

Third Laureate Research & Development

26th Khwarizmi International Award (KIA)



- **Project Title:** Designing and deploying a framework for aerospace Product realization by consideration on systems engineering
- **Executive Organization:** Aerospace Industries Organization,
- **Collaborator Organizations:** Many Universities, Public & Private Companies

• Abstract:

With respect to complexity of aerospace product, the design process and technical management of these projects need to a systematic insight. In this project in relation to conducted assessment in design and development of aerospace Complex product, we introduce and deploy a Product realization framework on the aerospace product life cycle by consideration on systems engineering.

In aerospace design project, there are many designers with different skills in different discipline, and there are different technical requirement must be considered. Systems engineering Let to integration in design and development and assures requirement satisfaction in an effective way. For the first time in this extensive scale, we introduce a customized and adapted national systems engineering approach in aerospace product development.

Integration of technical activities, product design teams and design functions, design procedures, holistic controlling of requirements (e.g., operational functional, interface, reliability, maintenance), technical reviews and decision gates, technical data interchange software (Configuration management software) and validation and verification procedures (e.g., test and evaluation master plan, quality plan) are the main process of this approach.

Some of The most important features and results of deploying of this approach are: decrease the average time of aerospace projects, decrease change of design in accordance with customer requirements, decrease the time and cost of tests, increase the number of concurrent projects in one design office, increase accuracy of design and better control of design changes.

