

# RESEARCH INCLUDING PRIMARY AND SECONDARY DATA COLLECTION

This mobile revision pdf is based on detailed work found in the 'DESIGN PROCESS' section. Tap on the green link button below to go to the website.



Tap the blue button to view all work covered by this Revision PDF



# RESEARCH INCLUDING PRIMARY AND SECONDARY DATA COLLECTION

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## 1. WHAT IS PRIMARY and SECONDARY DATA?

## 2. EXAMPLES OF PRIMARY AND SECONDARY DATA

## 3. WHAT IS MARKET RESEARCH?

## 4. HOW MARKET RESEARCH CAN BE CARRIED OUT

### IMPORTANT

IT IS RECOMMENDED THAT YOU  
DOWNLOAD THE APPS RELATING TO  
“**DESIGNERS, COMPANIES, ICONIC  
DESIGNS AND FACTORS THAT  
INFLUENCE PRODUCT DESIGN**” FROM  
THE MOBILE APP SECTION OF  
[www.technologystudent.com](http://www.technologystudent.com)

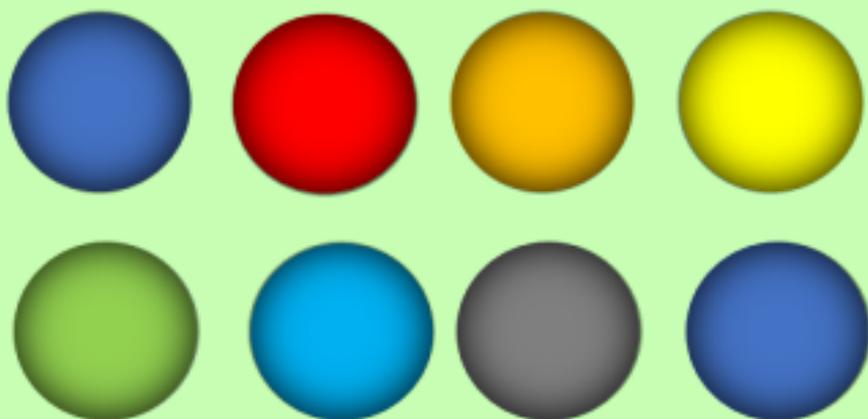
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# WHAT PRIMARY DATA?

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Primary data is data collected completely by yourself. It could include, interviews, questionnaires and surveys, your own materials tests, the conclusions of focus groups, analyzing existing products, ergonomics, testing models, writing emails/letters to manufacturers and much more. Essentially, it is data collection carried out by yourself, not relying on the work of others. It has close links with market research.

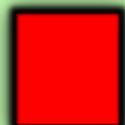
**Tap the link buttons** for information/exercises



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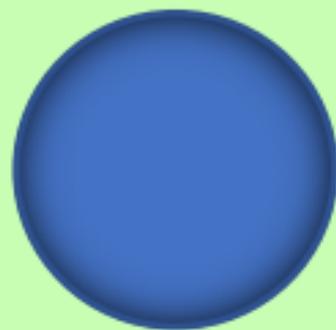


## WHAT SECONDARY DATA?

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Secondary data, is data that you use, that has been collected and even analysed by other designers. This can include using ergonomic data collected by others, research books, researching articles on the internet (such as www.technologystudent.com), watching useful and associated TV programmes, looking at the work of renowned designers.

**Tap the link button** for information and exercises on primary and secondary research



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# PRODUCING A CUSTOMER PROFILE

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A very important aspect of any Product Design folder is a sheet that clearly identifies the client. This is normally the person who has commissioned you with designing and making a product. It will probably be the person you are design for, such as a customer.

On the Client Profile sheet (**primary data**) you need to include some details about your customer. An example is seen below and includes suggested subtitles to a variety of short sections.

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for the  
information /  
data collected  
as a customer  
profile



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# CUSTOMER / CLIENT REQUIREMENTS

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**Primary** research includes asking your client about the problem you are trying to solve and the desired product outcome (what the client wants from your design). This leads to a carefully written design brief, that is agreed and understood by both the designer and the client.

