Project Management Institute

Throughput Yield of Staffing for IDIQ Task Order Contracts

By Mark E. Salesky, PMP

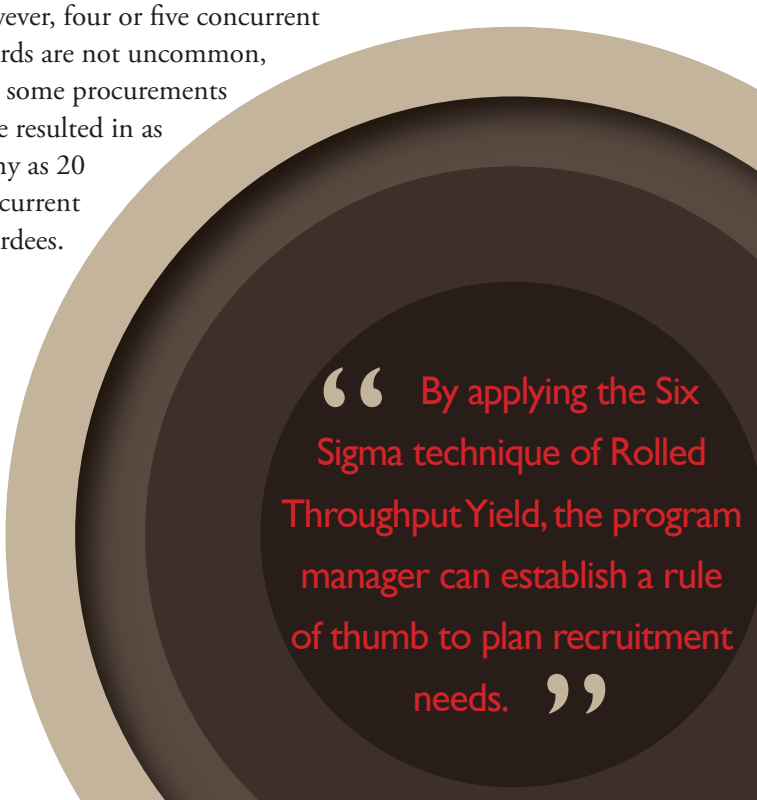
Abstract

Task order contracts are notoriously difficult to staff, because task orders are commonly released with little or no notice. No contractor to the federal government has the luxury of keeping a "bench" of available employees, particularly those with premium skills and clearances. The author's "Progressive Staffing Implementation" pushed the recruiting process far earlier than the announcement of an individual task order. His experience using Six Sigma techniques provides planning guidance and a rule-of-thumb for the throughput recruiting needed to successfully staff for task orders.

THE SITUATION

"IDIQ" stands for "Indefinite Delivery, Indefinite Quantity." The U.S. Federal Government increasingly uses this form of contract to procure goods and services. IDIQ contracts are not new — both the government and industry have long used this type of undefinitized contract for recurring requirements, typically for commodities that are ordered from a pre-approved price list. The U.S. General Services Administration (GSA) has used blanket purchase orders for decades for commodities; they have been very useful and popular with vendors, because they reduce the lead time and administrative costs of individual contracts. Business-to-business commerce uses open contracts for many activities, such as retail consumer items. For example, a vendor replenishes a point-of-sale beverage cooler with product and bills the storeowner with pre-established terms and pricing. In the last decade, the federal government has refined its method to use IDIQs for services of all types, from janitorial work to highly advanced scientific support. Not unexpectedly, the U.S. Defense Department leads the way with volume and scope. Other federal agencies have followed rapidly. IDIQ services contracts convey real advantages for the government; somewhat less so for industry. But for certain, IDIQ contracts are favored by the U.S. Federal Government and, like it or not, industry must compete within this structure.

IDIQ contracts always have a two-step process. The first step is a qualification of the company by a formal proposal, which is often rather generic. The accompanying statement of work describes broad examples of work to be performed, sometimes with sample tasks. Some solicitations require submission of a price list of labor categories, which are expected to be honored through the term of the contract. The U.S. Federal Acquisition Regulation (FAR) requires the government to select at least two winners whenever possible; however, four or five concurrent awards are not uncommon, and some procurements have resulted in as many as 20 concurrent awardees.



