



## Case Study

### Project Management: Aerospace Supply Chain



“Project management as a discipline underpins much economic activity. In industries as diverse as pharmaceuticals, software and aerospace, projects drive business”

**Dr Malcolm Wheatley**  
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## Project Management: Aerospace Supply Chain

The aerospace industry provides high performance systems and solutions on a global basis. Due to the nature of the products provided a high level of regulation, management and control is required in the design, development and manufacturing process.

### The Client

The client, a global international aerospace systems integrator, has clients which include major commercial aerospace operators and agencies, governments and military services. Products include aircraft, electronic systems, spacecraft and aerospace related services. All participants in their projects are highly trained and are required to work to the highest standards.

### The Challenge

The client was conducting the major upgrade of a high performance jet aircraft. The upgrade included airframe modifications and the development and integration of new avionics systems. Avionic LRUs (Line Replaceable Units) were being designed and manufactured by a number of suppliers. Each LRU was a high value deliverable and their performance to specification and timely delivery was critical to the project.

Our leading aerospace consultant was required to manage a team monitoring the design, development, testing, delivery and integration of eight avionic LRUs. The range of tasks to be conducted required a team of highly trained avionics engineers who were all experienced in project management.

### Our Approach

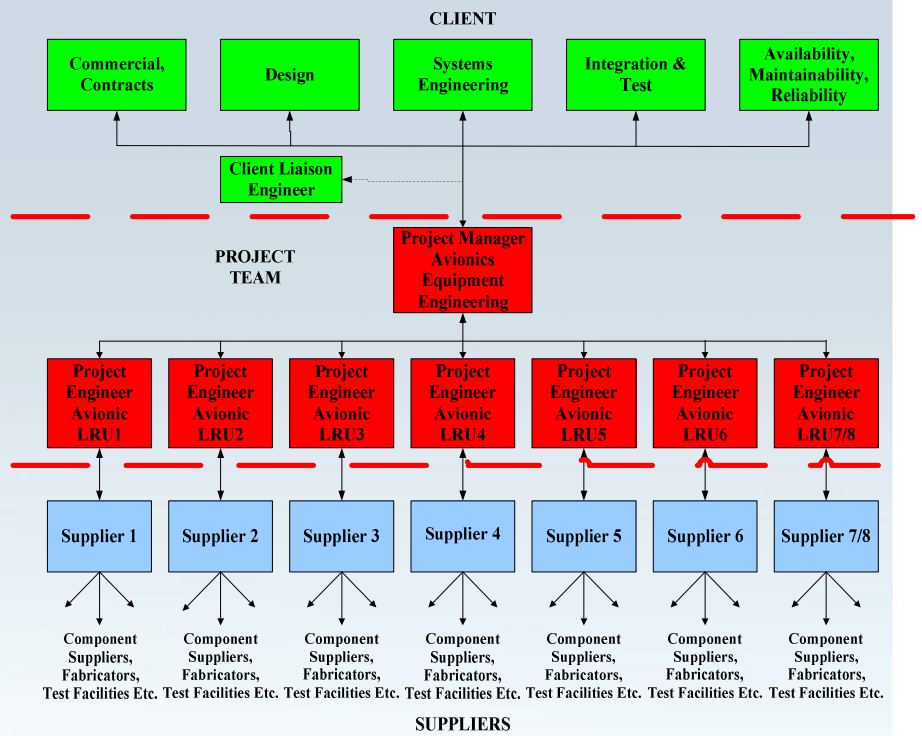
A team of seven Project Engineers was assembled led by the Project Manager; our leading aerospace consultant. Each member of the team had a minimum of five years aerospace project experience covering both commercial and military avionics design. Each member of the team was allocated a specific avionic LRU and, working with the client's commercial/contracts executive, had responsibility for managing the supplier in its design, development, test and delivery lifecycle. The team met and established relationships with the client's project and design teams. The project structure, which is shown below, was agreed as were the terms of reference and procedures for its conduct. The clients overall project programme plan was agreed and the client handed over each of the LRU specifications and programme plans to the project team.

Initial meetings were conducted with each supplier, attended by the Project Manager and LRU Project engineer accompanied by the client's commercial/contracts executive. A project review was conducted at which both performance against the programme plan and design and development status were assessed. The benchmark position was agreed and the plan going forward covering review, test, delivery dates and project milestones was also agreed.

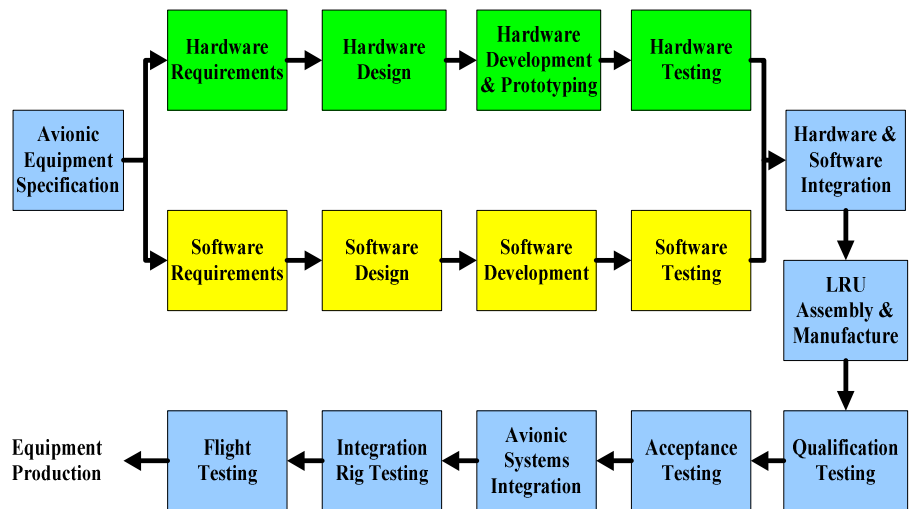


“Aerospace projects, by their very nature, are highly complex and demanding. Sound management is imperative to ensuring their successful outcome and that they deliver to expectations.”

**Keith Morris**  
*Aerospace Consultant*  
 The Consultancy  
 Company



Each LRU design and development programme was conducted in accordance with the lifecycle shown below. The project was complex having to respond to the needs and aspirations of a number of stakeholders which included the client, end user, suppliers and in addition had to take account of the fact that this project formed part of a multinational aerospace programme.



Throughout the project the team conducted the following activities:-

- a) Management and continuous review of each suppliers programme - in conjunction with the supplier's project manager.
- b) Programme reviews with the client, end user and multinational partners.

- c) Monitoring adherence to the programme and to the equipment specification.
- d) Co-ordination of the suppliers programme with the clients project programme.
- e) Advice and support to the clients project commercial/contracts executives.
- f) Management of the interface between the suppliers and clients technical and design teams.
- g) Review of all equipment technical documentation.
- h) Change control.
- i) Monitoring of all acceptance, qualification and integration testing.
- j) Advice and support to both suppliers and clients design and project teams when technical and programme difficulties occurred.

## Results

The result was the delivery of a high performance jet aircraft which met the requirements and expectations of the end user customer.

The following was achieved:-

- The delivery of avionic equipment that met in full the requirements of the specification.
- High speed reaction to all queries, information requests and problem reports ensuring minimal impact on the overall programme.
- Effective change management and control.
- Improved relationships between the client and the supplier.
- The Project Management task was conducted as a fixed price project and implemented within budget.
- The development of a project management model used on subsequent projects conducted on behalf of the client.

A sound relationship was established with the client which resulted in the performance of further supply chain projects to project manage the development and delivery of avionics equipment for high profile aerospace projects.

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