It is essential that this primary research is carried out, in order to avoid any misunderstanding about the final outcome and what it will do / solve.

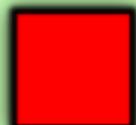
**Tap the link button** for information and an example of this type of primary research



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# THE DESIGN BRIEF

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The design brief is a concise 'paragraph' that outlines precisely, the desired practical outcome, of all the design work. It states simply, what the new product should do and relates to the design problem being solved. This is regarded as **primary** research, as it is written by the designer, usually after a number of meetings with the client

**Tap the image** for information and an example of a design brief



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# FOCUSSED ANALYTICAL RESEARCH OF EXISTING PRODUCTS

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This is **secondary** research / data, as it involves using the work of other designers. Existing or similar products, may have functions and features you find of interest or partly solve the design problem you are working on.

Carefully analysing your research findings, could help you design a successful, innovative product.

If you identify an interesting function or feature, the next stage is to determine why the function / feature has been included.

**Tap the image**  
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an exercise on  
existing  
products



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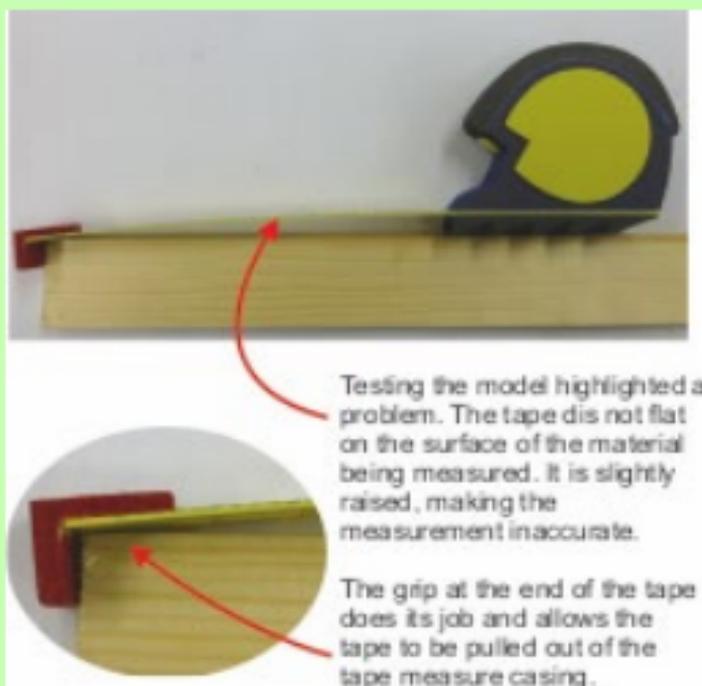


# TESTING EXISTING PRODUCTS / MODELS AND PROTOTYPES

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Testing a product, or one of your own prototypes is primary research. The image below shows an early model of a tape measure being tested. This **primary** research / data helps develop the design into a better product.

**Tap the image** for information / an exercise



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# THE WORK OF KNOWN DESIGNERS AND ART MOVEMENTS

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Studying the work of existing / known designers Art Movements is **secondary** research, as it involves looking at the work of others. This is often completed after discussion with a client. The client may identify a particular design style or designer that he / she likes. Secondary research into the style / designer, may enable you to identify functions, features and styles, to include in your design for the client.

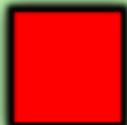
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an exercise



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# ANTHROPOMETRICS

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It involves collecting statistics or measurements relevant to the human body, called Anthropometric Data. The data is usually displayed as a table of results. Anthropometric data is used by designers and architects. If the data is generated by the designer by himself/herself, then it is **primary** data. However, if the designer using existing anthropometric data from a book, then it is **secondary** data

