NPV) (Berk & DeMarzo, 2012). While other methods are used (payback period, Return on Investment (ROI) and its variance (Return on Invested Capital, etc.), and others; NPV offers several benefits. First, it accounts for both the cost side as well as the benefit side of the project financials. It also accounts for the time value of money as projects' benefits typically extend out several years. It is beyond the scope of this paper to present the mechanics of the NPV calculations. Interested readers may reference *Financial Benefits of Effective Project Management and Team Performance* (Bender, 2016) or any business accounting or finance book for more information.

Pierce and Robinson (2011) suggest a contingency approach to strategic planning. Such approaches include a risk analysis of the plans to hedge potential problems. For our analysis, we examine organizational culture as our risk and examine the effects on our test project. Such risks include those effects mentioned previously, limited market window size, the probability of a competitive product introduction, and quality issues.

The Sample Project

Our sample project involves developing and introducing a new or upgraded product into the marketplace. The analysis can also be applied to an internal business process improvement project, or geographical expansion project (entering a new country for example) or any other project. Product introductions make an excellent analysis as the results can be easily measured and seen.

To demonstrate the effects of culture on our bottom line, we'll use quarters for our NPV analysis rather than years. We'll assume the projects will cost US $100K in the first and last quarter, US $200K in all internal quarters and an additional US $100k in expenses during quarter 2. Our discount rate for our company is 10% or 2.5% per quarter.

The goal of our project is increased sales. For our analysis, we'll assume a typical bell-shaped sales curve running for three years (12 quarters) following project completion.

Analysis of a Sample Product Launch

For our analysis, we will establish three baselines based on the ability of the project team to deliver the product. Certainly, a high-performance project team (by definition) will be able to deliver the product faster and with higher quality than a typical-performance team or a low-performance team. A brief description of the analysis is below:

Effect	**Description**
Project Cost	Extending the project's duration increases project cost as the team continues working on the project.
Market Window	Market windows typically are set by the marketplace. As a result, delayed product introductions reduce the duration of the available market window.

Competitive Products	Competitive product introductions are also typically independent of product introduction. This causes the competitive product to be released earlier in your sales cycle reducing future sales.
Quality	Lower quality products increase returns and repairs as well as reducing sales as brand image suffers.

Effect of Culture on Project Cost

Our variable for this analysis is internal project cost. For this analysis, we assume a high-performance culture can complete the sample project in three (3) quarters, a typical-performance culture completes the project in four (4) quarters and a low-performance culture completes in five (5) quarters. As internal project cost is our only variable for this analysis, sales figures remain the same for all three team types, but begin only after project completion. Values are in round thousands (US $ '000)

The resulting NPV analysis is shown in Table 1.

Table 1: Effects of Culture on Cost/Benefit Analysis

NPV Comparison of Internal Project Costs						
	High Performance Team		Typical Performance Team		Low Performance Team	
Quarter	Cash Flow	Discounted Cash Flow	Cash Flow	Discounted Cash Flow	Cash Flow	Discounted Cash Flow
0	($100)	($100)	($100)	($100)	($100)	($100)
1	($300)	($308)	($300)	($308)	($300)	($308)
2	($100)	($105)	($200)	($210)	($200)	($210)
3	$25	$23	($100)	($108)	($200)	($216)
4	$50	$45	$25	$23	($100)	($111)
5	$90	$80	$50	$44	$25	$22
6	$125	$108	$90	$78	$50	$43
7	$150	$126	$125	$105	$90	$76
8	$150	$123	$150	$123	$125	$103
9	$135	$108	$150	$120	$150	$120
10	$125	$98	$135	$105	$150	$117
11	$110	$84	$125	$95	$135	$103
12	$90	$67	$110	$82	$125	$93
13	$75	$54	$90	$65	$110	$80
14	$60	$42	$75	$53	$90	$64
15			$60	$41	$75	$52
16					$60	$40
NPV		**$ 446**		**$ 209**		**$ (32)**

Note that the analysis shows a positive NPV for both the typical- and high-performance teams while it shows a negative value for low-performance teams.

Typically, management would proceed with the project under the first two scenarios but reject the project under the third. Also note that the NPV of the high-performance team is over twice that of the typical performance team, and therefore over twice the value.