Regardless of the number of awardees, none at this point is guaranteed any work above a minimum value specified by the base contract, nor does the government provide a schedule of anticipated task orders. The contract is nothing more than an open container, waiting to be filled.

The second step is when the government users of the contract "fill the container" by issuing a task order solicitation for any of the broad service areas described in the contract statement of work. Now the company must make a firm commitment to provide the requested services — staffing with real people at the labor rates that have already been set by the step-one award. Profitability hangs on the project manager's ability to get the right staff at the right price. The staff must also be available on the timeline stipulated by the government. It is not uncommon to have a task order proposal due in ten working days after the government releases the task order solicitation and then to start work in another two weeks *IF* selected. In today's lean corporate environment, it is impossible for companies to maintain a bench of semi-idle staff who can rapidly be reassigned to a new task order. But rarely can new employees be sourced, vetted, and offered in such a short time. Even allowing for the traditional two-week notice puts prospects outside the response time window. The only viable approach is to have candidates on a "virtual bench" with a contingency offer of employment. This allows the company to legitimately offer the person's résumé/CV in reply to the task order solicitation, and if awarded the work, then to activate the contingency offer.

Keep in mind that the government rarely announces a release schedule of the task orders, and rarely releases task order solicitations in draft. I've seen many attempts to fill task order solicitations for skilled staff without advance planning — none of them has been very successful. It stands to reason: hiring quality staff for services takes time and effort by the company, on a timeline that is just too long to be responsive to a no-notice task order solicitation. A "progressive staffing implementation," (PSI) can remedy this situation. PSI aligns with PMI's *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*, (Chapter 9.1.3, the Staffing Management Plan, itself part of the Human Resources plan of the project documentation).

The goal of the PSI is to fill a bench with candidates who have been offered and accepted a position contingent on a future need. The term "progressive" has two meanings: First, it contrasts with a "reactive" posture to fill opportunities on new task orders, and second, it refers to the *progression* of candidates through the series of selections to get to a placement on a task order. PSI is the series of process steps necessary to recruit, select, and hire new employees, and the measure of how well it works is the "Rolled Throughput Yield."

THE PROCESS

Rolled Throughput Yield is a calculated expression that is used in the Six Sigma measurement of a set of sequential process steps, from the input of raw or semi-finished goods, to the final output product. More common in the context of factory production, the measure can also be applied to people management. Disciplines like education, career planning, and actuarial study use this approach applied to a population of individuals: a certain number of individuals begin an activity, a fewer number of them make it to completion. Rolled Throughput Yield is calculated as follows:

RTY% = (Yield% of Step 1) x (Yield% of Step 2) x (Yield% of Step N)

You can also think if this as the *percentage of loss* in each sequential process step. The ideal is zero loss through multiple steps. This doesn't happen in reality — in any set of processes some attrition always occurs.

How should this measure be applied to the retention or loss of qualified candidates as they progress through a hiring process? To start, I structured the PSI into four phases:

Phase 1 – Prepare Job Requisition
Phase 2 – Sort and Bin
Phase 3 – Hire and Place
Phase 4 – Replenish the Bench

I then developed a work breakdown structure (WBS) of discrete steps with which I could collect and organize data. In the WBS shown in Figure 1, the non-recurring actions are captured in *Phase 1 – Preparing the Job Requisition.* Ideally, these should be done shortly after the IDIQ is awarded and well in advance of any task orders. I suggest the job descriptions should be based not solely on the customer's descriptions (a reactive position) but rather on the skills that the company wants and expects to provide. Ultimately, the company has to match its offering of skilled labor to the customer's written (and sometimes unwritten) needs; however, early in the process we are sourcing candidates, not showcasing nominees. Getting the Throughput started with a good position description is critical.

