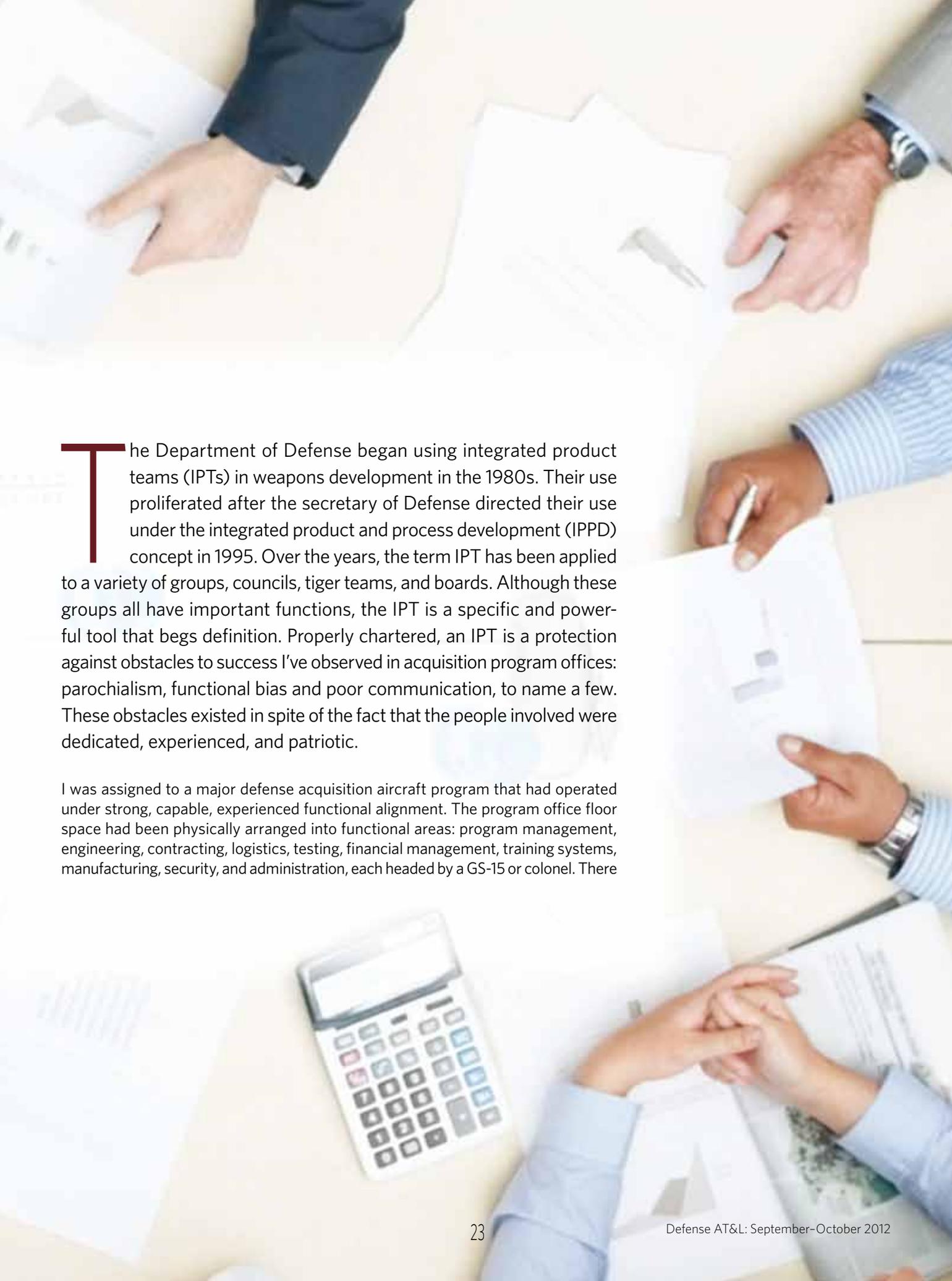


How to Form an IPT

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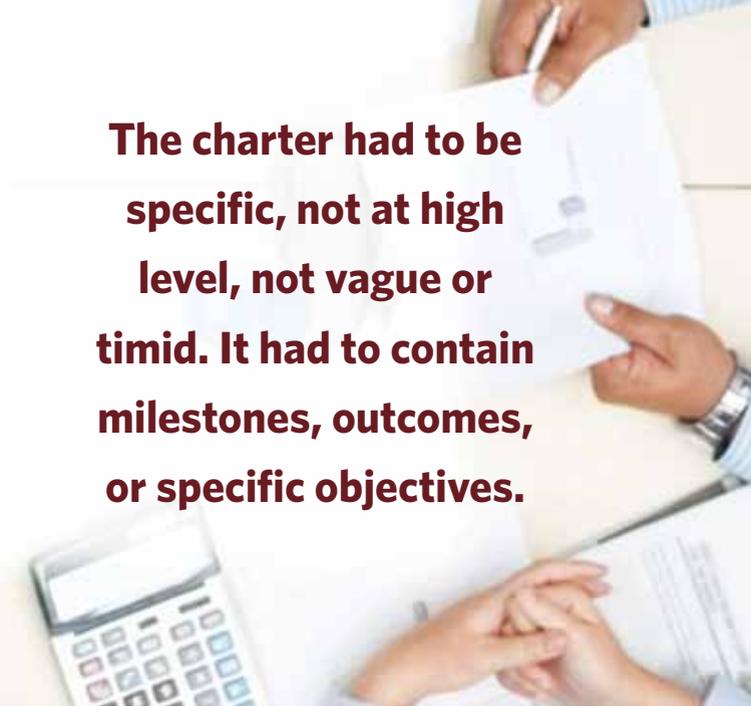
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The Department of Defense began using integrated product teams (IPTs) in weapons development in the 1980s. Their use proliferated after the secretary of Defense directed their use under the integrated product and process development (IPPD) concept in 1995. Over the years, the term IPT has been applied to a variety of groups, councils, tiger teams, and boards. Although these groups all have important functions, the IPT is a specific and powerful tool that begs definition. Properly chartered, an IPT is a protection against obstacles to success I've observed in acquisition program offices: parochialism, functional bias and poor communication, to name a few. These obstacles existed in spite of the fact that the people involved were dedicated, experienced, and patriotic.

I was assigned to a major defense acquisition aircraft program that had operated under strong, capable, experienced functional alignment. The program office floor space had been physically arranged into functional areas: program management, engineering, contracting, logistics, testing, financial management, training systems, manufacturing, security, and administration, each headed by a GS-15 or colonel. There

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were SES-level functional heads at the base level to which these functional chiefs, and those in other program offices on base, reported. There were also user representatives from the combat commands on base.

When a major issue, such as a proposed design change, arose in the program office, each functional chief would assemble his functional team and formulate their best position on the issue. Each functional position then would be presented in a staff meeting to the program manager, who would eventually make the decision on how to proceed. Next, the deputy program manager and chief of contracting would travel to the prime contractor to present the decision. One of the user reps would check back with their combat command headquarters. The program manager ran the program by being the arbiter among valid but competing positions among his functional chiefs, sorting out issues at his level.

