



MANAGING NEW PRODUCT DEVELOPMENT

Creating the Product Design Brief

Session IX August 2022

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purpose ?



product design brief

It's a strategic business initiative that can differentiate companies in competitive markets,
a method/ process by which a company develops new products to meet the wants and needs of
its existing or new customers.....

.....brought to life by well considered and managed innovation strategy.



purpose



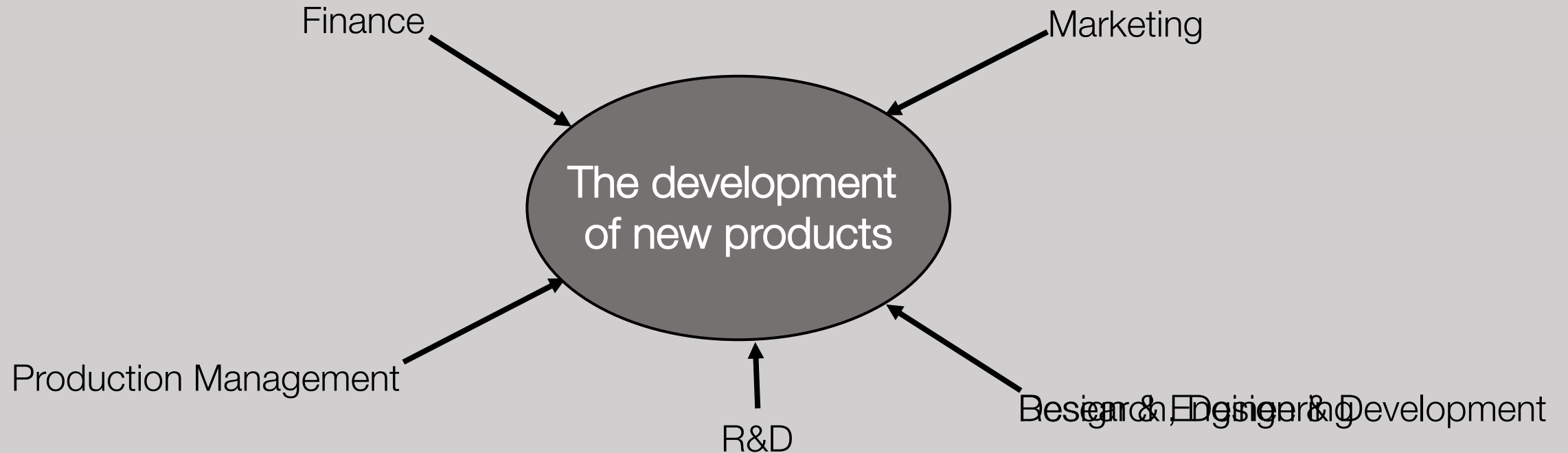
product design brief

Product design briefs are documents employed during NPD serving as a central meeting place for the various requirements of an NPD project, such as product development objectives, descriptions of the target market, current industry trends, competing firms and offerings, relevant technical or technological specifications, timelines, production objectives, budget and success metrics, along with product design and attribute details-e.g. shape, branding, dimensions, materials, personality, and so on..

(Phillips, 2004; Bruce and Daly, 2007).

Previously.... in Innovation
Management & NPD we
discussed

product design brief



The variety of views presented on the subject is not a weakness. Indeed, it should be viewed as a strength, for these different perspectives all bring something to the table.

product design....complex ?

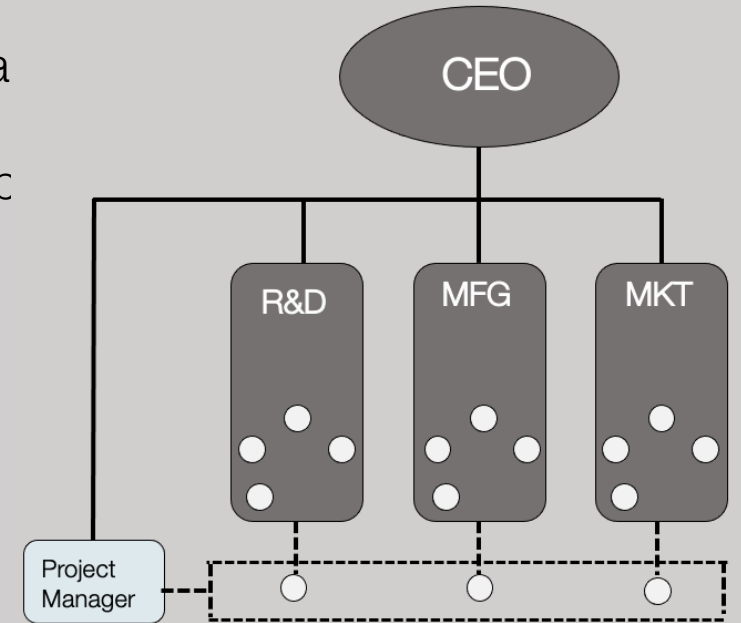
product design brief

The product design process can be a complex one, involving cross-functional teams from within your own organisation working together, or possibly with help from designers (and other contributors) from outside of the company.

Regardless of whether you are developing a product entirely in-house or using an external product designer.....

A clear **product design brief is essential** if you want to be rewarded with a smooth-running project and a worthwhile outcome.

Usually starting with the awareness of customer and their changing needs.....





customer need



product design brief

Successful new products should be based on what your research-based insights are telling you the customer could need and want in the future.

WHAT THEY THINK THEY WANT MIGHT NOT BE WHAT THEY NEED!

This can be found from a range of sources including focus group research, customer advisory panels, analysis of your competitor products, trend information etc.

The key here is to identify what insights you have gained that might help differentiate your new product from others on the market.



the market for the product

product design brief

Information in this section is critical to understanding the risk and financial return involved with new product development. It should include:-

- Potential market size and growth trends
- Anticipated market share
- Pricing range
- Competitive products or services
- Research of existing patents to identify any conflicts
- Other influencing factors on the market
- Research whether or not legal and or industrial standards or accreditation is required.....COMPLIANCE



product attributes
and specifications

product design brief

A brief should clearly explain:-

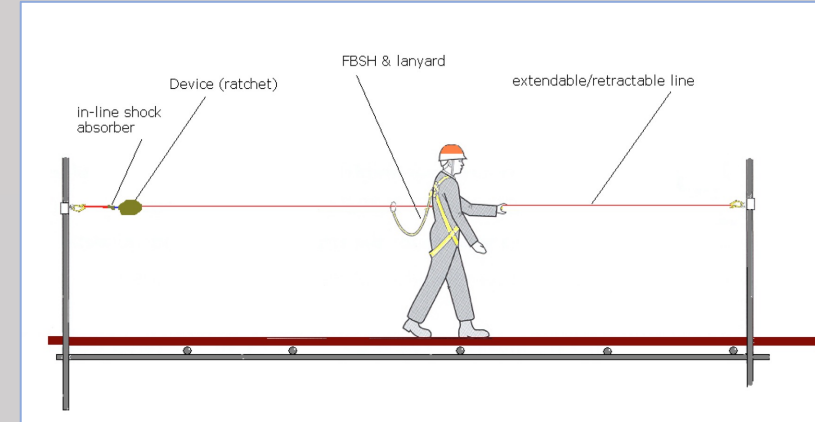
Purpose

- Where and what the product is used for?
- Fully understand the environment and context for use and how it may be used in connection with other products or processes.

a synopsis is usually a good idea.....

defining the NPD

product design brief



Defining the NPD – **getting the words right is really important**

“The product is a horizontal safety line device (with ‘inline’ shock absorber), which once attached to two fixed anchor points, is then tensioned by means of an integral ratchet.