With position descriptions in place with the recruiters, I collected Throughput metrics of the attrition of candidates as they progressed through *Phase II Sort and Bin*, and *Phase III, Hire and Place*. In the course of these processes, I found some specific guidance was needed:

1. PSI goes on in parallel to any contract activity, not in response to it. A defined, recurring process will

WBS	Task Name	Resource Names	Predeces
1	**Phase 1 – Prepare Job Requisition (non-recurring actions)**		
1.1	Validate expected skills	PM	
1.2	Prepare Job Description	PM	2
1.3	Gain necessary approvals	PM	3
1.4	Approval Received		4
1.5	Post job requisition	Recruiter	5
2	**Phase 2 – Sort and Bid**		**1**
2.1	Collect and screen candidates for minimum requirements	Recruiter	
2.2	Review qualified candidates	Hiring Manager or PM	8
2.3	Select candidates for interview	Hiring Manager or PM	9
2.4	Schedule interview	Recruiter	10
2.5	Conduct inteview	Hiring Manager or PM	11
2.6	Prepare salary analysis	Recruiter	12
2.7	Make contingency decision	Hiring Manager or PM	13
2.8	Coordinate for approval	Hiring Manager	14
2.9	Assemble offer package	Recruiter	15
2.10	Candidate accepts or declines offer	Candidate	16
2.11	Document "the Bench"	Hiring Manager	17
3	**Phase 3 – Hire and place**		**7**
3.1	Receive new task order	PM	
3.2	Validate requirements against the bench	Hiring Manager or PM	20
3.3	Make best fit decision	PM	21
3.4	Activate the contingency offer	Recruiter	22
3.5	Candidate accepts or declines offer	Candidate	23
3.6	Place onto contract	PM	24
4	**Phase 4 – Replenish the Bench**		**19**
4.1	Modify job descriptions as necessary	PM	
4.2	Go to WBS 2	All	27

Figure 1: Work breakdown structure of the author's Progressive Staffing Initiative.

yield better results over time than a "wait-then-surge" approach.

2. Following the wisdom, "don't let the perfect be the enemy of the good enough," find candidates with 85% or better of the job qualifications and move them through the process. Don't look only for the perfect candidate. I have found that a résumé rarely communicates all the desirable attributes that make an excellent employee. After all, the resume only provides evidence of what the candidate *could* do in the future. Keeping the standard to a reasonable 85% gets more good candidates into the process.
3. The recruiter should make the first assessment of all submitted resumes, to confirm that the applicant meets the minimum requirements (for example, he or she is authorized to work in the United States or has a college degree). Call these "screened candidates," assembled for the hiring manager to review. Using the 85% standard

gives enough discretion to the recruiter to send forward applicants who may have differing but possibly valuable experience. For example, a candidate who started and ran his or her own small business might have entrepreneurial skills that offset some lack of specific experience.

Over time and many projects, I began to gather enough information to build a model of staffing Throughput. I queried colleagues in my project management network, and it came as no surprise they had the same difficulty in task order staffing and few metrics to contribute to my study. I finally assembled enough to show a picture, although not enough for solid statistical analysis, so I offer my findings here as exemplars and perhaps a useful rule-of-thumb, subject to adjustment and tailoring by other project managers to reflect their specific experience.

THE FINDINGS

1. **After the recruiter screens and compiles a set of screened candidates, the hiring manager accepted only one out of every three résumés.** The hiring manager has a perspective closer to the customer than does the recruiter. He or she may see a potential problem in the job history, such as working for a company with a poor reputation, or lacking depth in a certain critical skill; so only one of three candidates moves on to the interview. This is not a shortcoming of the recruiter. Job position descriptions must be flexible enough to account for future unknowns, so your recruiter is trolling with a pretty broad net. It should be no surprise then if the hiring manager can bring more nuance and intuition into the screening process.
2. **After interviews, still working to an 85% "goodness of fit," two out of every three candidates were offered contingency employment.** Being liberal with contingency offers hedges against the many future events may intervene before an actual hire. Well-written offer letters can describe the offer of employment only when future conditions are right, so there's little risk of being saddled with a poor employee who merely had a compelling résumé.
3. **Applicants have a say, of course, and only 4 out of 5 accepted the contingency offer.** Some candidates are wary of signing an offer of employment for some unspecified date in the future. However for many, it provides a hedge against an uncertain future in their current employment. For the employer, the value of a contingency offer is the initial relationship it establishes that can dramatically shorten the proposal process for the future task orders. Stipulating in the offer letter for permission to use the candidate's résumé is a smart and common practice, further shortening the response time to task orders. Both the recruiter and the hiring manager need to explain to the candidate that the contingency offer is indeed a serious offer; this builds confidence and makes it more likely the candidate will accept the offer *and* the hiring when activated in the future. This is now the "bench:" a set of qualified candidates who have accepted a contingency offer based upon future task orders. The project manager can now develop skills matrices, map into labor categories, and do other activities well in advance of the actual task order.

