

Product Support Resource Model (PSRM)

Manpower Model for the Product Support Mission Area

Instructions

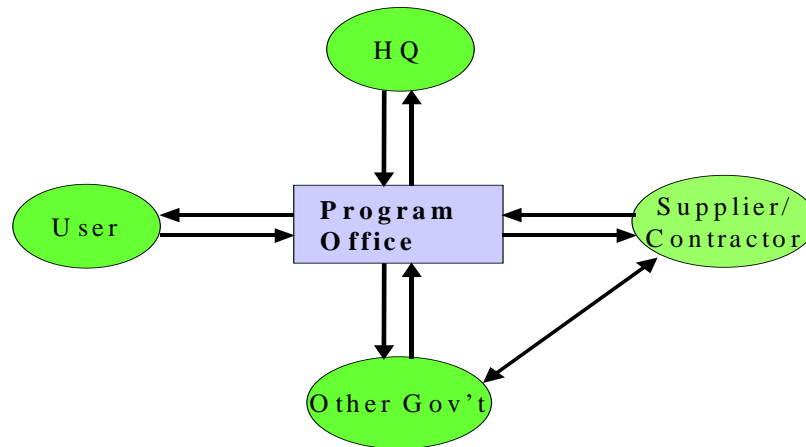
Background

The Command has had limited success in defending manpower needs, particularly in the Product Support Mission Area, because of the apparent inconsistent treatments between systems. There is a need for a simple, top-level model that will estimate manpower needs with relative accuracy and consistency. It must also permit the application of management judgment during the process to accommodate program and Center unique issues. This culminated in developing the PSRM resource model that will estimate the PSMA resource requirements for AFMC product and logistic centers. The primary output for this effort will be to support the AFMC POM efforts with the initial application on the FY04 POM. This will be done by modeling product management manpower needs for individual system program offices, adding estimates for efforts outside of the program offices, and summing them to arrive at a number for the center. The systems used for the basis are those delineated in the Merged Portfolio List. The command has traditionally use a “bottoms-up” approach to estimate PSMA manpower, but this method lacks a firm analytical underpinning, and resources could not be tied to outputs.

The Model

The model is a center-sizing tool. The primary building block, and the largest element of the model sizes program offices. It is not the intent of the model to come up with an exact score for each and every program at a center due to the idiosyncrasies and many variables of each program. Rather it will generate as estimate with an error band of accuracy for any one program, but individual inaccuracies will tend to cancel out when totaled at the center level.

The basic hypothesis of the model states that program office size can be estimated by defining and measuring four primary areas of work that represent program office efforts. Those four areas are depicted below:



- Headquarters –efforts expended reporting to and fulfilling taskings from entities higher in the management chain above the Single Manager or System Program Director including PEOs, DACs, HqAFMC, HqUSAF, OSD, Congress, etc.
- User –efforts to interface with, and report to the user of the system, i.e. ACC, AMC, etc.
- Supplier/Contractor – work done to interface with and manage suppliers and contractors that support the program. May be a commercial contractor or another government agency. This has two major sub-elements; (1) constructing and maintaining a contract or service level agreement, and (2) providing management and oversight of supplier/contractor performance.
- Other government – interfaces with other government agencies that support or must interface with the program. May be another service, another platform, or another weapon system.

Work associated with these four areas in each program has been described by workload descriptors, divided in five descriptor groups. Each program will score itself on a scale of one to five for each of the five-descriptor groups. The score for the five groups will be totaled, and that total will be translated into a manpower number using a lookup table. We recognize this does not encompass all the work performed by a program office, but the balance can reasonably be accommodated in the look up table.

It must also be recognized that program office manpower does not account for all of the PSMA manpower. Other efforts must be added to program office manpower to obtain the total PSMA requirement. Those efforts are product line management, special efforts, other efforts, and corporate services.

Application of the model

Programs to be scored

Programs to be scored will be on the official AFMC Merged Portfolio List. If a program is not on the Merged Portfolio List it will not be scored without the prior approval of AFMC/DR. Programs on the merged portfolio list may be broken down further for scoring purposes (i.e. for grouped or basket program offices). Rules for grouped programs are discussed below in the grouped program section.

Foreign Military Sales (FMS)

As FMS manpower slots are not a part of the AFMC POM, they are not to be included in the PSRM. FMS activities are not to be scored as part of the model. However, the model does recognize that USAF manpower and effort is affected by FMS efforts in program offices. According, the descriptors account for this effort, and programs are scored accordingly.

Slots for classified efforts

Slots to support classified efforts (“green door”) are separately included in the basic AFMC POM. Separate procedures are in place to program for these manpower requirements. Therefore, these efforts are not part of the PSRM. As was the case with FMS efforts, the descriptors do recognize that classified efforts can and do impact the efforts associated with the PSRM and programs are scored accordingly.

