EXECUTIVE SUMMARY

The armed services must provide its personnel with acceptable housing at minimum cost within the vicinity of military installations. To achieve these housing objectives, the Department of Defense (DOD) has entered into experimental joint ventures with private developers to construct attractive housing projects on military installation property, with some of the projects reserved for military personnel. To support the analysis of the joint ventures, the DOD needed a methodology that would help officials evaluate the feasibility and cost implications of the housing projects. A decision support system, called the Housing Revitalization Support Office System (HRSOS), has been developed to provide the necessary support.

The HRSOS architecture is based on a combination of database, econometric, simulation, and decision support techniques. Its deployment can help the Department of Defense to realize significant economic and management benefits. Future enhancements, motivated by the challenges from the current system, promise to increase the power of HRSOS and to further improve the DOD’s ability to manage its housing projects.

To obtain the benefits, the HRSO experience suggests that system design, development, and implementation should be a team effort through an adaptive design strategy. It also indicates that an integrated suite of software development and implementation tools, offering rapid prototyping, computer assisted software engineering, and object-oriented analysis, can promote this strategy. The strategy is likely to work well in a hybrid project-technology virtual organizational form that is established and administered by the practicing top manager.

BACKGROUND

The United States Department of Defense (DOD) consists of the armed forces (mainly the Air Force, Army, Marines, and Navy) and several support offices (most notably the Inspector General, which serves as the major fiscal oversight group for the DOD). Technically, the President of the United States is the head of the DOD. In effect, however, a political appointee, the Secretary of Defense, is the DOD’s chief operating officer. There are several deputies, and many department chiefs, who assist the Secretary in performing her/his responsibility.

The main roles of the DOD are to provide a national defense, enforce foreign policy, promote national interests, and support U. S. allies. A force in excess of 2 million civilian and military employees implements strategies, policies, and procedures that fulfill these roles. Such implemen-
tation requires the establishment and maintenance of hundreds of military installations throughout
the United States, Europe, Asia, and other places in the world. For security and other practical
reasons, personnel (and often their families) must be acceptably housed on, or near, the installations.
The Department of Defense (DOD) wants this acceptable housing to be within a one-hour commute
of the military installations.

Historically, the thousands of needed housing units have been acquired, maintained, and
managed through the Department of Defense with government funds. The process has become quite
expensive, and military personnel and officials have not always been satisfied with the resulting
accommodations. To improve the situation, the DOD recently has sought remedies from the U. S.
Congress. In response, Congress passed the Military Housing Act of 1995, providing the DOD with
a series of desired authorizations.

In search of improved efficiency and effectiveness, public officials have proposed and
experimented with the privatization of local, state, and federal government services (Chi, 1998;
Brunsdon and Crossmit, 1998; Kotlikoff, Smetters, and Walliser, 1998). Governments have con-
tracted with private organizations to collect garbage, house prisoners, build structures, and perform
other essential services (Boubakari and Cossert, 1998; Helsley and Strange, 1998; Haarmeyer and
Moody, 1998). Successful privatization efforts influenced the U. S. Congress to include such an

Partially because of government budget cutting, there has been significant movement within the
armed services to privatize military housing. Top-level policy makers realize that all the services can
benefit from privatization initiatives. Using the 1995 Act as authority, the DOD established an
agency, called the Housing Revitalization Support Office (HRSO), to develop innovative initiatives
that would help achieve the housing objective. This office has a Director, four deputy directors, and
a support staff of three technical specialists, one secretary, and eight armed service representatives
at its suburban Washington, D. C. headquarters. There are no true IS/IT personnel in the office.

For the past five years, HRSO’s management group has planned housing initiatives, developed
procedures to implement the plans, and then communicated the procedures to the housing managers
at each military installation. Such policies, procedures, and actions are audited by Department of
Defense, Government Accounting Office, Office of Management and Budget, and other government
agencies for compliance with existing laws, regulations, and guidelines. Since audit reports can
significantly influence available funding, HRSO typically is very responsive to auditor suggestions
on housing initiative policy and practice.

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

Figure 1 gives the organizational chart relevant to HRSO housing initiative management.
Currently, managers in this organization influence decisions about approximately $30 billion worth
of onpost housing assets. HRSO has an annual budget of about $7 million, and a long-term allocation
of approximately $10 billion to design, develop, and implement housing projects that would affect
these assets.

As Figure 1 indicates, the HRSO organization is largely hierarchical in nature. For the most part,
major decisions are made by the Director, with considerable input from the deputies, service
representatives, and installation managers. Such input is sought after and valued by the Director.
Supporting analyses are implemented and managed by the deputies and service representatives.
Some, but not all, of these deputies and representatives are IS/IT literate, but none are IS/IT experts.

**SETTING THE STAGE**

At any military installation, the projected supply of available government housing may be
insufficient, or of inadequate quality, to meet the personnel demand expected at the site. To reduce,
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