To complete the Throughput calculation there is one more metric that is influenced by two factors out of the project manager's control:

1. The government rarely issues draft task orders, although sometimes it provides a "heads up" and a general description of the scope and duration. One thing is for certain: the new task order will be different in some significant respect than any prior insight or expectation. Changes to skills make the most impact to staffing and for this reason you may not have the right people on your bench. Other reasons could be that the security requirements increase, the work location changes, or the required experience is greater or lesser. All of these affect the ability to match your bench to the task order needs, and to do it in just a few days.
2. Candidates are not sitting idle. Between filling your bench and the release of the task order, weeks will pass, maybe months. In that time, a candidate may accept other employment, or move to another city, decide to go back to school, or a myriad of other different reasons to decline the position. **So even if there is a good fit between the position and the candidate, only one out of two can be placed on contract.**

Let's recap. We start with a pool of qualified candidates provided by the recruiter to the hiring manager, then:

- One out of three, or 33%, will move on to the interview.
- Of those interviewed, two out of three, or 66%, are offered employment contingent on a future need.
- Of those given a contingency offer, four out of five, or 80%, accept.
- And at the point where the task order is released and you then know exactly what skills and experience are needed, one of every two from your bench — 50% — will not get placed.

Rolled Throughput Yield is the product of the success of each of these four process steps:

33% x 66% x 80% x 50%, which equals 9% overall

Put another way, it will take 11 candidates found by the recruiter to make one successful placement.

REPLENISHMENT and CONCLUSION

Celebrate each placement of a new employee into a service task order; then, quickly go back to work because that placement depletes the "bench." Like an inventory of goods, the bench will age, whether you pull from it or not. So, eventually, certainly within a few months, all your candidates will gather reasons to decline a position once you need to fill it. Like any valuable inventory, your bench needs care and maintenance. My approach was to work with my recruiter to maintain email and phone contact every few weeks, gauging true availability and commitment.

I believe the Rolled Throughput Yield model of 9% is a good rule-of-thumb. The implications can be unsettling: a task order that calls for 10 positions will need 110 qualified candidates in the beginning of the staffing "funnel." Each project manager's experience will be somewhat different, and there may be opportunities to improve the yield at each step. What may be most valuable for the project manager is describing the demands on the recruiter at the front end of the process, sometimes called "feeding the funnel." Executive managers must resource this effort, and with this model the project manager can analyze the cost of staffing compared with the revenues earned from placement. It can be an expensive process, but this approach of considering Throughput can help make the business case for progressive staffing far in advance of the actual task order release, which then positions for quick and credible responses to the task orders. The alternative — to start scouring for candidates only at the point when a task order is released — is the path to missed opportunities and an underperforming contract.

References

Project Management Institute (2008). *A guide to the project management* body *of knowledge (PMBOK® guide)* — Fourth edition. Newtown Square, PA: Author.

U.S. Government (2013). *Federal Acquisition Regulation, Subpart 16.504(c) "Indefinite-quantity contracts, multiple award preference."*

About the Author

Mark E. Salesky has been a Project Management Professional (PMP)® credential holder since 1998, a Six Sigma Black Belt, and a U.S. Defense Acquisition Professional, with assignments as a project manager, program manager, and program director in the U.S. Army and the Defense Industry. He specializes in task order programs.