

Interview Article with Shri. P.G. Yogindra
(Executive Director(retd), Hindustan Aeronautics Limited)



On 25th November 2022 Shri. P.G. Yogindra, Executive Director(retd), Hindustan Aeronautics Limited, delivered the Inaugural Session on Economic Growth and Sustainable Development: Emerging Trends on the 7th International Economics Conference 2022-23, the Dimensions had the honor to interview him to further capture insights from his experience.

The interaction was as follows:

Team Dimension: “In the American context aircraft like SR-71 which served the strategic interest of the country were shelved following the introduction of satellite technologies or for better equipment following a very short period of service, both projects were exceptionally expensive. In India how is the industry set up to not have such rapid obsolescence?”

Mr. Yogindra: “In India, HAL manufactures aircraft under licensed contracts. Once a contract is signed even the ministry understands that it takes time to deliver and HAL cannot accommodate modification in the middle unless it is of the highest significance; at the same time the plane is the outcome of the efforts of HAL and it has control and autonomy over the design and production this, in turn, gives HAL the freedom to make changes in the plane design as per the requirement without anybody’s intervention. Thus, extending the life of the plane design itself.”

Team Dimension: “You stressed Make in India in the aeronautical segment. Several components are manufactured domestically and there are a few crucial components that have to be imported from non-Indian manufacturers. How far are they from being 100% ingenious manufacturers of aircraft?”

Mr. Yogindra: “India has improved in these terms. In the past 5-10 years we have noticed tremendous improvement in this direction. Yes, we are not fully self-sustained, if we speak LCA Tejas there have been suppliers who try to twist our arms by renegotiating the price and asking for more money for integration. All that has been addressed through parallel development so that the dependency that we had initially is overcome with indigenous products. Today the Mark 2 of Tejas is a big move in the same direction.”

Team Dimension: “Does HAL have plans or initiatives to act as incubators for emerging aeronautical companies in the country?”

Mr. Yogindra: “HAL currently does not have its initiative as we have to keep ourselves focused. But many R&D organizations are state-run such as National Aerospace Laboratories (NAL), and IISc act as incubators because the technology at its early stages needs a lot of financial and technical inputs which is hard for HAL to manage. Thus, these labs act as an incubator for these startups who can depend on them for financial needs and technology transfer in the development of the technology and the company. Indian government liberalized the defense sector so that more private players can invest in the development of the technology. This has opened a lot of opportunities for new entrepreneurship with great earning potential. It is also important to understand that the world is more dynamic now, the needs of the customer are much higher and they don't want to wait for decades for the aircraft. Thus, in modern times concurrent development is seen, which means the development and the production happens parallelly thus reducing the time. If not, the customer would buy go elsewhere to buy the aircraft.”

Team Dimension: “As computers are the norm for any segment, how dependent are you on IT for your product development and management?”

Mr. Yogindra: “We adopted the ERP system a long time ago, we use IFS's ERP. Parallelly we are upgrading the ERP to suit the newer manufacturing process. As the aircraft manufacturing industry is quite dynamic and the production batch size is usually small and the gestation period is an average of 36 months and thus it takes a long time to incorporate changes in the system as we have to wait for the current batch's manufacturing to be concluded. The team works continuously to customize the ERP products to suit the needs of HAL which is usually unique when compared to other segments such as automobile manufacturing. Everything needs to be planned from procurement, inventory management, design, and improvement to the last second as the input cost is very expensive making it all crucial.”

Team Dimension: “The aerospace industry is usually highly capital intensive thus making the entry for many budding entrepreneurs difficult, are there any segment in the aircraft industry that you think could be a great starting point?”

Mr. Yogindra: “As long the technology is unique to the company, capital generation will not be a problem. To answer your question, when I used to head production, we found that having an in-house CNC department was financially and time-wise extremely resource intensive. Thus, we used to outsource those work packages to a few companies which offered the best technology and price. Human resource planning is one such segment where we don't want to invest heavily as we have access to many skilled individuals who can manage this without HAL needing to reskill its employees for a few niche jobs. Thus, HAL is opening its gates to outsource many components. Just the crucial component and technology is what we focus on maintaining the secrecy.

With the same strategy, HAL has managed to develop the most advanced mission computers for LCA Tejas that even Americans are surprised with.”

Team Dimension: “As a person in a leadership position at HAL you might have been in situations where you had to negotiate with your suppliers when you are resource bound.”

Mr. Yogindra: “At first, I don’t see them as sub-contractors, I see them as potential partners. I always don’t try to make it a zero-sum game but a win-win situation where I explain to them and give them the context. I also do not find it necessary to hide the constraints I have in terms of money. Thus, he has a clear picture and expectations. Being transparent is very important. I usually open the book and give them all figures that they need and put forward the specifications. Transparency and integrity are important for me as a manager in any deal. If they don’t want to stick to that, I too won’t prefer such a deal. Because doing business with HAL does not just business but also comes with the added benefit of the tag which is a supplier for aircraft manufacturers which alone will fetch them more business from everywhere. At the same time, we try to be empathetic to understand what are the constraints the supplier is suffering from. We go the extra mile by suggesting any improvements in his process to bring down his cost of production thus benefiting both.”

Team Dimension: “Countries don’t usually let you borrow Intellectual Property Rights (IPR) when developing a component, can you share your experience when working in the development of LCA Tejas of the same?”

Mr. Yogindra: “Usually they impose a condition on how and to whom the technology can be shared and cannot be shared. At times they even delay the IPR transfer itself. The only option to overcome this is indigenous development and registering the IPR. The IPR concept was not that prevalent in the manufacturing segment long ago when we in producing. We have developed many revolutionary manufacturing processes but as the knowledge around IPR was very poor in the industry we never went for IPR registration. It is available even today. Even when I was responsible for the development of the Boeing Gunbay door, it never came across to register these improved manufacturing processes which still makes me wonder why a lapse from our side was there to educate the industry about the IPR registration process. For example, the process of machining a two-ton billet into a 40kg finished component was never heard of and we managed to do that process still no IPR was registered but later another company registered it.”

Team Dimension: “What would be your suggestion to a future manager?”

Mr. Yogindra: “It might sound like a cliché but one thing that is very much required is to be firm with your idea, having that need to succeed is very important. As every field is connected and data for any field is available it is easier to explore and identify your passion. For all that to work having a vision beforehand is pivotal, they must know what they want to be a doctor, teacher, scientist, or a soldier. Only this is key.”