Single Manager

The single manager, no matter the location, is the person ultimately responsible for scoring his/her program using the PSRM. For ease of model application, we have allocated the work performed by the program into two classes, the DSM type work and the SSM type work. Depending on the ground rules defined in the following paragraph, the workload associated with these efforts may be separately estimated, using the model. Where the DSM and SSM functions are accomplished at different locations, it is expected that the Single Manager will score the program in coordination with the SSM or DSM at the other location, and the final score will have the full participation and coordination of the SSM or DSM if he is not the single manager.

DSM and SSM. There are two possible situations for the physical location of the DSM and SSM. First, the DSM and SSM are at the same location, and part of the same organizational structure. Second, the DSM and SSM are at separate centers. The guidelines for scoring follow:

DSM and SSM at the same location. When the DSM and SSM are at the same location, the single manager will score the program once. That score and the resulting manpower will be applied to that location. This minimizes difficulty in

scoring, and avoids the significant possibility that the same efforts (such as required reporting) will be credited to both functions.

DSM and SSM at different locations. The SSM and DSM functions will be scored separately. The score and the resulting manpower for the DSM will be allocated to that location, and the score and manpower for the SSM function will be allocated to that location. In most of these cases, the majority of the DSM function will be accomplished at the product center, and the majority of the SSM function will be accomplished at the logistics center. In those cases the SSM workload will be allocated to the logistics center, and the DSM workload will be allocated to the product center. A few positions at the product center may actually be doing SSM work, and a few positions at the logistics center may be doing DSM work, but these are generally small in number and will normally be cancelled out. These are ignored in the model. There will be, however, a few instances where a significant amount of the SSM work will be done at the product center and a significant amount of DSM work will be done at the logistics center. In these few instances, the SSM and DSM manpower allocations will be manually distributed between the two centers.

Grouped programs

Grouped programs (sometimes called basket programs) are grouped under a single management structure to gain execution efficiencies. It is therefore necessary to measure and score these programs with these efficiencies in mind.

For a grouped program, each of the projects/programs receives a score based on the descriptors. Individual numbers for each project/program from the lookup table are added. Take this total number; multiply by a factor to account for efficiencies and synergies. To that result, add a number to account for overhead (director, administration, etc.). These numbers are dependent on the amount of integration and synergy in the program office, and the amount of integration will have to be assessed separately for each grouped program or grouped program office. The result is the manpower number for the grouped program or grouped program office. The three levels of integration and the numbers to be applied for synergy and overhead, and guidelines for which synergy number to apply are outlined in the table below:

Type of program	Program Characteristics	Decrement for synergy	Add for overhead
Minimum Integration	2 or 3 programs scored, one or two large (approx. 100 people)	5%	5
Moderate Integration	3 (if no large) to 5 programs scored	10%	10

Fully Integrated	6 or more programs scored	20%	20
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The specific programs to be scored in a grouped or basket organization will be determined from the Merged Portfolio List by the SAF/AQ-HQ AFMC team prior to the scoring effort to support the POM. It will normally be based on experience gained from the previous scoring effort. HQ AFMC/DR must approve any changes to the list of programs scored for a basket organization.

CMEs and FFRDC

For the purposes of the model, all manpower engaged in program office support functions are included in the model, but are considered to be fungible and are not treated separately. These categories include organic (military and civilian), Contractor Manpower Equivalents (CMEs), A&AS, and FFRDC. For the purposes of the model, it is extremely important to consider all workload in support of the program, and score the program accordingly. It will be the responsibility of the center to allocate total program and center manpower to the appropriate category (organic, CME, A&AS or FFRDC).

Sustainment support

There are some instances that some program office effort can be classified as sustainment support. This is effort that may be more typically accomplished by a prime contractor and will include such efforts as sustaining engineering. Program offices may choose to do these efforts organically for reasons such as a prime contractor may be unavailable or the capability does not exist in the private sector. Therefore the conscious decision has been made to do the effort organically. The model recognizes this, and can accommodate the effort being accomplished by most organizations, with no special adjustments required. It has failed to adequately accommodate this type effort on a limited number of programs. For these programs, the effort is more substantial, and an adjustment to the model is needed. For these programs, a discrete estimate for sustainment support will be manually added to the score obtained from the use of the descriptors. The HQ AFMC team supporting the PSRM effort will, in coordination with the centers, determine the programs that need this adjustment, and will validate the size of the adjustment.

Product Line Management

Product line management are those efforts that are not defined as a single program by the merged portfolio list, but are efforts that support a product line such as architecture definition efforts or TPIPTS. Product line management is not directly estimated by the model, but rather will be discretely estimated by the product and logistics centers. Each product line management efforts will be identified by the centers during the PSRM application during the POM cycle along with the manpower associated with the effort.

