



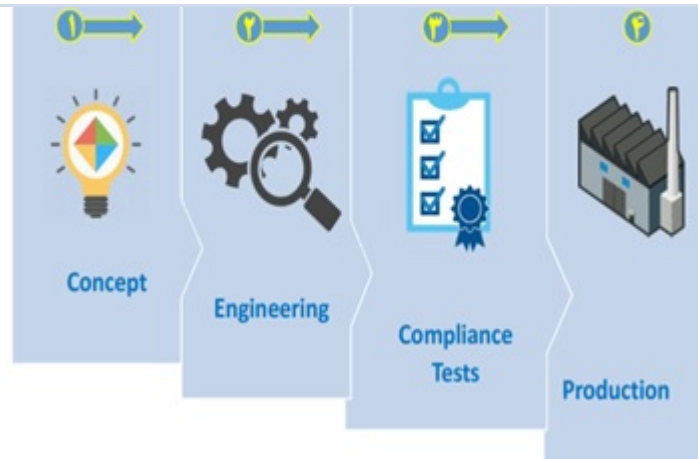
## Technological Innovations

## How to shorten our idea to product process

Nowadays, with the use of new technologies, it is easy to shorten the "idea to product" process without significantly reducing product quality. This is how this is done.



Many engineers, companies and organizations involved in designing and manufacturing industrial products and parts and familiar with the process of designing a product from idea creation to mass production, know that this process is very time consuming and It is not simply possible to reduce the time it takes, and it may be that eliminating one of the process steps can significantly reduce the quality of the product. but nowadays, with the use of new technologies, the time can be considerably reduced without compromising on the quality. To find out how this works, let's first review the idea process for the product:



The production of a product starts with the creation of the idea first, and after the idea has been developed, the conceptual model is designed and then ensured that the conceptual model is adapted to the intended purpose. Next, the product design and engineering steps are undertaken, which include computation, drawing, computer modeling, and technical analysis and tests. At the same time or subsequent as designing, qualitative criteria and related tests are performed and then product sample is produced. After performing tests and confirmation of conformity of sample product with qualitative criteria, mass production of product will be possible.

As shown in the above picture, a significant amount of time is belong to the process of idea to product to "design and engineering" and subsequent "tests", which, in the event of a reduction in the time of these activities, the total process time will be significantly reduced. In the conventional engineering method, designers move from calculating to drawing and from drawing to computer modeling, but in the new method you just have to have a similar sample of the piece or product you want to develop. Then, by using a 3D scanner, you can scan and convert it to a computer model in the shortest possible time. Modify the computer model and make custom changes to it. You can use this model to prepare workshop maps or use it for technical analysis like strength analysis, thermal analysis, and other engineering analysis. This type of model has high dimensional accuracy so it can also be used for dimensional control of the product. The final model can also be used for 3D printing of the desired product or piece, and can quickly produce one or more copies of the same material or original material. The following diagram shows the workflow in this process:



Studies show that this approach reduces the time taken of the "idea to product" process by substantially reducing the time it takes to produce a computer model and validating it, and will also shorten the return on investment.

"Arya Engineering and Consulting Company - META" is one of the companies that active in 3D engineering technologies that are also active in the "idea-to-product" process and are ready to provide consulting and training to industries and companies, start-ups and entrepreneurs to shorten their "idea-to-product" process. The company also has the possibilities to provide the equipment and services needed in this area.

To contact with us, please visit the company website [www.metacoltd.com](http://www.metacoltd.com) or call +98 21 88910625-6. You can also send your requests by email to [info@metacoltd.com](mailto:info@metacoltd.com).

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Number 2 - Yazdan Alley - Zartosht Street - Valiasr Street - Tehran - Iran



0098 21 88910625



✉ info@metaco.com



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