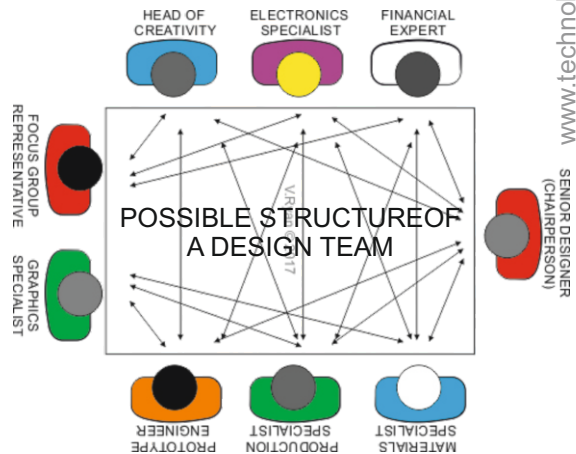


# REVISION CARDS - DESIGN STRATEGIES

## COLLABORATION - 1

A **DESIGN TEAM** - sometimes a team of people will work on the design and development of a product.

A design team working on a design problem, are more likely to develop a solution, in a shorter time, than an individual.



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FOR MORE INFORMATION AND EXERCISES ON DESIGN STRATEGIES GO TO:

- [http://www.technologystudent.com/prdtes\\_2/team1.html](http://www.technologystudent.com/prdtes_2/team1.html)
- <http://www.technologystudent.com/despro2/focgrp1.html>
- [http://www.technologystudent.com/despro\\_flash/nea1.html](http://www.technologystudent.com/despro_flash/nea1.html)

## COLLABORATION - 2

**USER CENTRED DESIGN - E.G.** A focus group, is a small group of people, who are asked a series of questions about a product or service. The group may consist of a cross section of people from society or be made up specifically of potential customers OR clients.

They provide feedback on designs, ideas, design concepts etc.....  
Suggest changes to a design or product, the way it looks, the materials it is manufactured from, the colour scheme etc.....

Express their likes and dislikes regarding the product or aspects.  
Suggest methods of advertising the product and which types of advertising are likely to be the most successful.

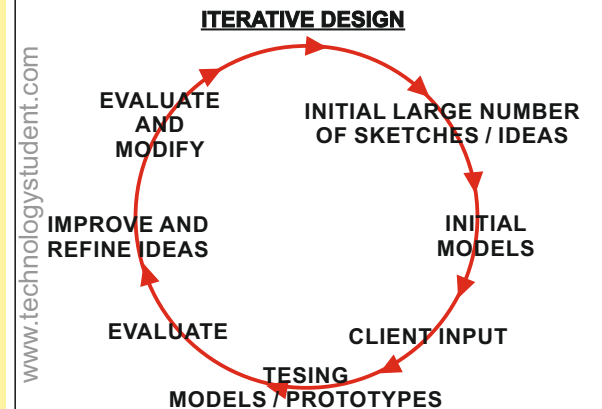
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## ITERATIVE DESIGN STRATEGY

It is a cyclic approach to the development of a product, whereby a design is improved by frequent testing, client feedback, focus groups, materials testing, prototype testing, design development and evaluation, until a final refined / developed design is reached.



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1. What is the design strategy called 'Teamwork'?

3 marks

2. What is iterative design? 3 marks

3. In one sentence, what is a Focus Group? 1 mark

# REVISION CARDS - DESIGN STRATEGIES

## LONE INNOVATOR / INVENTOR

Sometimes an individual will work by himself / herself, on the design of a product. **EXAMPLE:** Trevor Baylis (1937-2018) invented a prototype for a wind-up radio. In the late 1980s, he realised that people in Third World Countries, could not afford or did not have access to replacement batteries. He developed the worlds first wind-up radio - could be used in remote areas, and wound-up when required. An investor, made it possible to develop the radio and to enable production.



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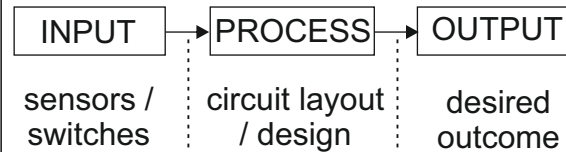
- [http://www.technologystudent.com/prddes\\_2/team1.html](http://www.technologystudent.com/prddes_2/team1.html)
- <http://www.technologystudent.com/despro2/focgrp1.html>
- [http://www.technologystudent.com/despro\\_fish/nea1.html](http://www.technologystudent.com/despro_fish/nea1.html)

## THE SYSTEMS APPROACH

This is a **LINEAR** approach to design. One stage follows another, As outlined below. The opposite to iterative design.

1. DESIGN PROBLEM
2. DESIGN BRIEF
3. IDEAS
4. DEVELOPMENT
5. WORKING DRAWING
6. MANUFACTURE
7. EVALUATE

The systems approach is often applied to the design of electronic and programmable circuits.



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## REVERSE ENGINEERING - THEFT?

Some companies operate illegally, taking the work of others and copying their ideas, breaching copyright / patent laws. This is illegal, but it still happens.

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**EXAMPLE:** A company develops an innovative electronic device, that is a commercial success. A competitor company, dismantles the device and learns its secrets (reverse engineering), avoiding years of development costs. They manufacture their version of the device, selling it at a lower cost. Please note - The USA has complained repeatedly, that some Chinese companies have copied and marketed products, developed by companies in the USA. Foreign companies have little chance of winning lawsuits in China.

1. Write a description of a Lone Inventor. (Give an example).

3 marks

2. What is the Systems Approach to design? (Include an example of this process)

3 marks

3. What is Reverse Engineering?

3 marks