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Why We Must Design And Develop In India, Not Just 'Make': A Defence Perspective

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A [teardown report on the Apple iPhone 6](#) claimed that the bill of material for the smartphone was \$200 and the gross margin was around \$450. And the major part of this gross margin is captured by Apple. This is what happens when you design and develop -- you capture the major part of the value add. In manufacturing, one barely makes any money and capturing may be at most 2-3% per piece.

So, it was surprising that the [game-changing announcement from Defence Minister Manohar Parrikar](#) that indigenously designed and developed products are being given top priority and "will form a vital part of DPP (defence procurement procedure) 2015" went almost unnoticed. This announcement indicates that significant money will now be poured into indigenous R&D and focus will shift to designing and developing defence technologies rather than putting significant efforts in having "strategic" tie-ups with foreign vendors and setting up and managing dumb built-to-print facilities in India.

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Unless we focus on the design and development phase, we will not be able to shed our dependence on defence imports.

Self-reliance in defence is a strategic necessity, and countries like the US give outright preference to domestic companies while making procurements for their armed forces. And that is one of the major reasons that these countries have such vast and deep capabilities.

This policy announcement will ensure that Indian companies, in consultation with the armed forces, will proactively identify products that have market potential in defence -- both Indian and overseas -- and start designing and developing equipment to address defence needs. Such focused development efforts, benchmarking the existing market leading products as the base, will ensure that Indian firms make products that not only meet Indian needs but also are export-worthy. Such encouragement will create global champions. Taking a cue from the US, the Indian government can also insist on such products being procured as part of offsets and should also be promoted in government to government (G2G) deals.

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The Make in India (#MakeinIndia) campaign that lays so much stress on manufacturing needs to be expanded to include the design and development phases of product manufacturing too. The major objective of the Make in India campaign has been to generate jobs. But the reality is that manufacturing is moving more and more towards automation, and low-level jobs are being replaced with robots. Further, robots can work three shifts a day, don't need breaks, "love" to do repetitive work, and they never go on strike. The process of automating

and other breakthroughs will be relentless and, by one estimate, will endanger 47% of the jobs in the US, where the number of manufacturing jobs are already few and far between. For India, it is going to be much larger. The new factories being set up are expected to be mostly automated, as the prices of robots continue to plummet rapidly.

In addition, for defence, designing and developing are strategic imperatives. Benefits include that the IPR remains within India, the effects of sanctions during war are neutralised, more jobs are generated (especially for R&D talent), the defence ecosystem is rejuvenated, global leadership in certain defence segments leads to export growth, and, finally, the growth in pride and self-esteem in using indigenous defence products.

Therefore, unless we focus on the design and development phase, we will not be able to shed our dependence on defence imports. More generally, unless we focus on design and development and capture significant value, we will not be able to generate the surplus needed to sustain the deluge of unemployment and to retrain redundant workers for jobs that may still be available after robots take over "easy" jobs.

There is a need to expand the #MakeInIndia campaign to #DesignDevelop&MakeInIndia.

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