

1. Parts standardization is focused on using similar parts across different products to reduce part/supplier proliferation. This helps with repeatability, product costs, testability, and serviceability. Having the same parts from the same suppliers will offer volume discounts to save costs. It will make servicing easier because there is only one part to worry about, and testability/repeatability will be easier since you are comparing the same parts, apples to apples. Modular architecture focuses on having well-defined chunks and functions of product design. This helps with the repeatability, testability, and matching design with existing capabilities because the well-defined functions help engineers repeat and test the products the same every time, and the definitions will help create designs that match existing capabilities.
2. The advantages of concurrent engineering over sequential engineering are: shortens development times, forces teams to agree and stick to process characteristics early in development, and forces communication between all groups so that issues can be worked out together. Sequential development may be preferable if there is no general agreement on the characteristics of the new product at the beginning of the process. If this is the case, teams will need to create consensus as they go through each process step one-by-one.
3. It is important to meet the customers' needs in the dimensions of cost, design, capabilities, and serviceability because all of these impact the consumer directly. It is more important for the process to be repeatable, testable, and to have good volumes for the firm because it is in these dimensions that the company saves money and makes a profit. If the firm has to cut out a little part of the good to save a lot of money it may be necessary to do, even at the expense of the consumers' happiness. There are situations where this happens. For instance, consumers may want their good to perform a complex function, but if it makes the good harder to service, raises the price drastically, and/or changes the design significantly, then the firm may not respond to consumer pressure.
4. It is important to consider customers early in the development process because customers are ultimately going to decide if the good is a success and buy it. You want to meet as many of the customers' needs as possible with the good, so you know what they want when you make it. If you do

not find these needs early and incorporate them into the initial design, then you risk having to change design and functionality later at a huge cost.

5. The latest version of an existing product would be better suited for concurrent engineering. The new product has guidelines already established, which makes it easier for phases to overlap without leaving out any large details. The new technology would require each development team to inspect and design their portion of the product so that everything has been deliberately created and looked at before the product is launched.
6. Some benefits of supplier inclusion are gaining a supplier's insight into the development process, allowing comparisons of proposed production requirements with a supplier's existing capabilities, and allowing a supplier to begin preproduction work early. The risks are that if you give suppliers the blueprint of your product, you never know if that information could be stolen or given to a competitor. You also are risking losing competition for parts because if you include the supplier in the development then you are really committing to them - for the foreseeable future.