Other efforts

Other efforts are defined as work and manpower that is assigned to the product support mission area, but is not work normally associated with program management and not on the merged portfolio list. These efforts are not mainstream program management efforts, but the manpower is counted in PSMA. An example would be the security forces guarding aircraft at a Center. Normally the infrastructure to support these personnel is not part of PSMA. These efforts will be identified by the centers during the PSRM effort along with the manpower associated with the effort.

Special Efforts

Like other efforts, special efforts are work and manpower that is assigned to the product support mission area, but is not work normally associated with program management. It differs from other efforts mainly in the fact that infrastructure support for these efforts would normally be part of PSMA. These efforts will be identified by the centers during the PSRM application during the POM cycle along with the manpower associated with the effort.

Corporate support

Some corporate support may be allocated as a part of the Product Support Mission Area. As different centers will cover different areas of corporate support in different mission areas, the PSMA portion of this support is discretely estimated. The PSMA portion of corporate support will be identified by the centers during the PSRM application during the POM cycle along with the manpower associated with the efforts.

Model Scoring

Work associated with the four PSRM areas in each program has been described by workload descriptors. These descriptors represent factors that drive the bulk of the workload. Based on how a program office fits against these descriptors, a range of manpower is estimated which would represent the manpower needs for a specific program office. In order to size the Centers, a manpower number is assigned for each of the program offices.

Each program is described using five groups of workload driver descriptors. Each of the five workload descriptor groups is subdivided into 4-6 expanded descriptors. They are:

Required Reporting Effort required to satisfy reporting requirements to resource and direction providers (those in the "food chain")

- Level of reporting: Work associated with standard reporting effort (SAR, DAES, etc)
- National visibility: Work associated with responding to media exposure and coverage
- Number of reporting recipients: Number of different resource and direction providers
- Stability: Effort driven by program direction and funding stability or instability
- Unscheduled reporting: Effort associated with predictable, but unscheduled reporting

User Interface (Effort required to interface with the operational user of the capability being supported or developed)

- Requirements stability: Impact of the user's requirements stability. A function of clarity and consistency of the requirements definition, and the effort required to aid the user in accomplishing requirement tradeoffs
- User reporting level: Effort to support user reporting. Defined as the level at which the user headquarters is routinely reviewing program status
- Number of operational users: Effort to support multiple operational users. Refers to different services, wings, bases, etc. not platforms
- Acquisition/operational support concept: Program office effort to work with user in developing or maintaining support concept.
- Ops Tempo: Effort to support warfighter/users ops tempo and surge.

Getting on contract activity Focused on the magnitude of work to define and come to agreement with contractor/supplier new work efforts (including ECPs/CCPs/SLAs, etc. This effort includes all program office activity, not just the contracting functional area. Also includes externally provided changes such as service bulletins)

- Requirements Definition: Effort to translate requirements and strategy into "contractual terms" with the supplier. Covers acquisition and sustainment work from all disciplines in the program office.
- Contract Award/Implementation: Effort to select and/or reach agreement with the supplier. It covers acquisition and sustainment work from all disciplines in the program office.
- Contract maintenance: Effort to maintain a conforming agreement with the supplier. Includes such items as CLIN changes, ACRN changes, special provisions (i.e. aware fee), executing pre-priced curves, specification changes, etc.
- Closeouts/UOs/NULOs: Effort in closing out contracts and managing UOs and NULOs. For basket program offices need to consider how this effort is accomplished. If it is done in a centralized manner at the program office level rather than at the project level then the projects need to rate it lower in order to not overweight it in total.

Management/Oversight (Monitoring of effort after content of work has been established and work initiated. Refers to government/contractor/supplier relationship whether called oversight/insight/involvement, etc.)

- Acquisition/sustainment management approach: Measures two variables. First, how well the acquisition/sustainment approach is understood or tested. Second, how extensive is the Government role in integration.
- Performance Risk: Risk of contractor/supplier (including SMAG/DMAG) not performing and such failures impact.
- Complexity: Technology stability, or other problems which may threaten ability to achieve program objectives.
- Funding: Effort in maintaining the funding program and accommodate funding swings.

- Support/Age of Fleet: Impact of aging system in enabling user to maintain satisfactory levels of readiness
- Numbers of Systems/Configurations: How many different configurations are managed, as it directly impacts program office operations

Other government interfaces This category includes other government agencies, and is not limited to OSD, but does not include those interfaces scored in user and other government categories.