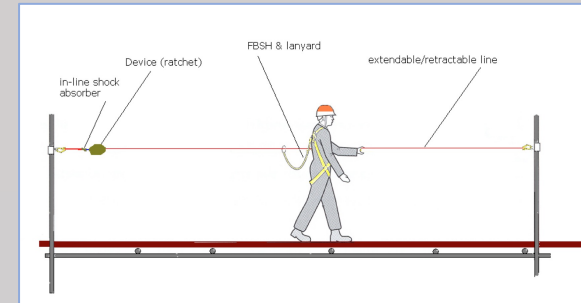
A worker with a Full Body Safety Harnesses is then able to attach himself to this line by means of the carabiner fixed at the end of the FBSH lanyard, this allow the worker to operate safely within his now extended (2 – 8 meters) work space.”

performance & features

product design brief

Performance

What does the product have to do? Explain what the primary operating characteristics are, i.e. this product must be designed to work in wet conditions, be assembled for use in less than 30 seconds or can integrate with other similar products or component parts.



Features

- What additional things must it have?
- Apart from doing its job, what else will make it more appealing, useful and user-friendly?
- Does it need a non-slip handle, a child-proof cap, a non-graffiti surface?
- Will recyclability of all the components be required?



product design brief..
product design specification
(PDS)
?



product design brief

From Product Design Brief to.....Product Design Specification (PDS)

The PDS evolves from the design brief.

- The design brief outlines the design goal and any major constraints and considerations that need to be addressed
- The PDS goes further to determine the precise limits for the full set of requirements in the product being designed.
- For the Product Design Brief - it's not all about engineering, or can it be manufactured.....

aesthetics, colour
shape form and
finish....

Steve Jobs Jony Ive

product design brief

Sir Jonathan Ive KBE Hon FREng RDI



aesthetics, colour
shape form and
finish....

product design brief



aesthetics, colour
shape form and
finish....

product design brief



aesthetics, colour
shape form and
finish....

product design brief



aesthetics, colour
shape form and
finish....

product design brief



aesthetics, colour
shape form and
finish....

product design brief



prototype ?

product design brief

prototype ?

is it required?

how much will it cost?



prototype ?

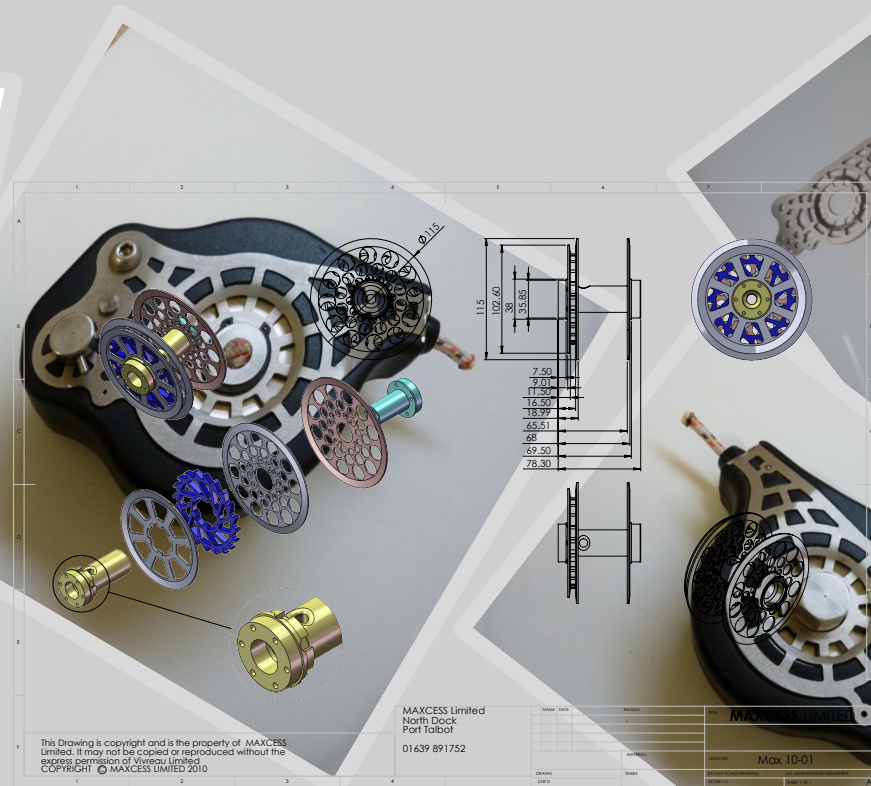
product design brief

aesthetics, colour shape form



prototype ?
form and
function, as well
as aesthetics

product design brief



elements of a product design brief

product design brief

aesthetics

installation

performance

safety

branding

intellectual property

politics

size

company constraints

legal

processes

shelf life and storage

competition

life in service

prototyping

shipping

customer

materials

product cost

social & cultural

circular economy

manufacturing facilities

product life span

standards & specifications

documentation

market constraints

quality

testing

environment

maintenance & repair

quantity

time scale

ergonomics

packaging

reliability

weight



elements of a
product design brief



product design brief

Performance...

In discussing the preparations of a product design brief, most technicians and scientists think primarily in terms of performance, since performance achievement forms a major part of their design activity.

so let's start there

The header features two large, reflective, metallic spheres on a dark grey background. The sphere on the left contains the text 'performance...' and the sphere on the right contains the text 'product design brief'.

performance...

product design brief

The performance demanded or likely to be demanded should be fully defined:-

- how fast

- how slow

- how often in use - continuous or staccato

- loadings likely

- electrical or pneumatic

- tolerance of speed rate of work etc.



performance...



product design brief

Is the performance demanded attainable in an economic manner? A common failing in specifying performance is to ask for the ultimate, rather than that which is obtainable.

The header features two large, glossy, grey spheres. The left sphere contains the text 'environment...' and the right sphere contains the text 'product design brief'.

environment...

product design brief

All aspects of the product's likely environment should be considered:

- Temperature range
- Pressure range (altitude)
- Humidity
- Shock loading (gravity forces)
- Dirty or dusty - how dirty? - how clean?



environment... cont'd

product design brief

- Corrosion from fluids - type of fluid or chemical
- Noise levels
- Insects
- Vibration
- Type of labour or persons who will use the equipment- likely degree of abuse?
- Any unforeseen hazards to customer, user or environment - for example, inclusion of CFC's?

All manufactured items experience a number of these environmental changes in any or all the areas before being called on to function for the user. These may occur at the following stages:

- During manufacture - exposure to cutting fluids, solvents, fluxes (flow soldering), acids (plating and cleaning), etc.
- During storage - in the plant
- During assembly - assembly forces, contamination from sweating hands?

All manufactured items experience a number of these environmental changes in any or all the areas before being called on to function for the user. These may occur at the following stages:

- During packaging
- During transportation
- During storage - at a wholesaler's warehouse
- During display
- During use



life in service (product)



product design brief

Should service life be short or long and against which criteria should this be applied? Against which part of the Brief is (or should) the product life be assessed? One year on full performance, 24 hours a day, seven days a week, or what?



maintenance & repair



product design brief

Reliability

What is the expectation for the product life?

