

Mr. DADDARIO. You are not saying that the marketplace is going to determine those things necessary to solve our problems?

Dr. MACARTHUR. I would say a great deal of them.

Mr. DADDARIO. Yes, I understand that, but the fact remains that we still have environmental pollution problems and in many instances the technology is available if properly applied to solve these problems. Therefore, the market cannot be relied upon in this particular instance. I do believe there is tremendous commercial advantage which has not evolved as yet, but the problem can run away from us unless we develop techniques to take care of it.

Dr. MACARTHUR. One of the problems is that each agency defines its problem very specifically—what they are looking for. I happen to have come from the defense industry before I came to DOD 2 years ago and what I could see with some of the non-DOD agencies, was that many times they didn't define their problems precisely enough. When the private sector comes in, and they don't have a well-defined problem staring them in the face, then they are not going to invest. It becomes necessary to come up with the answers to the problem. But understand once you have a well-defined problem, you will find that the marketplace will take care of it if the resources are available to put in the R. & D. necessary to solve it. It is a two-way street, to define the problem clearly and to let the private sector know what the problem is and then industry will attack it.

Mr. DADDARIO. You can more clearly define the problem, and my question gets back to that particular point. Where do you allow this to grow rather than depress it?

Dr. MACARTHUR. I was coming to that point a little later on in that I believe in the long run every agency has to have an in-house R. & D. capability. You just have to have it, if you are going to be most effective, you have to do some of the R. & D. yourself. You cannot solely rely on the private sector or other Government agencies.

Mr. DADDARIO. Mr. Glass, do you want to say something?

Mr. GLASS. I was agreeing with Dr. MacArthur. You need both. You need a very, very strong in-house group in order to help define your problems. I think that is part of the strength we have in the Department of Defense, the ability to define it both in technical and other terms. Once you do that and work with the industry, acting as sort of the leaders and the coaches of the private sector, you can solve these problems very rapidly together. I think you were right in pointing out the importance of a strong in-house capability in order to capitalize on the private sector.

Mr. DADDARIO. With the flexibility and the authority to do these things?

Mr. GLASS. That is right.

Mr. DADDARIO. Do you define within that authority the necessity for discretionary funds and the requirement to compete for funds and this type of thing?

Mr. GLASS. That is right. All of these factors are a part of it.

Dr. MACARTHUR. When you define technological requirements, it is not just sufficient to say we want something. In air pollution, for example, you want to define what compound you want to monitor, in what concentrations and what response time and, what kind of