



PRODUCT DEVELOPMENT STRATEGY

Why develop new products?

- Changes in consumers' lifestyles such as healthy eating ranges, ethnic foods, children's products, snacking.
- Technological developments in food production.
- Changes in type of retail food outlets.
- The changing buying power of the consumer.



**Can you think of examples
where a product has been
developed to fit different
market requirements?**

Sachets useful for measuring correct amount of liquid , then convenient pots, ready to add liquid, stir and eat.



Now we have the bar, ready to eat on the move as well as a variety of flavours available in the range



- Range of flavours also available
- Golden syrup

STAGES OF
DEVELOPMENT

1. Concept
generation

2. Concept
screening

3. Prototype
production

4. Product
testing



5. First
production
run

6.
Marketing
plan

7. Launch



Consider taking a page for each stage and make a mind map of all the relevant information about that part of the process.

Start by adding the info you already know from Nat 5 – then you can add in the extra detail needed for Higher.



STEP 1- CONCEPT GENERATION

**The thinking stage –
new ideas or a gap in
the market**

- Development of ideas from market analysis, perhaps even trialling of popular existing products, looking at, for example, why a certain flavour is popular, looking for something similar yet new and different.

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- **Manufacturers do not want to replicate existing products in the market.**

- Developers will consider cost, portion size, methods of reheating and cooking, flavour, texture and appearance.

Impact on the food development process

- **Without this stage the development strategy cannot go forward**
- It will ensure the product is new, different to what is already on the market and appeal to consumers as they have carried out research to find out what the trends and consumers are looking for in a new product