Have sustainability issues been considered?

Ease of repair

Is it designed for self-repair or does it need to be taken to an expert? Is a spare part included with the initial product? What is the estimated repair time?



maintenance & repair



product design brief

Is regular maintenance available or desirable?

Will designing for maintenance-free operation prejudice the design to such an extent that the product will become too expensive to buy in the first place?

Does the company, or indeed the market into which the product will ultimately go, have a definite maintenance policy?

Are end-user companies able to maintain equipment once it is purchased?



target cost



product design brief

Target production **costs should be established from the outset** and checked against existing products. Invariably, all target costs are on the low side, and in many cases they are unattainable within the constraints of the Brief.

Care should be taken at this stage to ascertain whether the **target cost is compatible with competitors'** products and, most importantly, with the manufacturing facility available to make the product. Cost patterns should be established and studied in detail before setting the target cost.



target cost



product design brief

Consider....

You will need to consider **the selling price expectations of the retailer** and identify if there is enough margin between your cost price and selling price to make a good profit and cope with any fluctuations in material costs, exchange rates etc.

cost – what are your expectations

product design brief

- Development costs
- Prototyping and pilot/testing costs
- IP protection costs such as patents, design registrations, trademarks
- Capital costs such as tooling, additional plant and machinery
- Manufacturing costs
- Distribution costs such as warehousing, freight, import or export taxes





competition



product design brief

A thorough analysis of competition must be carried out, including a comprehensive literature search, patents and product literature search relating not only to the proposed product area, but also to adjacent product areas.

These must be analysed.

The nature and extent of existing and likely competition is probably the most important aspect of the Brief - at least from a comparative viewpoint.



packing



product design brief

Depending on the type of product being designed, some form of packaging may be necessary for transport, storage, etc.

The cost of packing will add to the product cost and volume. Should the packaging protect against the environmental effects of shipping such as salt water, corrosion, shock-loading, etc?



packing



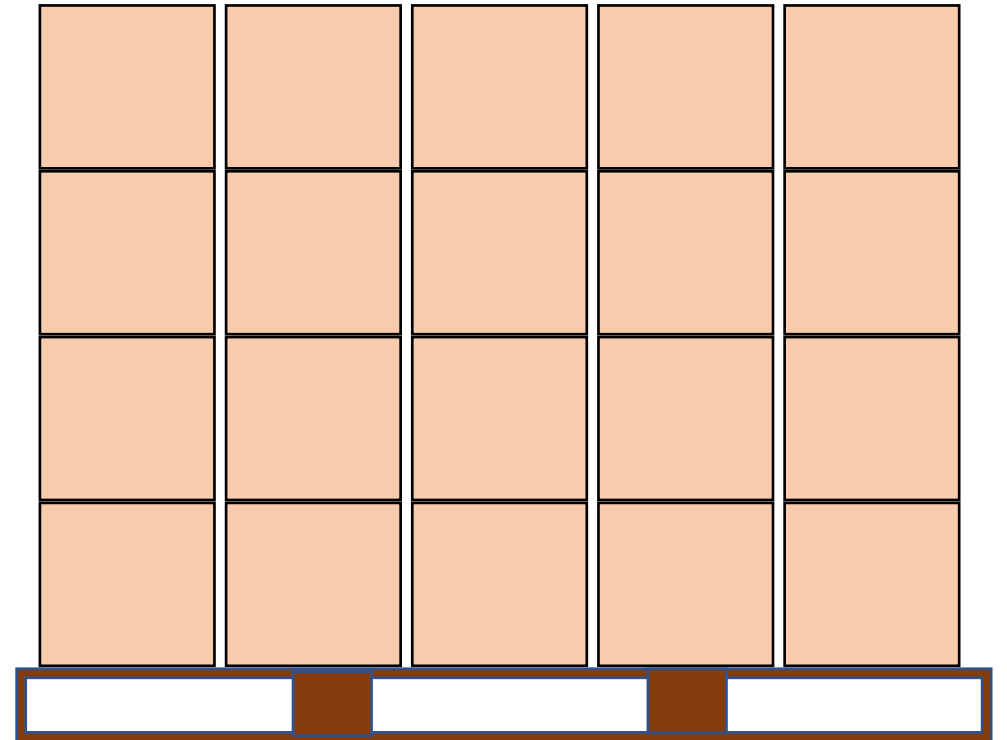
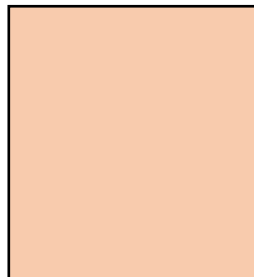
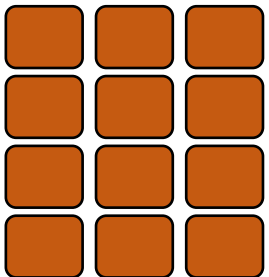
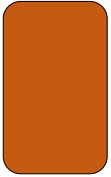
product design brief

Depending on the type of product being designed, some form of packaging may be necessary for transport, storage, etc.

- What are the requirements for packing in regard to labelling and handling?
- Does it need to fit in a standard-size shipping container pallet or box?
- Is sustainability a factor in purchase and does the packaging need to be recyclable?

establishing the
footprint

product design brief





shipping



product design brief

it is necessary to determine how the product is to be delivered:

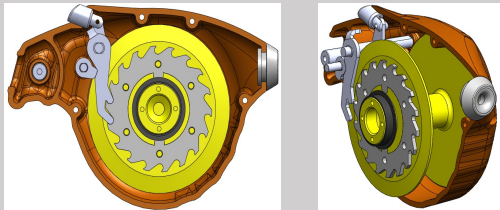
- Home or overseas; what type and size of truck, pallet container (ISO) is used for the type of product under consideration.
- A product may be competitive in the UK but by the time it is shipped overseas it may have become too expensive.

quantity

product design brief

Likely numbers to be run off - the size of the run - will affect all aspects of a product's design.

Moderate numbers may require cheap temporary tooling, while large numbers may require permanent, expensive tooling.



This has a considerable effect on the supportive investment required and the plant already existing in-house.



manufacturing facility



product design brief

Are we designing to fill an existing plant.. or is the plant and machinery involved a constraint to our design?

What are the plans for any new plant and/or machinery?

It is no good designing for a one-plant set-up to find a new one in existence by the time the production phase arrives.

Make-in or buy-out policy: is the product constrained to techniques with which the company is familiar?



manufacturing facility



product design brief

Is our proposed flexible manufacturing system the ultimate in inflexibility?

More and more companies are resorting to subcontract manufacture which will make them less capital intensive and reduce their fixed costs.

Scale and type of production

How much of this product are you aiming to produce yourself?

How is production going to be managed?