Example –  
opposite a table  
of data collected  
on 'hand' sizes

**Tap the image**  
for detailed  
information / an  
explanation

| PUPIL/PERSON    | A             | B             |
|-----------------|---------------|---------------|
| Child A         | 100mm         | 53mm          |
| Child B         | 103mm         | 45mm          |
| Child C         | 90mm          | 47mm          |
| Child D         | 95mm          | 44mm          |
| Child E         | 102mm         | 50mm          |
| Child F         | 87mm          | 41mm          |
| Child G         | 75mm          | 43mm          |
| Child H         | 102mm         | 51mm          |
| Child I         | 104mm         | 51mm          |
| Child J         | 74mm          | 36mm          |
| Child K         | 78mm          | 46mm          |
| Child L         | 81mm          | 39mm          |
| <b>TOTAL(S)</b> | <b>1091mm</b> | <b>546mm</b>  |
| <b>AVERAGE</b>  | <b>90.8mm</b> | <b>45.5mm</b> |

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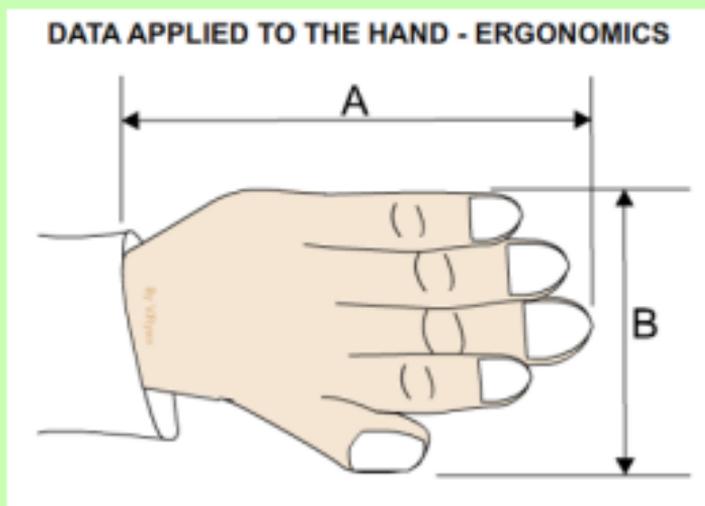


# ERGONOMICS

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Ergonomics is when anthropometric data is used to help design a product. For example, the anthropometric data regarding the size of the hands of a 1000 people is used to design a door handle that is comfortable to use. The data has been used to produce a good design. This is normally **primary** research applying the measurements to the design is completed by the designer.

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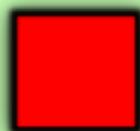
# ANTHROPOMETRICS AND ERGONOMICS

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# WHAT IS MARKET RESEARCH?

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This is where a company/design team takes an initial design concept for a product and tests it out on potential customers or the general public. This is done through questionnaires, interviews and a range of other activities.

## **Market research has several aims:**

The most important is to determine if the design concept has any chance of economic success.

Potential customers will soon express their opinion and say if they would be interested in buying the product.

**Tap the image** for detailed information / an exercise.



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# WHY SPEND TIME AND MONEY ON MARKET RESEARCH?

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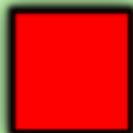
A product can cost millions of pounds to develop at the design stage. Setting up a production line can also cost millions. Therefore, it is essential that the company developing the product, is convinced that it has every chance of being an economic success before the enormous cost of designing and manufacturing takes place.

The Sinclair C5 electric Vehicle is an example of what can go wrong if market research is inadequate.

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information / an  
exercise



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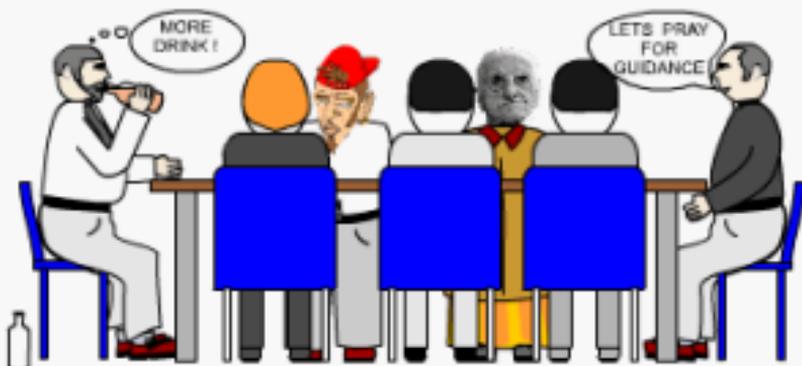


# A FOCUS GROUP

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A focus group of potential customers will discuss the 'pros' and 'cons' of the design concept. They also may suggest improvements to the product so that it is more likely to be successful.