I was assigned to the program office about the same time that a new program manager, a general officer, was assigned. The general quickly became overwhelmed with having to determine the best direction for the aircraft program while being faced with conflicting recommendations from his functional chiefs, often in areas where he had little experience himself. He sensed that program decisions had been made in the past based on the strength of arguments and personalities. He believed this was not always the best balanced approach for the airplane program overall, nor the most efficient application of the program office expertise. The program manager had just come from a base that had undertaken a base-wide transformation to IPTs in their program offices. This had involved extensive training, but it had paid off in efficiency and effectiveness, and he determined it was time it install IPTs in his program office.

At first there was some unease with the program manager's IPT initiative, but that diminished as the functional chiefs

each volunteered to lead an IPT. That is where things got interesting. The program manager was firm that IPTs would be chartered by him to manage or produce a product, such as a test plan or engine, or a major subsystem. Rather than be an engineering team or contracting team, the IPTs were to represent a product, not a function. There would be no engineering solutions or logistics positions or testing imperatives. There would only be a team solution for the product, balancing all functional inputs at the working level. The IPT organization would replace the functional organization process of handing off a product from one stovepipe to another—from engineering to manufacturing to logistics, and back again.

He expected his functional chiefs to take on a new responsibility. They were to help him identify key products or areas in the weapon system that needed an IPT. The manning demand for IPTs required they be few as possible in number and cover major products. They didn't need a seat cushion IPT. They were to then help write a charter for each IPT. Then identify members from each functional discipline needed on the IPT. Next, the functional heads were to empower the members they put on an IPT. No running back to the chief engineer for mother-may-I. And there was no space for observers, only necessary contributors. (I am reminded of a senior acquisition official who said she only wanted members on her team who would lose their jobs if the team failed. The message was no hangers-on, no observers, and no kibitzers.) The IPT concept was decision making and execution at the lowest level.

The program manager expected some resistance. He remembered at his previous base the IPT concept had required buy-in from the senior functional heads on base, and the senior officers at the base. So he met with each senior stakeholder on base. He explained to the senior leaders something that he had discovered. The program was in trouble, but no one was accountable. The best example of the trouble was the test schedule for the electronic countermeasures (ECM) system was not being met.

