

dominate, as opposed to simple Government utilization for experimental purposes.

Now, in that broad context of cost and effectivity, the discussion today should be broken into two parts: first, the near-term problem—the decisions that must be made now and in the next 2 or 3 years to provide us with the next 10 years of capability. The second part is the long-term problem—those decisions for which the technological work must be done within the next 5 years, to allow us to make decisions on 5- to 15-year hardware programs after the 5 years.

Starting with the near-term problem, it seems clear that our efforts and decisions will fall in four general categories (fig. 43). First, there is the need to develop an Earth orbital operations capability for civilian and scientific use. Second, depending upon what man finds when he lands on the lunar surface, decisions will have to be made that will establish the follow-on lunar exploration tasks. The third category of decisionmaking for the near-term future is concerned with the need for an improved transportation capability. These improvements will be needed to accommodate the increased demands for Earth orbital capabilities, lunar exploration, and the unmanned planetary program. The fourth category, unmanned planetary missions, will provide the information required to make decisions concerning the future of manned planetary missions.

One of the first priority considerations to be faced in the near-term future is the function and mission capability of manned earth orbital space stations. In this area, many configurations and functions have been proposed. The S-IVB cluster (S-IVB workshop) shown in figure 44 is a typical example of an early configuration. It utilizes a spent S-IVB stage as the manned workshop area and incorporates adapter systems to accommodate docking other spacecraft. This configuration is also designed to incorporate a telescope. Regardless of the configuration, the basic intent of this first Earth orbital program is

NEAR TERM FUTURE (0-10 YEARS)

- EARTH ORBITAL - CIVILIAN AND SCIENTIFIC
- LUNAR EXPLORATION FOLLOW ON
- TRANSPORTATION IMPROVEMENTS
- UNMANNED PLANETARY

FIGURE 43