

Verbatim report

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Defence Sector Reforms and Indigenous Production

I would like to share some very broad ideas, I have thought of, which could perhaps make a difference to the situation. But let us first focus on what we really wish to address. If we are thinking in terms of innovation, obviously we are thinking in terms of developing new capabilities, new products or new technologies. It is not simply a matter of producing something, which has been produced elsewhere years and years ago. So when we are talking about innovation, we are literally taking of something, which is certainly a level higher than what we have been talking about mostly during the forenoon today i.e. greater participation of Indian defence industry, greater self-reliance, greater indigenization. I do agree that none of this is possible unless we have the initial strength to develop what has been developed elsewhere, not suggesting that we replicate everything that has been done elsewhere but at least we reach that capability in the sectors where it is essential for us to do so. I am trying to make suggestions, which I feel are practical. I am not sure whether they are naturally necessarily implementable but I think change will have to come. Otherwise we'll keep discussing these issues and perhaps not reach anywhere.

First of all there is a need for a vision for what self-reliance or innovation should be. Ever since India became independent, I don't think there has been any policy statement on defence, which hasn't emphasized on self-reliance or indigenization. India has never really advocated reliance on foreign sources. We have always had this consciousness about self-sufficiency and self-reliance. Despite this emphasis, unfortunately we seem to have moved nowhere partly because we are not clear about what this self-reliance or indigenous capability development or innovation capability might mean.

Therefore, I think there is a need to clarify in our minds what should be our goals in self-reliance.

Should it be in terms of value of foreign components? For instance, we often talk about Indian defence industry being dependent almost 70% on foreign source.

Is it in terms of new systems that we are acquiring?

Is it in terms of components for existing system? Is it a mix of both?

Or is it a dependence on certain critical capabilities?

There may be many things, which may simply be easily available off the shelf. These may be commercial products or they may be very low technological products. Do we

need to develop technology for those low technology products for which there are diverse sources available?

So, I think there is a need to have a clearer definition of what the self-reliance mean in terms of specific goals for the next ten years because that will help us focus on what we really need to achieve.

And I think one of the things it must really address will come out of the kind of capabilities that are required in the defence sector.

Obviously, these are not new suggestions but we need to have clarity on what is our perspective for the future in order to address the kind of challenges that we are likely to face?

For instance, the Chinese have decided that they ought to focus on asymmetric warfare, information warfare, space based capabilities, precision guided munitions, missiles and on maritime capabilities. We will also have to decide on what we need to do in order to meet the challenges, which are likely to emerge in next fifteen years or so.

United Kingdom and Australia are excellent examples of sharing that information with the industry regarding what capabilities need to get developed.

When we are talking in terms of the kind of frustrations some of the industries have gone through, really the frustration is with the orders that have not come through.

But here we are talking in terms of developing capabilities which might mature in next ten or fifteen years or including at least some of those. Otherwise, we will always be awaiting some foreign support in order to have those capabilities.

There are certain areas like nuclear weapons, space based weapons, information technology or electronic warfare where we will have to always dependent on our own sources. Therefore, I think there is a need to develop that technology perspective and clearly indicate to the industry, defence laboratories, universities and everyone concerned regarding the capabilities, which shall focus on.

Some of it can be declassified and generally disseminated. Some other things may not be available to public- at-large but they can be shared in appropriate forum. I believe that currently the industry is not having this information.

The DRDO laboratories might have it but manufacturers' R&D facilities, if there are any, don't have. The universities don't have it either. So, a long-term

integrated capability development plan that takes into consideration possible alternative capabilities is necessary.

The second thing, which is very controversial, is the stage of QR formulations.

What kind of specifications or technical parameters a certain platform, capability or weapon system it should have. **I think armed forces should focus more on indicating the kind of capabilities they require.** It should be left to the scientists and industry to suggest how those capabilities can be provided. Of course, all this has to be done in consultation with people who are involved with operations and those on the frontlines. **That consultation has to take place.**

But how have UK and Australia address these problems: they have a capability development executive which has a lot of professionals, most of which are from the armed forces. But they are not part of the users. Users are the customers, they are treated as customers and the capability development executive is the supplier. It is his obligation to supply precisely what the user wants. But that doesn't mean that user themselves will design the specifications. **Scientists, engineers and technical experts in consultation with the industry specialists and the users will develop the specifications.**

That is the model they have evolved in order to give impetus to their industry because then the industry gets a chance. If we are only trying to ask for the best, and that is understood.