The logistics functional group would not agree to allow testing to proceed until the important maintainability features were included early in the test schedule. The engineering group stated that testing must be held up until certain engineering questions were worked out. The testing organization was not willing to proceed until all testing criteria met their developmental testing objectives. The program manager pointed out that in this example—and there were many others—there was validity to each position. But there was no one accountable for the product, in this case, the ECM system.

He viewed the responsibility of each senior head to be to get the airplane to the warfighter. To do that he would use IPTs and he solicited their help. The senior functional and base leaders agreed to support him, but not without reservations and concerns, and doubts. After some discussion, they agreed to exercise their functional responsibilities by seeing that the

right functional experts were assigned to the right IPTs. They agreed to offer sound balanced processes to their IPT members, but let them manage the products.

Here is what the program manager believed IPTs were and what they were not. The letters in "IPT" have defined meanings.

Integrated means the team is composed of every specialty or discipline needed to deliver the product. I was appointed lead for the ECM IPT. This IPT also needed domain representatives in development, test, manufacturing, contracting, budgeting, integration, deployment, and sustainment. The team included the user and the contractor during all meetings and deliberations, not as an afterthought.

Product means the team is responsible for a product. It is not a review group to monitor progress or a tiger team to address a single problem. The product may be a piece of equipment or a test plan, but a product must be defined. In my case it was the ECM system that would be provided as government furnished equipment (GFE) to the prime contractor to integrate into the airplane.

Team means that the members work for consensus. A team has one leader. I was a leader among peers, regardless of rank or function. Each member had equal say. As leader I did not have a technical or functional responsibility. My job was to see that the team delivered a product that balanced factors from all members, to see the team reach consensus. To operate best the team members are collocated, with their own meeting area.

The first step was to determine the IPTs. The program manager and his functional chiefs decided which major products or components needed direct management by an IPT. Next they took the necessary time to carefully craft a charter for each IPT. The charter had to be specific, not at high level, not vague or timid. It had to contain milestones, outcomes, or specific objectives. The charter had to state the IPT's authority and the next level of reporting for the IPT. The program manager and his chiefs named in the charter an IPT lead whose responsibilities were stated, which did not include any functional responsibilities. Finally the charter was signed by the program manager. Each charter was eventually posted in the IPT's team area.

Next came the naming of IPT members. Each must be relieved of other duties sufficiently to accomplish the objectives in the charter. The chiefs had to assure the approval of the individual's supervisory chain. Finally, the IPT members must be empowered to do what is in the charter.

There are a few tips I learned as an IPT lead.

The IPT leader must:

- Be respected in and out of the IPT
- Be balanced

- Possess managerial skills
- Be able to manage the external environment to allow the IPT to focus on their work
- Be decisive. Make the decision with the best consensus when the decision must be made
- Not be biased toward any functional or technical viewpoint

The IPT members must:

- Have domain or functional expertise
- Be empowered and have authority for their domain
- Be committed to the IPT's product and charter
- Agree on ground rules, time demands and schedules
- Be open minded
- Be a team player

Not every program office will be able arrange all the particulars I illustrated above, but the core functions are achievable. You may not have the luxury of dedicated meeting rooms, but you can schedule common meeting spaces. You may not have all members collocated, but there are ways to still meet together using travel, video teleconferencing, or, as a last resort, speaker phones. The essential requirement is that all IPT members be present at meetings. You may not be able to have (or even need) full-time access to every functional expert called for, but you must push for dedicated identified members, even if part time. Two mandatory members of your IPT—and this is essential—are the user and the contractor. If your IPT is for a GFE component, you need both the GFE vendor and the prime contractor.

There were other tasks the general faced to implement IPTs. The facility manager had to rearrange the cubicles so the IPT members could sit together, and so that each IPT had a meeting area. The head of human resources had to agree to permit each IPT lead to make written input to the appraisals and performance reports of his IPT members, such as by formal letter to the member's supervisor of record.

The IPT was tasked, recognized, and rewarded as a team, not as individuals.

At first there was some uneasiness and mistrust among the IPT members. But as they began to meet and solve problems together I witnessed an interesting phenomenon. They began to achieve successes. Small organizational successes at first, but then they began to tackle and solve bigger challenges. They began to learn each other's jobs. They became able to answer outside inquiries for each other when a member was not available. They began to cover for each other.

IPTs do not arise automatically, or naturally, or spontaneously out of need. Nor are they learned on the fly. They must be worked at to work. There are a variety of people who can and will say no to an idea. IPT members are empowered to say yes. 

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