

NAVSEA's Systems Engineering Development Program Two Years Later

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In the March-April issue of *Defense AT&L*, Michael W. Wynne and Mark D. Schaeffer, in their article "Revitalization of Systems Engineering in DoD," stated that "our primary goal is to re-establish DoD's systems engineering prowess." One of the missions of the Naval Sea Systems Command's Systems Engineering Development Program is to train and develop systems engineers based on competency-driven models.

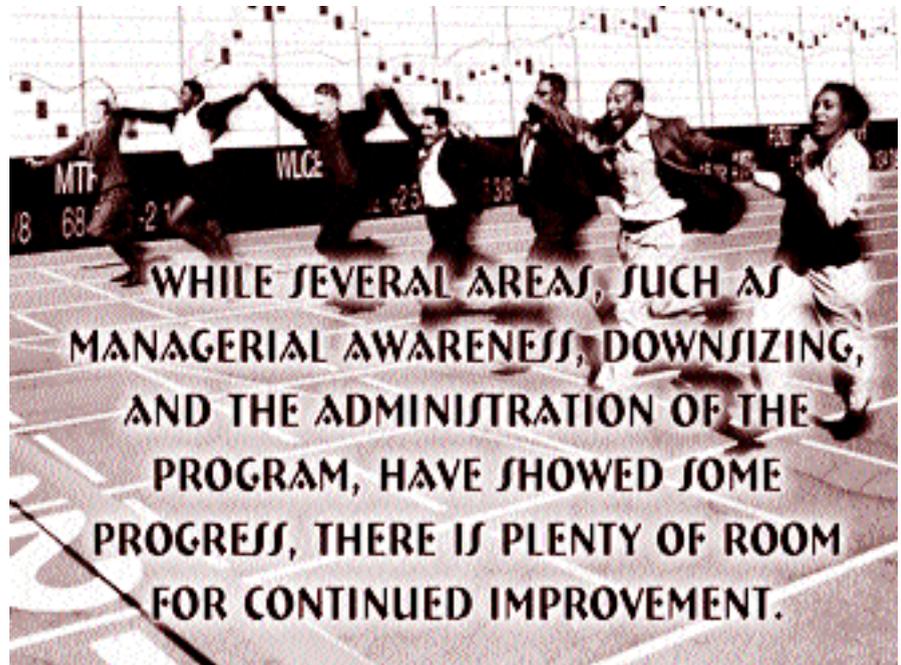
Assessing the Health of NAVSEA's Systems Engineering Development Program

Two years ago, NAVSEA's Systems Engineering Development Program was evaluated for effectiveness. In October 2003, after the survey, a national engineering manager's meeting was held to enhance and improve the program through the implementations of agreed-upon best practices. This year, 65 engineers from NAVSEA's Systems Engineering Development Program were surveyed to evaluate our progress. How are we doing? Well, as Dr. Bob (Richard Dreyfuss) said to his client (Bill Murray) in the movie *What About Bob?* "Baby Steps."

While several areas, such as managerial awareness, downsizing, and the administration of the program, have showed some progress, there is plenty of room for continued improvement. The "intern" name still remains a sore point. The percentage of engineers who would enter the program again has decreased. Although managerial awareness has shown improvement, it still is the area identified as most frustrating and in need of work.

Two years ago, 86 percent of current engineers and graduates said they would enter the program again. In this

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year's survey of current interns, 66 percent said that they would definitely enter the program again; another 15 percent said they would not; and 17 percent indicated "not sure." As before, some of those who would not enter the program again cited faster advancement outside the program. According to some engineers, the current lower initial salary contributes to their reluctance.

Best Experiences

Systems Engineering Education

Two years ago, 90 percent of managers indicated that engineers were learning systems engineering, as did 63 percent of current engineers. This year, 100 percent of the managers said that the engineers were learning systems engineering, and 73 percent of the engineers agreed.

Rotations

Two years ago, rotations—the core of NAVSEA's Systems Engineering Development Program—were cited as the most valuable aspect of the program by 60 percent of the engineers surveyed. This year, 81 percent indicated that rotations were valuable, with 55 percent citing the rotations as "extremely valuable."