What are the production constraints that need to be taken into account?

size

product design brief

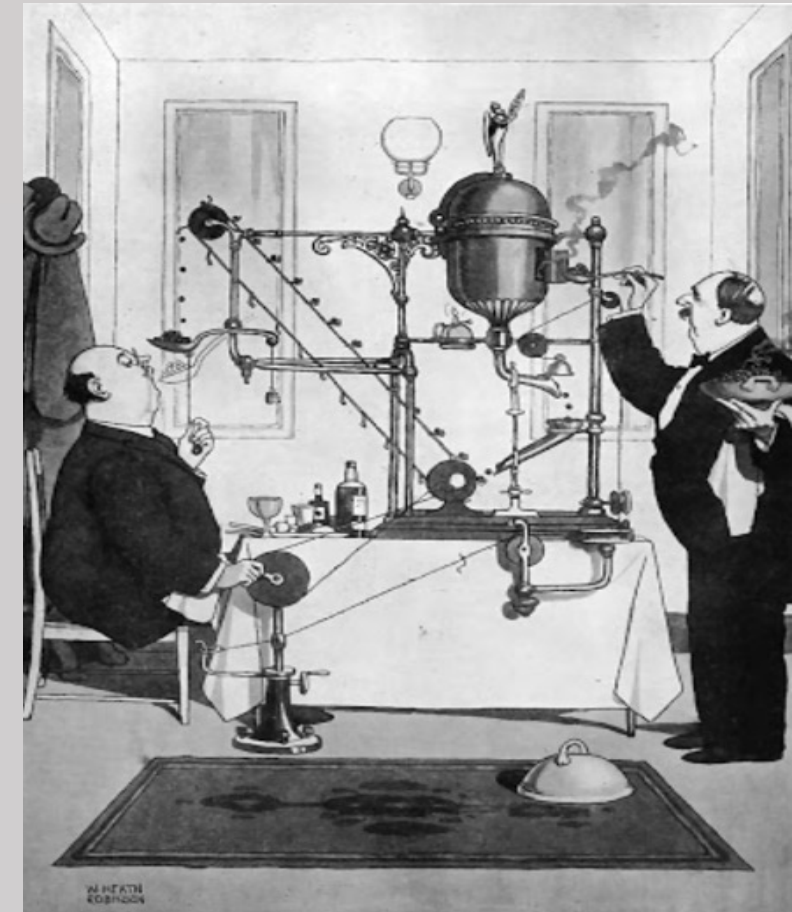
Are there any restrictions on the size of the product?

Does the product size and shape make it difficult to handle?

Size constraints should be specified initially.

many designs seem to 'grow' - with the result that the equipment will not fit into the space provided !

and even if it does, access for maintenance could be difficult.



An elegant solution for conveying peas to the mouth

weight

product design brief

What is the desirable weight? (Remember that, for a given technology, weight is frequently directly related to cost.)

Allied to size, weight is important when it comes to handling the product on the shop floor during manufacture, in transit, during installation or in the user situation with the customer.



weight

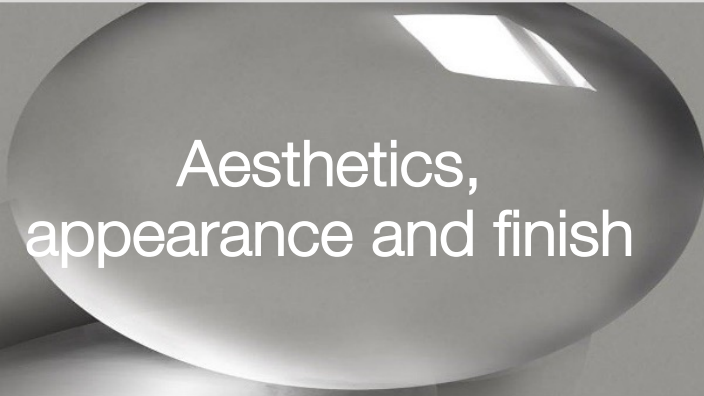
product design brief

It also has an impact on possible ergonomic or anthropological considerations – is it too heavy to hold in one hand for too long?

Should the design be modular to assist in the size/weight area?

For heavy products - should lifting points be provided?



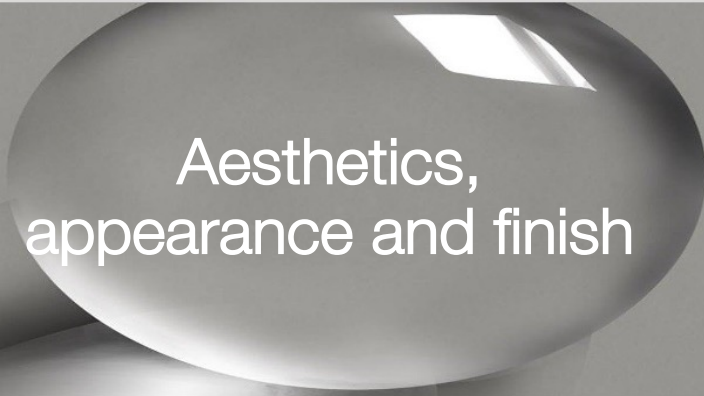


Aesthetics,
appearance and finish



product design brief

- What about the look and feel for the user?
- How important is the ergonomics in relation to appearance and finish of the product?
- Is there a product colour range that it needs to match?
- What brand values need to be reflected in the look and feel?
- How will it sit against the competitor's range of products?

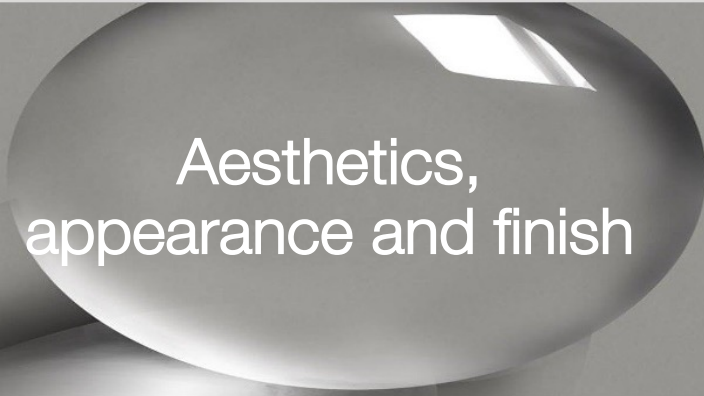


The appearance of a product is a difficult thing to specify and therefore, in many instances, it is left to the designer: the complaints come afterwards.

Colour, shape, form and texture, should always be considered from the outset. Advice and opinion should always be sought either from within the company or without.

Sales, marketing, production and others will always criticise a design once it exists?!

Therefore, efforts should be made to obtain these opinions before the design commences, and certainly as it progresses.



Aesthetics,
appearance and finish



product design brief

Everybody's a design critic, accomplished or otherwise.

So often the final appearance of a product 'just happens' and then strenuous efforts are made to make it look better, which usually prejudices the design in all aspects.

Never forget, whatever the product, that the customer sees it first, before he buys it - the physical performance comes later. The visual performance is always first.

All products have to some degree a user interface, certainly during manufacture and most definitely in this case during usage/operation and also maintenance. it is therefore necessary to make clear the likely nature of the interaction with the product.

- what height
- what reach
- what hand room is available around the controls
- what operating torques are acceptable to the user during usage/operation and also maintenance.
- what is visibility like for the user during usage/operation and also maintenance etc.





materials



product design brief

what materials are required to produce the product (or parts)? are appropriate standards be quoted - for example an encasement or cover may be needed, is it to be injection moulded ? if so what type of thermoplastic is required, what specification of material and to what standards ASTM, DIN, BS, ISO?

- Quality & Reliability
- Legal
- industrial standards
- Industrial Standards & Specifications
- Manufacturing facilities

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product life span

product design brief

Some indication of the life of a product as a marketable entity should be sought.

Is likely to remain in production for two years or 20 years?

The answer is crucial as it can affect the design approach and interacts with the market and competition, tooling policy, manufacturing facility and the like.



standards &
specifications



product design brief

Is the product to be designed to current international and/or British standards? If so, then these should be specified and copies obtained.

