Chapter VIII

Better Army Housing Management Through Information Technology

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EXECUTIVE SUMMARY

The Department of the Army must provide its personnel with acceptable housing at minimum cost within the vicinity of military installations. To achieve these housing objectives, the Army often must enter into agreements for the long-term construction of onpost housing or the leasing of existing offpost housing. A decision technology system, called the Housing Analysis Decision Technology System (HADTS), has been developed to support the construction or leasing management process.

The HADTS architecture is based on a combination of database, econometric, heuristic programming, mapping, and decision support techniques. Its deployment has enabled the Department of the Army to realize significant economic, management, and political benefits. Future enhancements, motivated by the challenges from the current system, promise to increase the power of HADTS and to further improve the Army's ability to manage its housing assets.

BACKGROUND

The Department of the Army's Corps of Engineers is responsible for housing personnel at, or near, division installations. For the past 20 years, the Corps' Installation Management Office has administered the housing program. This office has a chief of housing, three functional managers, and a support staff of 10 technical specialists and five secretaries at its suburban Washington, DC (Fort Belvoir, Virginia) headquarters.

At headquarters, management plans housing policies, develops procedures to implement the plans, and then communicates the procedures to the housing managers at each Army installation. Such policies, procedures, and actions are audited by Department of Defense, Government Accounting Office, and other government agencies for compliance with existing laws, regulations, and guidelines. Since audit reports can significantly influence available funding, the Army typically is very responsive to auditor suggestions on housing management policy and practice.

Installation housing managers collect data pertinent to the planning process, communicate the data through various information systems to headquarters, implement headquarters-developed procedures, and administer onpost assets. Traditionally, these installation managers have been given much discretion in exercising their responsibilities. Moreover, headquarters has relied heavily on installation managers' input in formulating housing policies, procedures, and practices.

Figure 1 gives the organizational chart relevant to Army housing management. Currently, managers in this organization control $55 billion worth of onpost housing assets. The annual budget is $12 million for managing these assets and the associated housing programs.

SETTING THE STAGE

At any Army installation, the projected supply of available government housing may be insufficient to meet the personnel demand expected at the site. Policy requires unaccommodated personnel to seek acceptable private rentals in the installation's predefined Housing Market Area (HMA). If the expected stock of private rentals in the HMA will be insufficient to eliminate the onpost housing deficit, the Department of the Army will enter into agreements for the construction of onpost housing or the leasing of existing offpost housing. Government policy and regulations require the Army to economically justify any leasing request with a Segmented Housing Market Analysis (SHMA).

SHMA Process

During a SHMA review, installation housing managers first compute the onpost deficit and forecast the private rental stock available to meet military housing needs. Next, they estimate the military's market share of the private stock and compute the number of adequate rental dwelling units available in the local market to offset any onpost deficit. The result is the gross military deficit, or the number of personnel that do not have adequate housing onpost or in the private market (Forgionne, 1992).

The gross military deficit is reported by bedroom count (BC) for personnel in each of the 21 Army grades (ranks). There is a separate (grade by bedroom count or 21 x 6 = 126) matrix for unaccompanied (called UPH) and family (denoted AFH) personnel. Some cells in the housing deficit matrixes may show surpluses. In the interest of minimizing construction or leasing, Army policy is to offset deficits in other parts of the matrixes with these surpluses. Offsetting results in a final housing deficit, and this deficit becomes the basis for making construction or leasing requests.

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