

other programs in the event authorization is obtained. In view of lower funding for these programs, Dr. Seamans has estimated that the percentage of work going out-of-house NASA-wide will drop from more than 90 percent to about 85 percent. What Dr. Seamans is saying here is that, as we go into AAP, we estimate that henceforth we will only spend 85 cents out of the dollar in industry and 15 cents in the Government. We are certainly not going back to the arsenal concept. We are just shifting the ratio a bit.

My next slide deals with the distribution of our people by product. It summarizes the numbers given to the Congress in our Fiscal Year 1968 Budget Book. You see a gradual decline in the total ceiling as shown on the previous chart. You see that the vast majority of the people; namely, the white area, is still in Saturn Apollo. There is a comparatively slight increase in what we call nonmainstream work, including the staffing of management organizations for this work. Finally, you see that at the administrative level we have dropped about a hundred people during the past 2 years.

My next chart deals with our civil service distribution by class. The chart depicts classification of Marshall Space Flight Center manpower since the start of the Center in 1960, and reflects a gradual reclassification of our work force from essentially an in-house operation in 1961 to our present highly professional staffing pattern. We also show our projection to the end of fiscal year 1968.

Note that our wage board complement—some people call them blue collar—has been continuously decreasing as our professional groups have increased. And, of course, to the extent that our program management job has expanded, both business, professional and the clerical categories have also increased. Steps taken in 1963 and 1964 in the manpower management area allowed us not only to staff up to oversee the work of contractors in our mainstream program, but it also laid the groundwork for the manpower capability we need for post-Apollo activities.

We have a policy of continuously assessing our manpower skill profiles and gradually adjusting our skill areas through new hires and updating our know-how to meet future needs. Knowledge is being updated through retraining and graduate education programs. A total of 350 Marshall people are today pursuing graduate degrees. Twenty are pursuing master's degrees and 10 will receive Ph. D. degrees at the end of this school year. About 1,500 people attended seminars and noncredit courses in the past year to further update their knowledge.

This chart reflects that since the Marshall Center was formed in 1960 we have used support contractors in the Huntsville area. There are, in essence, two reasons for this. Support contractors provide you with a certain flexibility in manpower management to take care of the unavoidable peaks and valleys as you go into a commitment such as Apollo and the landing of a man on the moon against a hard schedule. Secondly, certain skills were simply not available in house. Our support contractor force increased between 1961 and 1964 as the complement of the Marshall Space Flight Center itself increased. In 1964, a peak year, we had a total of 39 contractors holding 77 support contracts in the Huntsville area. In 1964, we changed our policy and