Cross-correlation of such standards should be carried out prior to commencement of the design. It is difficult, costly, time consuming and inefficient to attempt retrospective matching of designs already finalised to such standards.

Cross-correlation of such standards, e.g. BS, EN, AFNOR, DIN, ASTM, ISO etc

standards &
specifications...cont'd

product design brief

“ It is essential that the device complies fully with all standards that are
requisite within country of purchase..... ”



standards &
specifications...cont'd

product design brief

“ The product will conform to all industrial standards (BS;EN) for personal protection equipment / prevention of fall from height BS;EN 795 Class C, including

- BS:EN 354 [lanyards]
- BS:EN 362 [line connectors]
- BS:EN 365 [generation of instructions and maintenance documentation for safety equipment]
- BS:EN 355 [energy absorbers]
- BS:EN 355 [anchorage system]

“





quality & reliability



product design brief

The laying down of levels of quality and reliability necessary to ensure product success and acceptability in a particular market is a cause for increasing concern.

They are the most difficult aspects to quantify in absolute terms.....



shelf life –
storage

product design brief

A factor often overlooked in specifications is that of 'shelf life'.

With respect to products, shelf life must be specified at the outset and the means to combat decay considered (see 'Environment'), otherwise rusty gearboxes, perished components, seized bearings, defective linings, corrosion and general decay will occur.



processes



product design brief

If special processes are to be used during manufacture, they should be defined.

e.g - plating specifications, wiring specifications etc.

Alternatively, the relevant standards - British, foreign, in-house, client's etc. - could be called upon.



time-scales



product design brief

What is the time-scale for the project as a whole, in parts or phases?

Is there need to fit in with the time-scales of others concerned with the project?

The header features two large, reflective, metallic spheres on a dark gray background. The sphere on the left contains the text 'time-scales' and the sphere on the right contains the text 'product design brief'.

time-scales

product design brief

Lead times allowed for design activity are frequently inadequate, but they determine the time-scale for the whole project up to manufacture and product launch.

There are a number of milestones and 'go' or 'no go' points in product development.

Any timescale needs to take account of the development process being used, the complexity of the development and the number of parties who are involved in the development process.



time-scales



product design brief

Design time must be adequate to ensure that the product is designed effectively and efficiently - in other words, professionally.

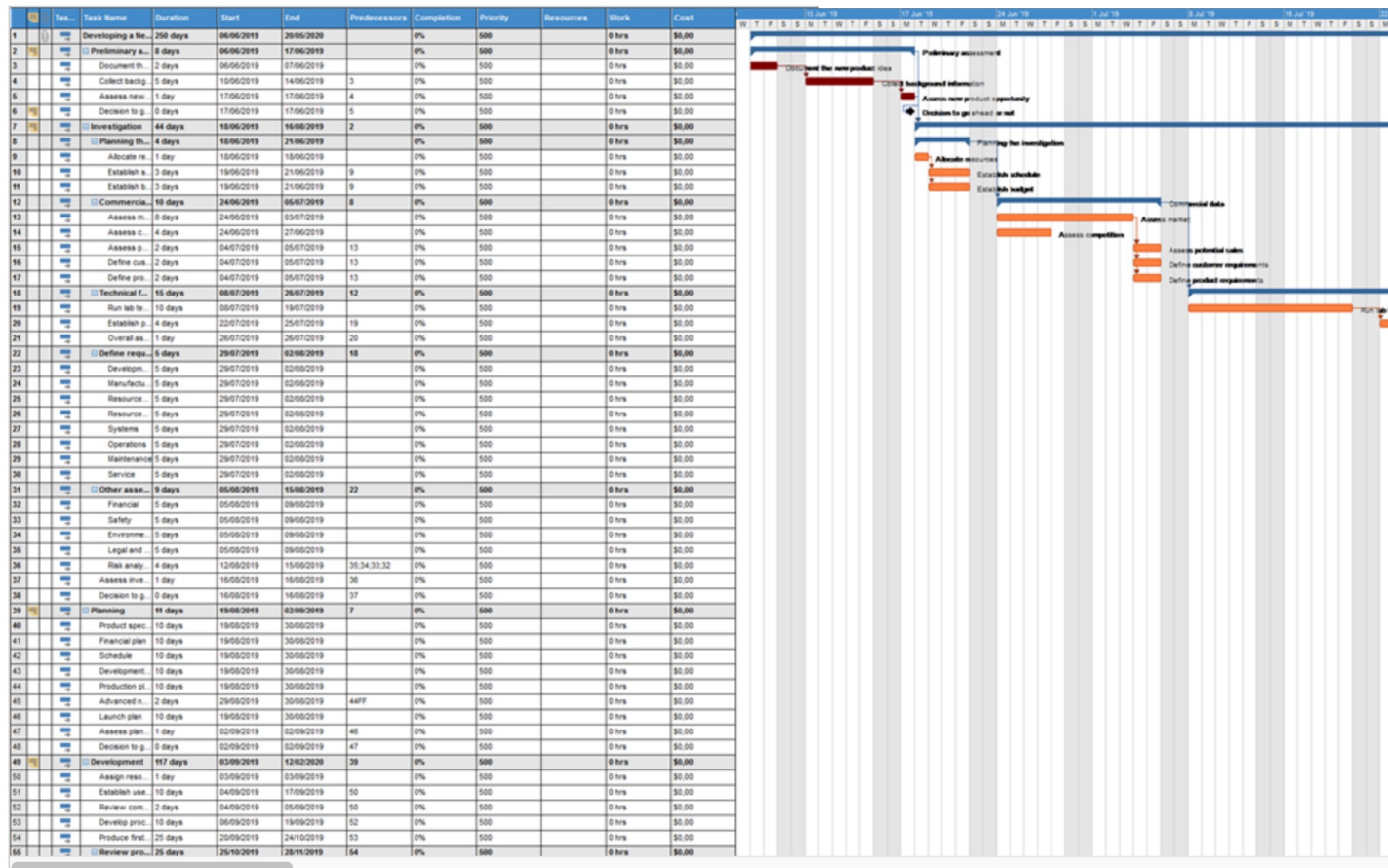
Lack of adequate time spent at the beginning of a design project will lead to other people's time-scales being effected due to defective products, market mismatches, overwhelming competition and the likes.

There is no alternative to adequate design time.

time-scales

product design brief

Developing a New Product - Gantt Chart





testing



product design brief

Most products require some form of testing after manufacture, either in the factory, on site or both. Products for the consumer or engineering markets usually require a factory test to verify the quality of the product and its eventual compliance with the PDS.



testing



product design brief

Curiously, this usually relates to the performance aspects which, although essential, represent a narrow view of the whole question of product evaluation.

Do we sample test one in ten, one in a hundred, or what?