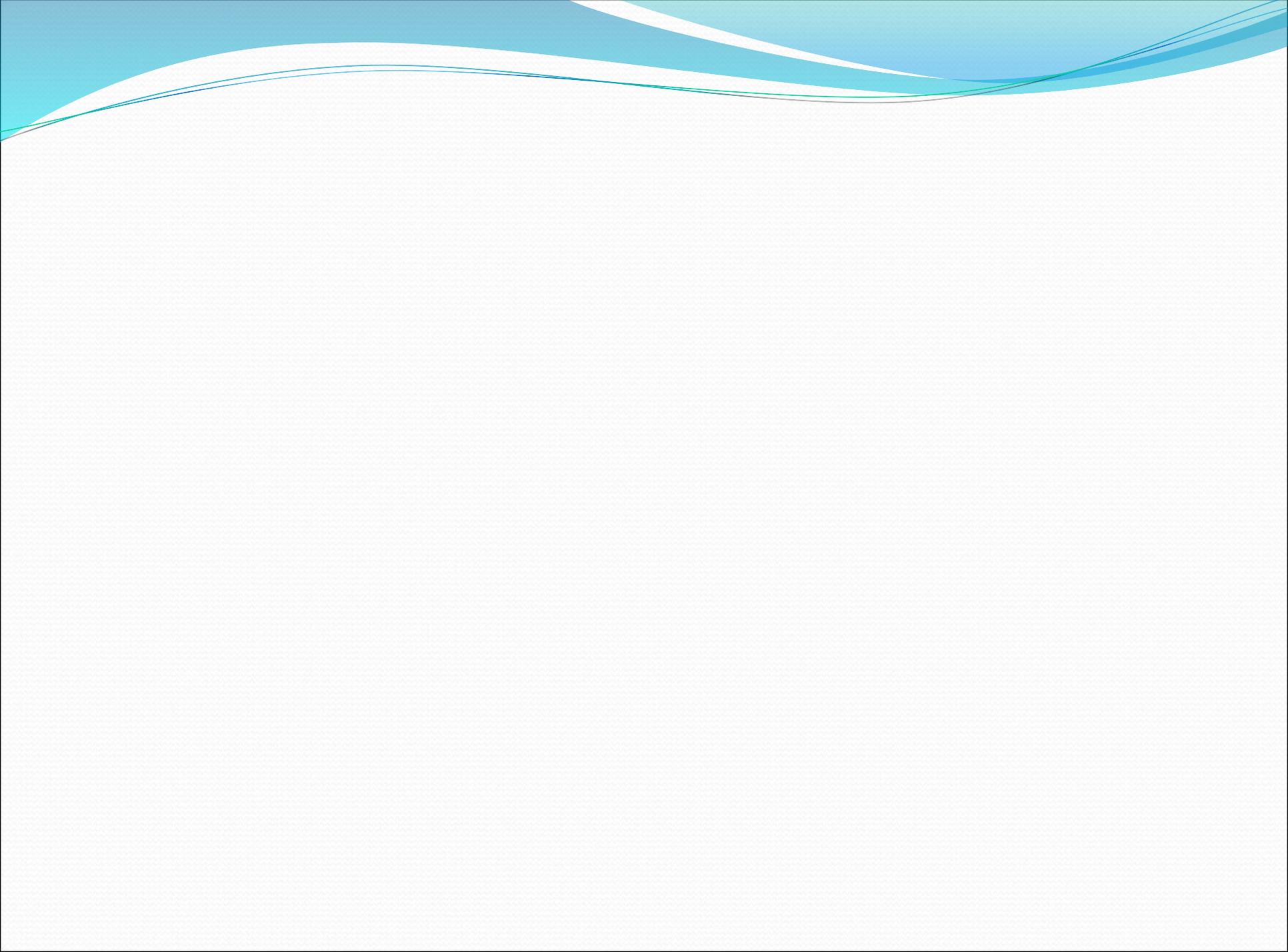
STEP 2 CONCEPT SCREENING

Consider all ideas, keep some and discard others.

The best ideas will be taken forward.



Allows the manufacturer
to develop a
specification against
which to
develop ideas.



Impact on the product development process

- Allow product ideas to be generated so that a prototype can be developed for the new product

STEP 3 – PROTOTYPE PRODUCTION

- A prototype is an example or specimen of what the product will be like.
- The prototype is developed and measured against the specification.

Impact on the product development process

- The prototype is tested for appeal and may be further modified or rejected so that it appeals/ looks attractive to the consumer helping to increase sales

STEP 4: PRODUCT TESTING

This is an important stage as it allows the products to be tested on consumers, so opinion can be obtained



**Why carry out
sensory testing?**

To compare a product against a competitor

To assess the shelf life of a product

To carry out quality control

To reduce cost without affecting taste etc

To investigate why one product is more popular than another



**Procedures to
follow when
carrying out
sensory testing**



Always check that everyone is able to taste the product

→ Some people may have allergies or special dietary needs, e.g. diabetics or vegetarians, that may prevent them from tasting

Always practise good hygiene when tasting. Everyone uses clean spoons and separate dishes

→ This prevents infection being spread from person to person

Do not allow people who are unwell (colds, upset stomachs) to taste

→ They could spread their infection or their illness could alter the true flavour of the food for them

Serve all food samples in the same way (same size portions, similar plates, same temperature)

→ This ensures the food is fairly compared

**Label the foods with
random letters or
numbers**

**→ So people cannot
identify the
samples**

**Only allow tasters to test
up to six samples at a time**

**→ The taste buds will
become less effective after
more than this**

**Have water available to sip
between tastings, or a dry
biscuit**

**→ This will help clear the
palate and make tastings more
effective on a number of
samples**

**Complete the tasting
charts after each person
tastes the food**

**→ If this is not done, the
taster may forget his/her
opinion.**

**Use separate booths
for each taster**

**→ To ensure no
influence from other
tasters**



**Tests used in
sensory evaluation
include:**

PREFERENCE TESTS

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graph TD; A[PREFERENCE TESTS] --> B[RANKING TEST - rank in order of preference for a specific characteristic]; B --> C[RATING TEST - RATE products on a 5 or 9 point scale according to degree of likeness];
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RANKING TEST – rank in order of preference for a specific characteristic

RATING TEST – RATE products on a 5 or 9 point scale according to degree of likeness

Ranking test

Please taste the samples and rank them in the order you like best.

1 = the one you like best, 5 = the one you like least

PRODUCTS	ORDER	ANY COMMENTS
A		
B		
C		
D		
E		

Rating test

In this test, foods may be given a score of 1 to 5

1. Dislike a lot
2. Dislike a little
3. Neither like nor dislike
4. Like a little
5. Like a lot

Samplers complete a chart similar to the one below and circle the number that describes the product

RATING TEST	smell	appearance	taste
Dislike a lot	1	1	1
Dislike a little	2	2	2
Neither like nor dislike	3	3	3
Like a little	4	4	4
Like a lot	5	5	5

☺ like a lot

☺ neither like nor dislike

☹ dislike

Tick the box/ rating that matches your response

	☺	☺	☹
Appearance			
Taste			
Smell			
Overall acceptability			



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Discrimination Tests

can be used to:

- evaluate the difference between similar products
- evaluate specific attributes, e.g. smoothness
- gauge consumer response to new products
- check that a food product meets its original specification

Paired comparison test

Tasters are asked to **compare two samples** for a specific characteristic, e.g. flavour or seasoning of the dish, e.g.