Of course there is a huge confusion here, which I would like to point out: if you look at our defence production policy- I do not know what the current defence production policy says anything that has not been said before. **I think it is just a statement of intentions. And there is a contradiction in the defence production policy because it says, 'we must emphasise self reliance, we must develop indigenous sources but the requirement of the armed forces having an edge over potential adversaries, shall be given highest priority'.**

It means that if the armed forces suggest that a particular kind of indigenous capability will not meet our requirements, then you will obviously go in for imports. So how does any decision maker take a decision? **We will have to agree to this proposition that there are trade-offs necessary if you want to develop indigenous capability. You cannot simply have the latest state-of-art aircraft; probably you don't even need it. You need to have an aircraft or a platform, which will give you the capability to defeat your enemy or impose your will on the enemy.** Unless that happens, it will not be possible for us to give a boost to defence industry within the country. **In the**

British, Australian and the American system they have integrated project development teams.

That means if you have a big capability required then you have a project management team- a multi-disciplinary team, which will comprise of a specialist from the armed forces, who understands that particular kind of designing, a financial expert, scientists, and industry representatives.

This team is also looking at the dynamic development of the QRs. The system that we follow here is that we freeze the QR and that cannot be changed. But if you can introduce changes up to a certain extent, it would help. Of course freezing has to happen before the final stage.

These project management teams stay in position for eight to ten years, even twelve years to complete the project. The programme director should have the responsibility of delivering it; otherwise you can continue to shift responsibility.

For example you have a DG acquisition, where you have to develop a particular aircraft and you are pretty sure that somebody else will sign the contract. So, you don't have that kind of accountability that you will have if you have long enough tenures to deliver on that project. That will also ensure greater accountability in that team.

The next point is the need to share information with all the establishments, universities and laboratories. It's very important that the R&D institutions or the research institutions are properly integrated into the system of sharing the information. Here again we can follow from the Chinese model where they have selected a few good universities and institutions as centres of excellence. They form part of the defence R&D ecosystem. Right now you have the DRDO interacting with some universities but that is not part of the system. I think some centres of excellence need to be developed particularly to cater to the requirements of the defence technologies in course of time.

The next suggestion I wish to make is something most of us feel is not practical. But I think we should continue to make this suggestion till it is accepted because I don't see any other way of giving impetus to any R&D or innovation or high-quality production unless we **corporatize our ordinance factories. There are some ordinance factories engaged in low-tech items. They can be perhaps sold off to the private sector. The others can be part of a holding company with subsidiaries, which can promote certain types of equipment and produce them. Once they feel the pressure of the market they will need to have some quality of a private enterprise.** At least, it is essential for us to corporatize it so that there are profit centres, there are balance sheets struck and they have certain incentive for producing something for which they can find a market. Also, they will be involved in exports so

that their enterprising skills are given a chance. Therefore, it is absolutely essential that they be corporatized.

Similarly, our public sector units also don't invest sufficiently in R&D partly because they are overloaded with orders. So, I think it is essential that they are developed in a manner where they can follow the model of a much more dynamic business organization subject to much greater market pressures.

A reference has been made to private sector not having a level playing field, and I think this is an extremely important thing because this dynamism or enterprise will really come from the private sector. There can be various models: one model is to have some senior officer in the department of defence production to only look after only private sector or re-designate the defence production department. Perhaps the best option is to relocate it to avoid any conflict of interests. Here some structural changes are absolutely essential.

The overall R&D allocation for defence continues to be low. It should take the private sector into consideration. There is some allocation for DRDO but that is not sufficient. We have to make DRDO much more lean and effective organization, solution for which is very well known. It should downsize and focus on critical technologies, and there must be much greater attention given to attracting highest quality of talent pool. Otherwise, I don't think DRDO will acquire the dynamism which is required. I had earlier suggested that we should liberalize the foreign direct investment but that is contested. Why it is being suggested is because today the policy is to import. In that case you are dealing with the foreign investor and you don't even have the advantage of having any kind of manufacturing facilities within the country and any spillover effect of that technology. So, it is a better option to have the foreign direct investment and have the manufacturing facilities here, if import is the other option. If you can really make it here in reasonable time then there is no question that we should really resort to the offset system and also import the technology. Our current experience with the offsets so far has been disappointing. Therefore, whatever model we adopt we have to ensure that if there is technology which is available elsewhere, which we can easily import and internalize, to produce a weapon system or capability we should adopt that route.