**Tap the image** for information / an exercise



**A FOCUS GROUP  
DISCUSSING A PRODUCT**

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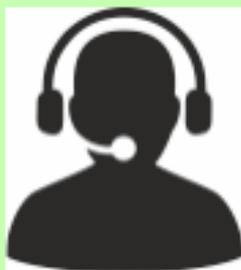
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# TELE-MARKETING

Tele-marketing is often used by media companies, especially 'sales departments' to generate appointments with potential customers. Company Directory Software is used to identify decision makers within companies, capturing their details. Often electronic versions of customer database lists are purchased, allowing sales to contact potential customers directly. The objective being, to secure appointments that lead to orders.

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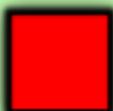


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# INTERVIEWING POTENTIAL CUSTOMERS

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Volunteers can be interviewed individually or in groups and asked about the design concept / product.

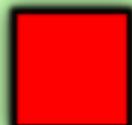
A model of the product or computer simulation can be put on display at a conference (eg. a motor show) and those passing the stand can be asked for their opinion and suggestions.

**Tap the image** for information / an exercise



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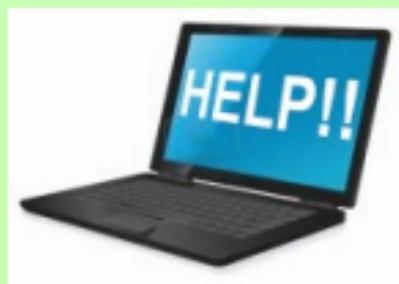


## ICT - A VITAL MARKETING TOOL

Using information Communication Technology (ICT), is crucial to most businesses, regardless of size. It is important to a company aiming to expand and to improve efficiency. The use of good ICT also improves customer services and customer demand.

From database development, website design to market research, translation software, direct mail marketing and training, the application of ICT is critical for a economic success.

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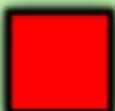


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# THE INTERNET – ADVERTISING AND MARKETING

The internet is one of the ways in which media companies / businesses advertise. The main form is advertisements or 'prompts' on media focussed websites. One example is the i-tunes website, through which millions of people purchase and download music. The site automatically recommends similar CDs / DVDs to the one being purchased by the customer. This is direct marketing, tailor-made for the individual customer. It ensures that the customer is directed to further potential purchases. Furthermore, previous customer purchases are recorded, allowing the software to build an accurate customer profile on each i-tune member.

**Tap the image** for more information

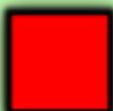


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# QUESTIONNAIRES

Questionnaires are used as a marketing and research tool. A well designed questionnaire will allow companies to compile up to date and accurate information. The questionnaire should be composed of appropriate questions, with proper wording and flow. DVD production companies use this approach, especially when gathering information on the internet.

Free software such as Google Docs allows online questionnaires to be compiled and then analysed automatically. This software is available for all to use.

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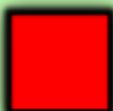


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# COMPANY WEBSITES

Companies usually have their own websites. For example, Sonymusic.co.uk promotes new releases. Often a media company will produce a website, for a specific artist or their most recent album. Free downloads of tracks encourage the purchase of further tracks and promote live events. Video trailers are produced to encourage attendance at cinemas or the purchase of films / music. Manufacturers also have websites, promoting their products.

**Tap the image** for more information

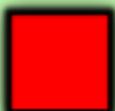


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## PROMOTIONAL PRESENTATIONS

Promotional Presentations through, special events, involvement of celebrities. Sometimes videos are release through YouTube, advertising / promoting a product.

In school, presentations are often based on the use of PowerPoint slide shows.

ICT is normally involved when a new product is being promoted.

**Tap the image** for more information and examples



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