In answering the question “What has been your best experience in the program?” the predominant number of responses were related to the opportunity to rotate and the flexibility to rotate through different assignments, especially those rotations that brought the engineer closer to the sailor and the Navy’s products. Fifty-four percent cited rotations and another 22 percent cited the flexibility that the program offers. Since rotations are a major aspect of the flexibility, one might argue that 76 percent of the positive indicators pointed to rotations. Some comments:

- “The main reason I entered the program was the ability to rotate within NAVSEA.”
- “Rotations provide you with the background to understand the Navy organization.”
- “External rotation at SubPac Pearl Harbor. I learned how the Navy ‘really works’ from the guys in both blue and khaki.”

Some engineers found the rotations to be career-defining:

- “Freedom to explore the Navy’s acquisition system, the opportunity to mold my career path, and the chance to get a graduate-level education are fantastic aspects of the program.”
- “[The program] gave me an opportunity to work many different kinds of engineering jobs and work with many different kinds of engineers. This helped me sculpt what an ideal job for me would be, where I could contribute the most.”

Hands-on Experience

Two years ago, 20 percent indicated that hands-on experience from events, trips, and SEA trials was one of the more important aspects of the program. This year, the number was up to 48 percent. Ninety-four percent indicated that hands-on experience was, at the least, “valuable,” if not more than valuable. Unhappily, some engineers stated that they hadn’t had the opportunity for hands-on experience. Some of the engineers reported that hands-on experience enabled career-defining realizations. A representative comment from one engineer: “By being hands on, I was able to determine what kind of position I would like to pursue once I’ve graduated from the program and enter the regular government civilian workforce.”

Getting An Overview

Nine percent of the engineers reported that getting an overview was either a “best experience” or a positive aspect of the program. For one,

it was “the opportunity to try a variety of different things and gain a broad range of experience before settling into one position.”

National Intern Conference

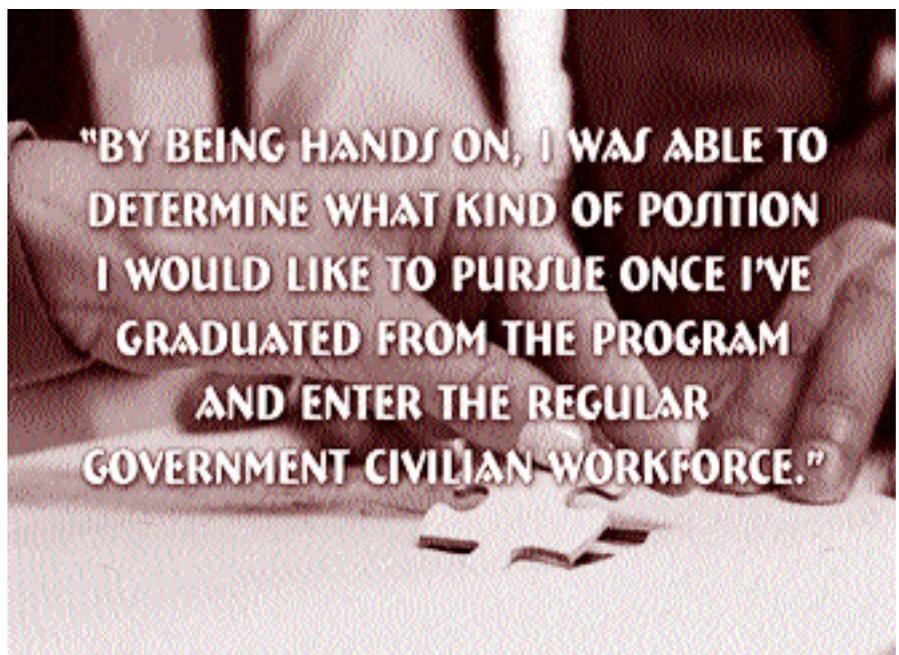
The National Intern Conference was cited as “extremely valuable” by 19 percent of the participants, and overall, 71 percent indicated that it was at least “valuable.” Twenty-five percent reported that the National Intern Conference was “not valuable”; however, many of them indicated that had it been offered during the first three months of their employment, it would have been valuable.

Areas For Improvement

Management Issues

This year, some of the same areas for improvement emerged, with management training and program awareness once again considered the two areas still needing the most improvement. However, while two years ago, 60 percent indicated insufficiently trained managers as a major problem area, this year only 17 percent indicated managerial training as a major issue; however, another 66 percent said the managerial training could use some improvement. Ten percent cited “managerial awareness” or lack thereof as being their worst experience:

- “I was placed initially on an external rotation with a manager that wanted to use me as his secretary. When I realized this and tried to press the issue with him that I needed to be challenged more, he refused.”
- “My boss didn’t introduce himself for a week-and-a-half and didn’t give me anything to do for the entire four months that I was there.”
- “Maybe give the managers, or divisions for that matter, mandatory training before they are allowed to take



on interns. My biggest complaint is lack of manager knowledge about the program.”