Data collection and product history are needed to answer these questions. An initial test specification should be written at this stage. It is too late after the design has been completed!



compliance



product design brief

regulations or directives which may be applicable to your product:-

- Active Implantable Medical Devices Directive
- ATEX Directive (Electrical and Mechanical equipment for use in explosive atmospheres)
- Energy Labelling Directive
- Energy Using Products Directive (EUP)
- Gas Appliances Directive
- General Product Safety Directive
- Hot Water Boilers Energy Efficiency Directive
- In-vitro Diagnostic Medical Devices
- Lift Safety Directive
- Low Voltage Directive
- Medical Devices Directive
- Measuring Instruments Directive
- Noise Emission of Outdoor Equipment Directive
- Non-automatic Weighing Equipment Directive
- Non-Road Mobile Machinery Exhaust Emissions Directive
- Personal Protective Equipment Directive
- Pressure Equipment Directive
- Radio and Telecommunications Terminal Equipment Directive
- Recreational Craft Directive
- Restriction of Hazardous Substances (RoHS) Directive
- The Batteries Directive
- Cableway Installations for Passengers Directive
- The CE Marking Directive



compliance



product design brief

Compliance is ensuring that the requirements of legislation, guidelines or specifications are met.

Therefore have an understanding what regulations may be applicable that could influence this developmental process.

For example as a minimum requirement all non-food consumer products must conform to the General Product Safety Regulations.



compliance



product design brief

Aspects that need to be considered include:-

- What function does your product/service have?
- Does it have a safety feature?
- Does it have any electrical components?
- Will it be sold In the UK?
- Will it be sold overseas?
- Is your product subject to specific regulations or are there tests or conformances which you as the supplier feel it would be appropriate to apply?



compliance



product design brief

Example directive information: Medical Devices Directive and associated directives the **In Vitro Diagnostic Device Directive** and the **Active Implantable Medical Device Directive**.

Medical devices fall into one of four classifications: -

Class I	Low risk	(e.g. Temperature monitor)
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Class IIa	Medium risk	
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Class IIb	Medium risk	
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Class III	High risk	(e.g. Stent)
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compliance



product design brief

There are a large number of rules (currently 18) to determine into which classification a medical device may fall, for example: -

“Rule 1 All non-invasive devices are in Class I, unless one of the rules set out herein-after applies....



compliance



product design brief

There are a large number of rules (currently 18) to determine into which classification a medical device may fall, for example: -

“ Rule 2 All non-invasive devices intended for channelling or storing blood, body liquids or tissues, liquids or gases for the purpose of eventual infusion, administration or introduction into the body are in Class IIa:

- if they may be connected to an active medical device in Class IIa or a higher class,
- if they are intended for use for storing or channelling blood or other body liquids or for storing organs, parts of organs or body tissues, in all other cases they are in Class I.”



company constraints



product design brief

The constraints of current company practice should be highlighted and discussed.

Possible manufacturing facility constraints, financial and investment constraints etc

Are there adequate in-house facilities for research, design, development, testing etc., including quality of personnel.



political, social
and cultural...
- implications



product design brief

The likely effect of the product on the political and social structure of the market or country for which it is to be designed and manufactured should be considered. Typical factors include the effect of consumer movements, the stability of the market, and the avoidance of product features that can create social unrest and upset.



political, social
and cultural...
market constraints



product design brief

Feedback from the market intel' should be considered.

e.g. The first rough terrain telescopic handler was designed to utilise a range of Ford engines. At that point in time Ford products were unacceptable in the Middle East. So the design was changed to accommodate Perkins engines, as well as Ford engines.

political, social
and cultural...
market constraints

product design brief





political, social
and cultural...
market constraints



product design brief

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political, social
and cultural...
- implications



product design brief

Knowledge of local conditions, particularly overseas, combined with a full knowledge of the market must be incorporated in the Design Brief and the PDS at the beginning of the project and as the design evolves.

Otherwise, if during the course of the project the market disappears, the whole activity may have proved to be a waste of time.



All areas of likely useful information should be investigated and researched, and in particular possible patent clashing should be known about as soon as possible.

It's pointless designing something for sale in ignorance of someone else's patent.

reference Sarah Whittle lecture session.

The header features two large, reflective, metallic spheres on a dark gray background. The sphere on the left is in the foreground and contains the word 'legal' in white. The sphere on the right is slightly behind and to the right, containing the words 'product design brief' in white. Both spheres have bright highlights and reflections on their surfaces.

legal

product design brief

With the adoption by the EEC of product liability legislation (*still valid*), based in part on US experience, it is essential to consider the legal aspects of a design at both the product design brief and then again at the PDS stage.

Such legislation considers ‘product defect’ as its primary basis. Many defects are designed into a product through lack of adequate consideration of all the constraints at the outset.

It is suggested that ‘defect of specification’ may account for many ‘defects of design’ and even for subsequent ‘defects of manufacture’.



installation



product design brief

Many products must interface with other products or be assembled into larger products or become structurally part of a building.

Installation therefore must be considered. This will include fixing holes and lugs, access, the volume available for the product, system compatibility, power compatibility and the like.

Disposal has been included as a primary element as the effects of man's design of products impinge more and more on our environment.

With many products, it is now not possible to 'forget' about the item after ownership has passed to the customer.

If the product contains hazardous or toxic parts, or indeed parts worth reclaiming, these should be considered at the PDS stage. Should we, for instance, design for disassembly.

Non-biodegradable plastic packaging and items made from plastic present a problem of increasing magnitude - in fact the whole problem of waste disposal and recycling looms large indeed.

documentation

product design brief

Product documentation is always important in terms of instructions to the user, the maintainer or others.

Even with consumer products, it is an important and vital task that must not be shirked (see ‘Safety’ and ‘Legal’ elements). With large turnkey projects, the associated documentation can become a substantial part of the overall design task.

In the light of previous comments re legal requirements, it is imperative that full documentation is prepared for all projects –

this should be done formally, not informally.



REFERENCE NUMBER: 00110158

IN ACCORDANCE WITH ANNEX III OF PPE DIRECTIVE (89/686/EEC)

Company:

CONTENTS

Section 1	EC Type-examination: application details
Section 2	Manufacturing details
Section 3	Group and product descriptions
Section 4	Master material list
Section 5	Compliance with Annex II of Directive 89/686/EEC
Section 6	User Information Notice
Section 7	Quality control procedures
Section 8	Test reports

(This skeleton Technical File has been produced by SATRA Technology Centre for an authorised representative or manufacturer of Personal Protective Equipment (PPE) to either enter the missing information or use it as an example for guidance. Whichever option you choose, it is important to ensure that all the necessary information is given in a clear, concise and unambiguous format).

Technical File Ref:



