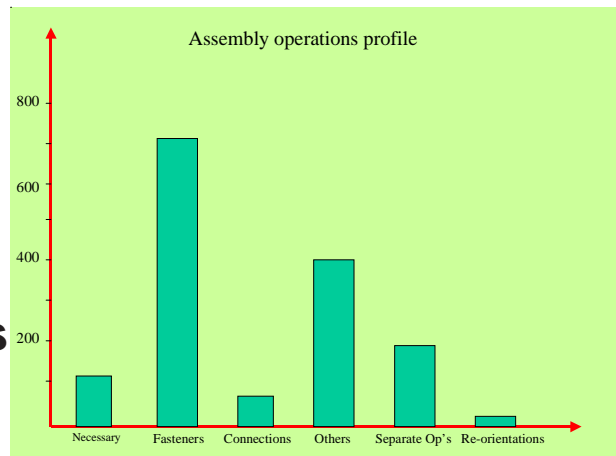




## Case Study

# Design for Manufacture

## Operations Strategy Analysis and Design for Manufacture



To enable funding to be allocated from a venture capital client, it was necessary to carry out an analysis of both the manufacturability and the proposed operations strategy for a mobile network basestation product.

### Design For Manufacture Background.

With our continuous policy of Design For Manufacture on all of our own developed products, Plextek were asked to apply our knowledge to this product, which was being prepared for manufacture. Mobile Network Basestation products involve a very broad base of processes, from bare board manufacture to mechanical chassis build etc, and Plextek were able to demonstrate experience in all of these areas.

Apart from an actual Design For Manufacture study of the PCB's and piece parts, the function of carrying out a Design For Manual Assembly (DFMA) analysis could also be provided. This would look into the efficiency of how the product went together to ensure maximum build efficiency (important when space and resources are limited).

One of the most important factors when designing medium to high volume products is to determine the test strategy very early in the program. The initial test concept must be established early, and then any of the design feature decisions must take account of this throughout the development process.

Such a test strategy needs to be very carefully chosen in partnership with the Manufacturing partner, and Plextek were able not only to help with this strategy, but to recommend those Contract Electronics and Manufacturing Services (EMS) who could best facilitate it. Test equipment (especially bespoke equipment) is a very expensive capital outlay, so efficiency of the test process itself must be carefully considered to maximise on the utilisation of this expenditure.

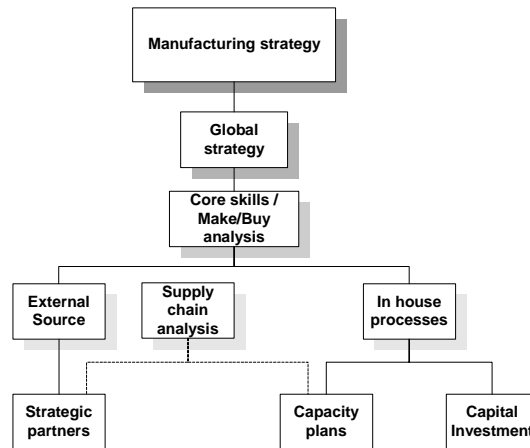
©Plextek Limited

Plextek Limited, London Road,  
Great Chesterford, Essex, CB10 1NY, UK  
Telephone: +44 (0)1799 533200  
Fax: +44 (0)1799 533201  
Website: <http://www.plextek.co.uk>  
Email: [mktg@plextek.co.uk](mailto:mktg@plextek.co.uk)

Communications Technology  
Consultants

## Manufacturing strategy.

With a design which the Venture Capitalists (VC) investee's now wanted to take into production, they had a strategy of what parts of the build they wanted to be involved with due to their own core competencies, and what parts they felt could be given to a CEM. For this mixed solution to be possible, a significant sum would need to be raised through the VC's for assembly facilities and test equipment, and Plextek were able to provide analysis of the best solution to achieve this.



## Strategy Decision Tree

Having experience in the related product areas in terms of both design and suitable EMS's, we were able to carry out a sanity check on the make/buy decisions that were being proposed.

Looking at the core competencies which the investee could provide, we were able to analyse in which areas it made sense for them to keep a close contact, and which areas were most suitable to be handled externally.

Having dealt with many of the CEM's through other projects, Plextek were in a good position to provide close guidance as to the most appropriate companies, taking into account anticipated volumes, technologies and test requirements.

For further information, please contact the Marketing Department:  
Telephone: +44 (0)1799 533200  
Email: [info@plextek.co.uk](mailto:info@plextek.co.uk)



**Plextek**