Thirty-one percent stated more specifically that there was a lack of oversight and guidance, while 50 percent stated that the manager’s expectations for the engineers were not clear. Twenty-three percent indicated insufficient supervision as an issue, and 25 percent specifically stated that their managers had a lack of understanding of the program. As a result of the survey, two key managers will be providing a Q&A to other managers in the field via video teleconference (VTC).

Downtime

Two years ago, 30 percent of the engineers in the program cited downtime as an issue. Lack of a computer or telephone and delays in obtaining a badge were noted as problems. This year, only 14 percent thought downtime was an issue, but of those, 21 percent said that they had to wait too long for a phone, badge, or computer. An additional 52 percent indicated that this area could use some improvement. What were the issues under downtime? Thirty-seven percent stated that they felt lost with nothing to do; 25 percent said that they had full time job responsibilities in addition to the Acquisition Intern Program responsibilities; and 16 percent indicated that they had too much to read.

“Intern”: Misleading Nomenclature

Two years ago, 60 percent of the engineers reported that the term “intern” was an issue. As a result, at the National Manager’s Meeting, an agreement was made to call the interns “engineers in NAVSEA’s AIP.” How did that pan out? Not very well, it seems. According to this year’s survey, 73 percent said that the intern name was still at least somewhat of a problem. From my perspective, calling the interns in the program “engineers” did not stick at the NAVSEA level, and since the official name of the program is “Acquisition Intern Program,” the title engineer falls out of use quickly. Fifteen percent of the responses concerning worst experiences were related to the intern name. “I had a lot of ‘intern’ work to do, meaning wasted time,” commented one, while another cited “being treated as free labor and being put on projects solely because you are free with no regard for the intern’s plans.”

Individual Development Plan

Thirteen percent cited the Individual Development Plan as their worst experience—“trying to get my IDP filled out and sent to Mechanicsburg [Pa.] by the deadline when my supervisor didn’t have much clue what it was about.”

Administrative Issues

Fifty-nine percent referred to administrative issues; even so, this was an improvement from two years ago. The area of travel issues showed an improvement of 9 percent; communication showed an improve-

ment of 10 percent; and budget problems showed an improvement of 8 percent. Gratifyingly, several engineers felt that the employees of the administration provided excellent service.

In terms of Washington, D.C. headquarters-related administration, two years ago, 20 percent cited the quarterly meetings as an area for improvement. This year, only 11 percent indicated the meetings as an area for improvement; 5 percent reported that the quarterly meetings were too long. The quarterly meetings have since been streamlined. Twenty percent did indicate that communication is an issue with HQ. Overall, communication was cited by 45 percent as an area to improve.

First Days

There has been real improvement in this area. The majority of the respondents completed the necessary paperwork and introductions on their first day of work. Most felt the first days were positive. It especially stood out for the new engineers when a more seasoned engineer met them the first day—a recommendation after the last survey. Ten percent of the first-day experience was somewhat negative, usually having to do with downtime and lack of preparation by management. Even so, this area has markedly improved over the last two years.

Conclusions and Recommendations

In summary, NAVSEA’s Systems Engineering Development Program has shown measured improvements. However, in looking at the data and specific areas highlighted, exponential improvements are possible with some slight adjustments. What would these recommendations/adjustments be?

- The senior career manager of recruitment will provide four 1- to 2-hour VTC training sessions to everyone managing engineers in NAVSEA’s Systems Engineering Development program.
- The two resident managerial experts will give Q&A sessions by VTC two or three times a year.
- The Naval Center for Acquisition Workforce Professional Development and NAVSEA Headquarters will communicate regularly any new information by e-mail.
- NAVSEA engineering managers will reinvigorate the title of “engineer” for those in the program.
- NAVSEA’s Systems Engineering Development Program will be administered based on the *Manager’s Survival Guide* and the best practices recommended during Q&A sessions.
- NAVSEA engineering managers must be better prepared and have a seasoned engineer meet the new engineers on the first day.

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