Effect of Cultural Performance on Market Window

In the previous example, we assumed the forecasted sales of the new product did not change as a result of the one-quarter delay. However, unless you are a true market driver, the size of the market window is set by the marketplace and social or technical factors, and therefore independent of your product launch. One client indicated that he had to drop his sales price by 5% for every quarter a product release was delayed. This same client typically exhibits a 48% gross margin resulting in a loss of 10% of gross profit per quarter (rounded). Our risk analysis would also consider that the market window would start to shrink regardless of when we release the product. For this analysis we add another 30% loss per quarter beyond quarter number 14. The resulting analysis is shown in table 2.

Table 2: Added Effect of Market Window on NPV

NPV Comparison Including Market Window Effects						
	High Performance Team		Typical Performance Team		Low Performance Team	
Quarter	Cash Flow	Discounted Cash Flow	Cash Flow	Discounted Cash Flow	Cash Flow	Discounted Cash Flow
0	($100)	($100)	($100)	($100)	($100)	($100)
1	($300)	($308)	($300)	($308)	($300)	($308)
2	($100)	($105)	($200)	($210)	($200)	($210)
3	$25	$23	($100)	($108)	($200)	($216)
4	$50	$45	$22	$20	($100)	($111)
5	$90	$80	$45	$40	$18	$16
6	$125	$108	$81	$70	$35	$31
7	$150	$126	$112	$94	$64	$54
8	$150	$123	$134	$110	$89	$73
9	$135	$108	$134	$108	$106	$85
10	$125	$98	$121	$94	$106	$83
11	$110	$84	$112	$85	$96	$73
12	$90	$67	$99	$73	$89	$66
13	$75	$54	$81	$58	$78	$57
14	$60	$42	$67	$48	$64	$45
15			$38	$26	$53	$37
16					$30	$20
NPV		**$ 446**		**$ 101**		**$ (306)**

Note that the effect caused by the market window reduces the NPV of the typical-performance team by more than half and the low-performance team's NPV turns sharply negative.

Effect of NPV from Competitive Product Introduction

Our next effect involves the introduction of a competitive product during our market window. Certainly, the longer we try to extend the market window, the greater the likelihood that a competitor will introduce a product that will eat into our sales. For this analysis we'll assume that the competitive product is introduced in quarter 12 affecting all three NPV calculations. We will assume a 20% loss of sales per quarter for all quarters starting in Q12. The resulting NPV calculations are shown in table 3.

Table 3: NPV Effect Due to Competitive Product Introduction

NPV Effect Due to Competitive Product Introduction						
	High Performance Team		Typical Performance Team		Low Performance Team	
Quarter	Cash Flow	Discounted Cash Flow	Cash Flow	Discounted Cash Flow	Cash Flow	Discounted Cash Flow
0	($100)	($100)	($100)	($100)	($100)	($100)
1	($300)	($308)	($300)	($308)	($300)	($308)
2	($100)	($105)	($200)	($210)	($200)	($210)
3	$25	$23	($100)	($108)	($200)	($216)
4	$50	$45	$22	$20	($100)	($111)
5	$90	$80	$45	$40	$18	$16
6	$125	$108	$81	$70	$35	$31
7	$150	$126	$112	$94	$64	$54
8	$150	$123	$134	$110	$89	$73
9	$135	$108	$134	$108	$106	$85
10	$125	$98	$121	$94	$106	$83
11	$110	$84	$112	$85	$96	$73
12	$69	$51	$76	$56	$68	$51
13	$44	$32	$48	$35	$46	$33
14	$27	$19	$31	$22	$29	$21
15			$13	$9	$19	$13
16					$8	$5
NPV		**$ 385**		**$ 17**		**$ (408)**

Note that even the typical team NPV is barely positive and the low-performance team is sharply negative.

Effect of Organizational Culture on Quality

Our final analysis includes the effect of product quality on returns and brand reputation. Certainly, high-performance teams will produce a higher-quality product. This results in fewer returns and repairs and increases corporate image and branding.

Using our high-performance team as a baseline, we reduce the profits for the typical team by 5% of profits to handle additional returns and repairs and decrease sales by 5% per quarter due to reduced image and branding. For the low-performance team, we reduce profits by an additional 10% of profits to handle additional returns and repairs and we reduce sales by an additional 15% per quarter due to reduced image and branding.