documentation



product design brief

Materials

Shipping

Performance

Processes

the relationship
between the elements

Aesthetics

Weight

Assembly

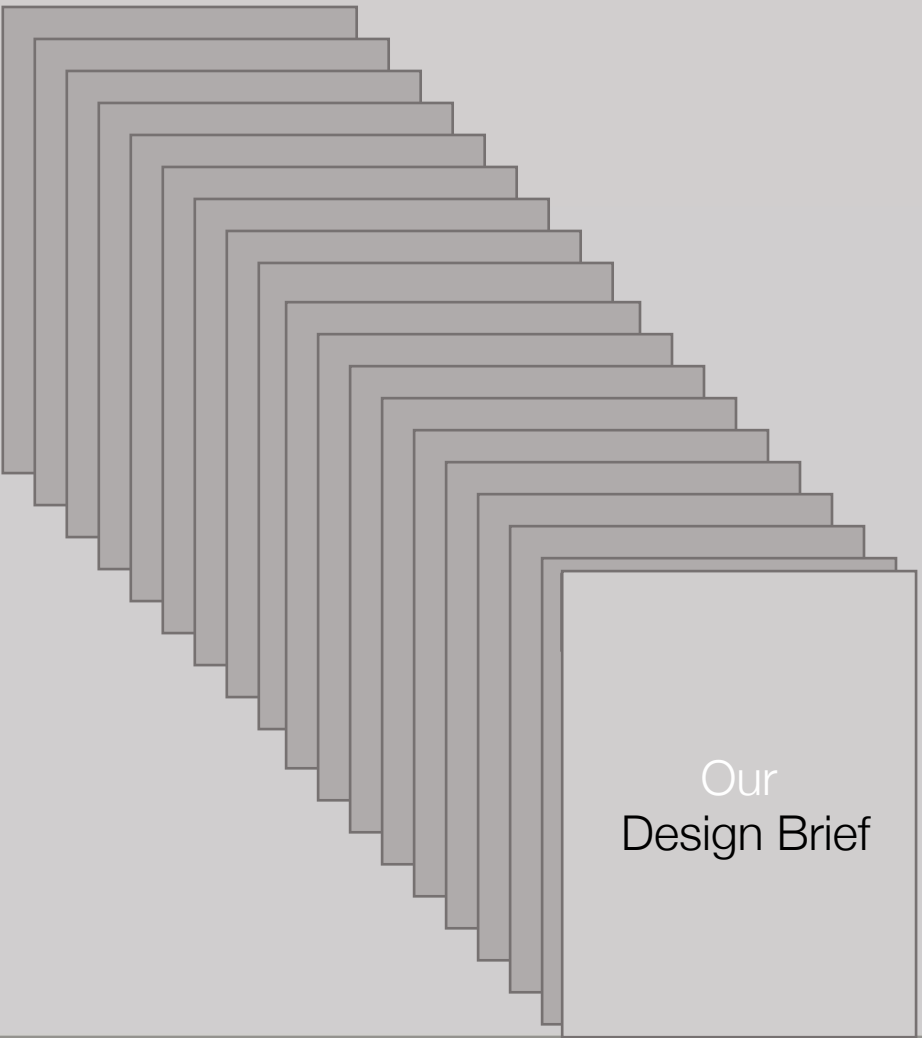
Ergonomics



documentation



product design brief

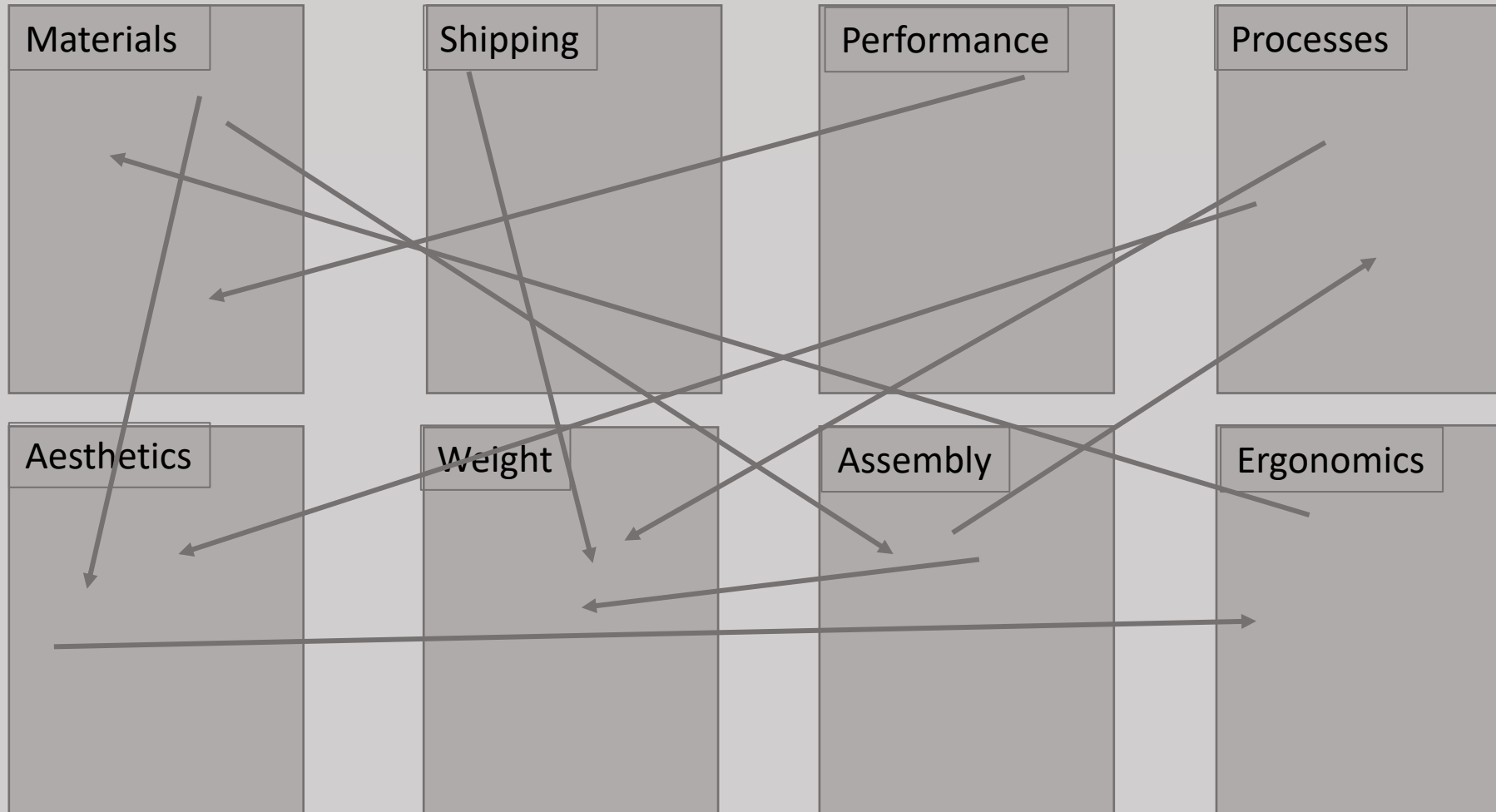


Our
Design Brief

the relationship
between the elements

documentation

product design brief



the relationship
between the elements

so be careful how you
view your product design
brief



Managing
New Product Development



Innovation Management

Criteria for a Shorter Product Design Brief

Potential Elements of a Short Product Design Brief

product design brief

elements

A) background

B) the requirement

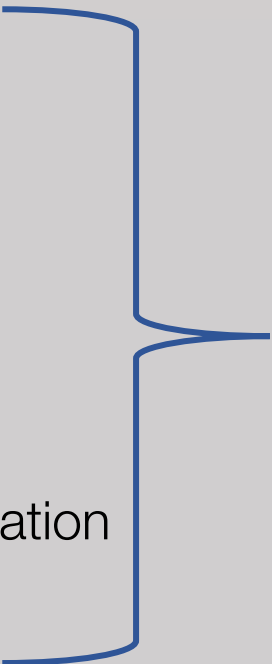
C) competition

D) product description

E) technical specification

F) manufacturing specification

G) timescales



collectively seen as just seven elements.....possibly

The header features two large, glossy, grey spheres on a dark grey background. The sphere on the left contains the text 'Criteria for a Short Product Design Brief' in white. The sphere on the right contains the text 'product design brief' in white.

Criteria for a
Short Product Design Brief

product design brief

A) Background

This could include company information and current position within the market.

B) The requirement.

This should include marketing background, strategic objectives, and consumer profiles supporting the requirement, as well as setting outline/target production and retail cost projections, along with sales forecasts.

