Operations Diagnostic And Roadmap At Multi-disciplinary Engineering Services Firm: Improving Profitability And Revenue Performance

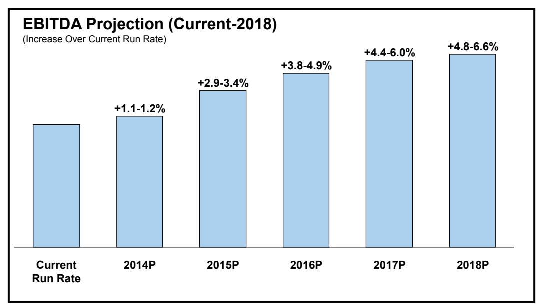
The Challenge: Our client, a leading mid-size engineering services provider, had gone through major changes over the last 3 years – adoption of a matrix organization structure (10 vertical market groups and 7 horizontal technical groups) and doubling of the company's size through 2 large acquisitions – with a 30% drop in EBITDA margins over the same time period. The CEO and PE owners believed that the company had grown past the business development and management approach/system that had served the company well in the past and were unclear on the EBITDA margin potential at its new size. To turn around the company's margin performance and position it for a successful exit in 2-3 years, the CEO asked Gotham to: "slice-and-dice" historical project and employee utilization performance and develop a target staffing leverage model; and a target business development model to improve efficiency of business development efforts while driving profitable revenue growth.

Profitability, Staffing, and Business Development Model Assessment: To create a solid fact base on the company's historical performance, Gotham cleaned, linked, and synthesized transaction-level data from the company's BST and Deltek systems taking into account data integrity issues related to legacy data from acquired companies. Gotham's fact base included:
- ***Proposal volume and conversion rate*** by proposal amount, market group, bidding process type, etc.
- ***Project and client size distribution*** by market group, technical group, etc.
- ***Project profitability distribution*** by market group, technical group, client type (public or private), fee type (cost plus, cost plus maximum, lump sum, etc.), project size, client, etc.
- ***Employee billable and non-billable time details*** by market group, technical group, role, seniority level, skill level, etc.

We also interviewed ~50 executives and managers (corporate business development and finance, market, and technical) to gain a first-hand sense of staffing and business development approach/process/tools and drivers of the margin shortfall.

2-3% Points EBITDA Margin Opportunity From Staffing Model Transformation

Working with the technical groups and HR personnel, Gotham established the seniority profile by mapping ~1,000 technical group employees of 3 seniority levels within 12 different skills (each skill comprised of 7-8 experience levels). We found that the technical organization (overall and across groups/skills) had a diamond staffing structure (~50% of the headcount at the mid-level). Our analysis of each employee's billable and non-billable time and markup showed overstaffing (significant non-billable time charged to overhead accounts) and misaligned staffing (mid- and senior-level employees performing lower skilled work). We then developed a model to estimate profits generated by every employee based on utilization, markup on employee's cost, and project performance. We also modelled staffing leverage scenarios for increasing the junior staff ratio/achieving a more pyramid structure and generated group-/employee-level performance data to enable fact-based staffing reduction decisions. We estimated that staffing model changes could add 2-3% points to EBITDA margins



2-3% Points EBITDA Improvement Opportunity From Strategically Increasing Project Pricing

From our historical performance analysis and management interviews, we found a >10% decrease in labor markup targets in recent years, partly driven by an emphasis on revenue. The company missed opportunities to price projects above target while pricing projects below targets in certain situations in order to win the job, leading to below target average margins. For example, the company had a 90%+ win rate on small projects (<$25K) due to limited competition yet was unable to achieve profitability targets on these projects. Gotham suggested a gradual approach to capture pricing opportunities, starting with new pricing targets for these small projects to mitigate risk to revenue performance from any potential project or customer losses. Once successfully achieving higher prices for smaller projects, the company can gradually move to fully capture pricing opportunities.

1-2% Points EBITDA Margin Opportunity From Business Development Model Redesign

Gotham found that the company did not clearly understand its target customers and its business development activities were dispersed among myriad groups with multiple client touch points. Because company management believed "everyone will do the best for the company" and there was no formal tracking of business development activities and outcomes. With the growth of the company and no incentive program to promote the desirable behavior, the business development effort was not yielding the desired results (e.g., almost no cross-selling).

To quickly capture cross-selling opportunities, Gotham developed and launched a **Key Accounts Program**, initially piloted with 4 accounts to formalize key elements: 1) Identification of client relationship owner and other key account members from relevant groups; 2) account strategy development; 3) measurement and reporting of progress/results; 4) incentive structure. Gotham then transitioned ownership of the program to the client team members and recommended ~75 clients/prospects for the key accounts program. Gotham also crafted a business development end-vision – redefined roles and responsibilities (marketing, prospecting, customer relationship management, proposal creation, pricing, etc.) for all groups based on business development phases (client identification, client acquisition, growth, and retention); performance measurements for all groups; and incentive structure to reward holistic performance (profits, margins, utilization) for both new customer growth and existing customer penetration/retention – with the potential to further improve EBITDA by 1-2% points, while unleashing the growth potential of the company.

The Outcome: Armed with a solid understanding of EBITDA margin improvement levers and a roadmap to achieve target performance, our client began implementation of quick-win opportunities and requested ongoing support.