Table 4: Additional Effect of Quality on NPV

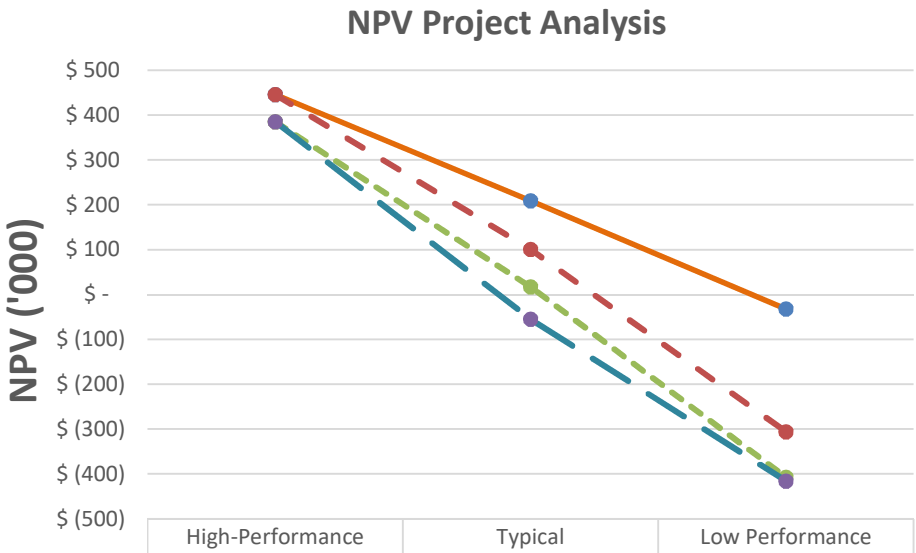
NPV Effect Due to Product Quality						
	High Performance Team		Typical Performance Team		Low Performance Team	
Quarter	Cash Flow	Discounted Cash Flow	Cash Flow	Discounted Cash Flow	Cash Flow	Discounted Cash Flow
0	($100)	($100)	($100)	($100)	($100)	($100)
1	($300)	($308)	($300)	($308)	($300)	($308)
2	($100)	($105)	($200)	($210)	($200)	($210)
3	$25	$23	($100)	($108)	($200)	($216)
4	$50	$45	$20	$18	($100)	($111)
5	$90	$80	$40	$36	$14	$12
6	$125	$108	$73	$63	$30	$26
7	$150	$126	$101	$85	$64	$54
8	$150	$123	$121	$100	$89	$73
9	$135	$108	$121	$97	$106	$85
10	$125	$98	$109	$85	$106	$83
11	$110	$84	$101	$77	$96	$73
12	$69	$51	$68	$51	$68	$51
13	$44	$32	$43	$31	$46	$33
14	$27	$19	$28	$20	$29	$21
15			$12	$8	$19	$13
16					$8	$5
NPV		**$ 385**		**$ (55)**		**$ (416)**

Here, the NPV of the typical team turns negative indicating the project is a loser.

Cumulative Results

Figure 1 summarizes the results of the four effects.

Figure 1: Cumulative Results of Team Performance



	High-Performance Team	Typical Performance Team	Low Performance Team
Effect of Internal Cost	$ 446	$ 209	$ (32)
Added effect of Market Window	$ 446	$ 101	$ (306)
Added effect of Competitive Product	$ 385	$ 17	$ (408)
Added effect of Quality	$ 385	$ (55)	$ (416)

Conclusion

High-performance teams, by definition, complete projects faster and with higher quality. In this paper, we have examined the financial results of a sample new product rollout project based on team performance. While each organization will experience different percentage losses or gains due to team performance, we have tried to base our sample project based on reasonable assumptions seen in the field and in our research. The results demonstrate the substantial effect team performance can have on profits and organizational performance.

We posit that team performance is based on cultural issues in addition to technology and process. Culture, in one sense, describes the habits of individuals and teams within an organization. High-performance teams depict excellent habits regarding communication, planning, management, quality, risk, and focus beyond social norms. We suggest that teams with typical performance portray habits in line with social norms, and low-performance teams exhibit habits below social norms.

One challenge facing senior management is that, as typical teams' habits align with social norms, the problems experienced are also typical and, therefore, unseen. This suggests that outside perspectives are required to identify and help resolve these issues.

One final note: while we have used a new product rollout as our example, similar results occur with any project. These include product upgrades, internal business process improvement projects, mergers and acquisitions, entering into a new geographical area, etc.

We hope you find this analysis enlightening.

References

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