C) Competition

Examples of existing product, competitor background including sales figures where available.

D) Product description.

A clear outline /description of the new project. This section should include aspirational qualities for the product/s.

E) Technical specification

This will be a specification for the performance of the product and include any necessary standards, along with details on internal components relating to the product/ product range.

F) Manufacturing specification

This will outline the manufacturing processes

Preferred manufacturing options based on machinery, and capacity.

Material specification.

Standard material sizes, billet, tube, extrusion, sheet, etc. based on optimizing standardised sizes, and economy of purchasing quantities.



Criteria for a
Short Product Design Brief

product design brief

G) Timescales

Project timescales and timeline

An example of a typical brief supplied by MDI.

For confidentiality reasons certain information has been removed.



background



product design brief

- [REDACTED] is the market-leading brand in salt & pepper mills and is synonymous with innovative design, product performance and quality.
- Our extensive range of mills, from traditional to contemporary designs, has something to suit every table setting.
- [REDACTED] is brand leader in the UK with a 60% share and exports to 42 countries worldwide.
- [REDACTED] is renowned for its design and style leadership.
- [REDACTED] is now investing in the premium sector of the mills market with its new range offering premium product performance and aesthetics.



requirement
target market



product design brief

- Primary 35-55 year old females/males. AB, C1 consumer groups
- Expert cooks
- Those who want the best performing mills possible
- In particular, US consumers who shop at premium gourmet/housewares stores such as Williams Sonoma, Sur la table and Zabars
- Premium department stores such as Ahlens in Sweden, De Bijenkorf in Holland, Glasmagasinet in Norway



requirement
positioning



product design brief

- Mature
- Formal
- Expert cook
- Premium finish
- Very best that you can buy
- Elegant
- Sophisticated
- Luxury



requirement
objectives



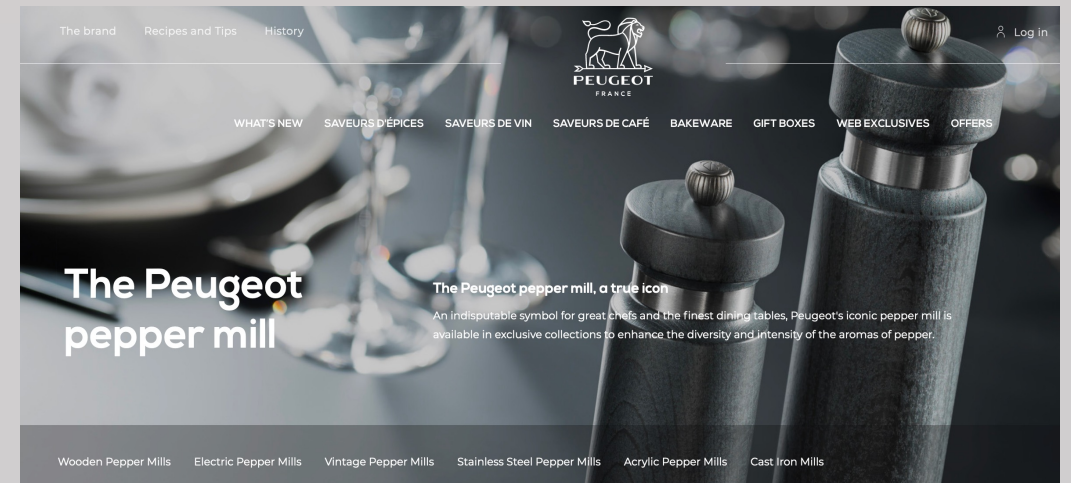
product design brief

- To grow sales in international markets
- To enter the premium wood capstan market by bringing to market a range with added value aesthetics, finish and performance to take the (company name) brand to new levels.
- Target retail cost outline.
- Target production cost outline.

competition

product design brief

- We want to replace Peugeot mills in certain retail outlets worldwide



- Peugeot market a range called Paris that we are particularly targeting. The range comprises Paris Naturel, Chocolat, Laqué rouge (polyurethane finish) and Laqué noir



product description



product design brief

- A single capstan design in different heights
- More contemporary than current (company name) capstans and the Peugeot Paris but the design should still be safely sympathetic to tradition.
- Feature a new premium knob not the usual (company name) knob
- The design should not have any sharp edges, it needs to accept a polyurethane finish
- The shape needs to work at the following heights:- 12,18,22,28,40 and 50cm



product description



product design brief

The design will be offered in the following finishes:-

- Natural beech
- Dark wood
- Polyurethane black and red
- The (Company name) logo will be printed on the mill similar to Peugeot using a tampo printing machine.
- Please consider where the logo will be printed.



- Pepper mechanism
 - All pepper mills will offer a high performance carbon steel Professional mechanism giving the best grind performance (more grounds per turn than any other mill) and most consistent grind over time. (It will require a larger bore size than normal therefore please bear this in mind when designing the mill)
- Salt mechanism
 - Salt mills will feature a stainless steel mechanism which is currently being performance tested



timescales



product design brief

- First stage visuals w/c 25th September
- Final design - TBC
- Tooling - TBC
- In stock February 2025



Managing
New Product Development



Innovation Management

INTRO TO ASSESSMENT B



background

INTRO TO ASSESSMENT B

- You are NPD and Innovations Manager of a Carmarthen -based SME which currently specialises in the manufacture of electronic breathalyser systems (See the website of Lion Laboratories for an exemplar product, for example the Lion Alcometer 500.)



A new product
development project

INTRO TO ASSESSMENT B

In light of the current Coronavirus pandemic, the Company see great potential in developing a product that can meet both clinical and personal requirements for such virus detection and are therefore anxious to bring the new product to market as soon as possible.



Task One

INTRO TO ASSESSMENT B

The Brief will require and therefore preceded by a synopsis of the device –
and its potential as a new product development.

Task Two

INTRO TO ASSESSMENT B

The development of an NPD control document –The Product Design Brief

- As the NPD and Innovation Manager you're required to produce a Product Design Brief that will provide a touch point for all the company's managers; design & engineering, manufacture, finance, marketing logistics etc.
- The brief will focus on the what needs to be considered to bring the product into existence - and will be used to inform the various managers within the company of the elements of the Product Design Brief that will need to be appreciated and deliberated.

Tasks

INTRO TO ASSESSMENT B

Examples of the elements to be considered may well be, but not exclusively;

aesthetics	installation	performance	safety
branding	intellectual property	politics	size
company constraints	legal	processes	shelf life and storage
competition	life in service	prototyping	shipping
customer	materials	product cost	social & cultural
circular economy	manufacturing facilities	product life span	standards & specifications
documentation	market constraints	quality	testing
environment	maintenance & repair	quantity	time scale
ergonomics	packaging	reliability	weight

The development of an NPD control document –The Product Design Brief

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- The brief will focus on the what needs to be considered to bring the product into existence - and will used to inform the various managers within the company of the elements of the Product Design Brief that will need to be appreciated and deliberated.
- The projected manufacturing volumes in the first year is likely to be no more than 750,000, potentially 3million per annum afterwards.

The header features two large, smooth, grey spheres on a dark grey background. The sphere on the left has the word 'Tasks' written on it, and the sphere on the right has the text 'INTRO TO ASSESSMENT B'.

Tasks

INTRO TO ASSESSMENT B

Word count: 4,500 words

Hand in date: noon 30th September 2022