- Management Interfaces: Management interfaces, other than reporting interface and user interfaces. Refers to other government agencies/organizations that require an interface with the program office in order to allow your contractor/supplier to do their job.
- Security: How security issues impact the operation of the program office.
- Test: Test program complexity and effort to support by the program office
- GFSS (GFE/GFI): Effort to provide government furnished supplies (including tooling) and services.
- Interoperability: How interoperability requirements effect program office workload to creating/maintaining interoperability

Each program grades its workload at one of the five levels for each of these five descriptors.

- Level 5
- Level 4
- Level 3
- Level 2
- Level 1

A Level 5 workload for a program would require extensive commitment of resources and would require the efforts of a large number of personnel. A Level 1 workload would be a minimal level of effort for that category and very limited personnel resources would be committed. Level 4, Level 3, and Level 2 would fall in order between Level 5 and Level 1 as described by the descriptors. Level 2 and Level 4 are intended to occupy the areas between Levels 1 and 3, and Levels 3 and 5 respectively. As such, Level 2 and Level 4 do not have their own separate wording.

Each program office will describe itself using these expanded drivers. Recognize that an individual system may not fit a category exactly, rather choose the category that provides the best fit. Start by reading the level 3 words to see if they describe your program workload. If the program is not covered, read level 5 words if you feel your program requires more workload than the level 3 words or read level 1 words if you feel your program requires less workload than the level 3 words. Look for the center of gravity of where your program is best defined by the words. Every condition does not have to apply in a level. If your program is partly defined in a level and partly defined in another then possibly you are in between the scores (either level 2 or 4). In every case, use only whole rating numbers. Relate each sub-descriptor to the workload it drives in the

program office. For each program office, a score will be given for each the subdescriptors in the five descriptor groups. Another tool available are the examples supplied for each of the major descriptor groups. Look at these example scores and compare to your program as a sanity check. For example, if you scored you program as a “5” in required reporting, check the example programs that scored a five in that category to determine if your workload is on a par with those programs. The program examples were determined by the HQ AFMC PSRM team in coordination with the centers.

A rating of Level 5 will score 5, level 4 will score 4, etc. The subdescriptors will be averaged to arrive at a score for each descriptor group, and each program office will receive a score for each descriptor group. The scores will range from a total of 5 (all minimum scores) to 25(all maximum scores). That will be a total of 21 possible scores for a program.

Each score will correspond to a program office size, with a score of 5 being the smallest and a score of 25 being the largest. The table follows:

Workload Score	Nominal Number	Range
25	300	270-360
24	270	240-300
23	240	210-270
22	190	165-220
21	150	125-180
20	125	105-150
19	105	85-125
18	85	70-105
17	70	55-85
16	55	45-70
15	45	35-55
14	35	25-45
13	25	20-35
12	20	15-30
11	15	10-25
10	11	6-16
9	9	5-14
8	7	4-11
7	5	3-9
6	3	1-7
5	1.5	1-4

Each program must be scored for each year of the POM recognizing that program office workload will change over the life of the program and over the POM years. An approach would be to start with a one page Gantt type chart of top-level activity for the program. Look at each FY and make a determination of the anticipated workload as it would be described by the workload descriptors and score accordingly.

In order for the model to score correctly, the scorer must consider absolute vs. relative workload. For example, a couple of people expending a great deal of effort in congressional reporting would seem like a significant workload to those people. But in an absolute sense, it remains a modest effort. The model is constructed to score absolute workload. For a program to attain a high score, significant program office resources must be applied to the effort, not just the heroic efforts of a few.

The model is also intended to score effort of the program office, not the prime contractor. For example, the prime may face a significant integration challenge, and be applying resources accordingly. However, the acquisition strategy may dictate the prime is wholly responsible for the integration effort, and a modest amount of program office resources are used. In that case, the score for the integration effort would be low.

Review process

One of the keys to the success of the model is a review process to ensure consistent and fair application of the model. The review process must ensure that programs are scored consistently, and that the system is not “gamed” and all scorers have the tools to allow them to score their programs correctly. A discussion of the review process follows.

The two main elements of the review process are a review by a HQ AFMC/contractor team, and a review by a cross-center team.

The HQ/AFMC team will review the output of the scoring of individual programs at the centers during the PSRM application during the POM cycle process. They will be available to help and assist in the effort, and will review the individual program scores for inconsistencies, inflated scoring, conservative scoring, and other problems. Recommendations will be made for changes to the scores for the program offices, and a summary of HQ AFMC teams findings will be made available to the Center commander before his or her review of the centers results.

After the center commanders have made their adjustments and inputs to the model, HQ AFMC will convene a review with cross-center representation at the 0-6/GM-15 levels. This team will review all center inputs for reasonableness and consistency. They will have a comprehensive database available that will provide them with the tools to compare programs between and within centers, and compare scores with other programs, and with historical data. The results of this analysis will be supplied to the centers to give the centers the option of making adjustments as necessary.