Duo-trio test

Out of three samples, tasters are told which is the control and are then asked **which of the other two samples differs** from the control

Triangle test

Tasters are presented with **three** samples, two of which are the same, and are **asked to identify the odd one out**

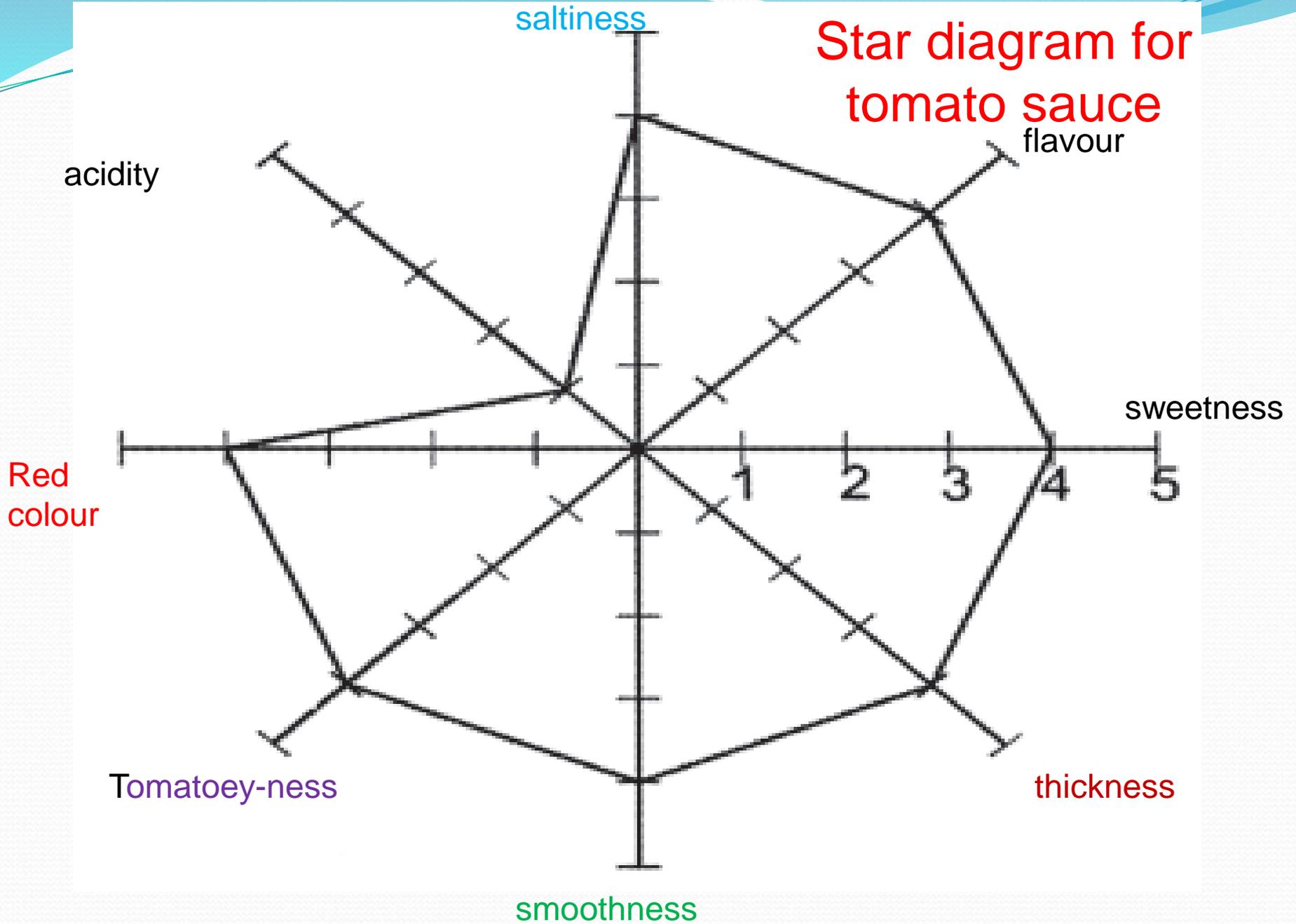
***star diagram is a
means of displaying
results.***

The diagram shown is called a star diagram because it is drawn in the shape of a star.

Each line of the star is marked on a scale of 1 to 5 (where 1 is the least and 5 is the most), and

Each line is labelled with a descriptor – a word which describes the food product.

Star diagram for tomato sauce flavour





These results show that this tomato sauce has a good colour, flavour, thickness and average sweetness. It is not very acidic.



Manufacturers use this method to compare their own products with one which is popular with consumers, in order to see where they need to improve their own product

Impact on the product development process

- Allows the range of possible solutions to be further refined – the most suitable and popular product will be kept and further refined or eliminated as a result of consumer opinions.



FIRST PRODUCTION RUN

FIRST PRODUCTION RUN

- The process allows for the actual item to be made in bulk for the first time and its suitability assessed

Impact on the product development process

- Product is tested to ensure quality and uniformity of standards during manufacture
- Important stage in development as it affects many other stages eg. If ingredients are changed then labelling needs to be adapted



MARKETING PLAN



This stage allows the legal and advertising teams to begin to develop the important work in relation to selling the product.

Factors to consider when marketing a product

The 4P's

Factors to consider when marketing a product

- Packaging
- Price
- Place to be sold
- Promotion of the product



PACKAGING

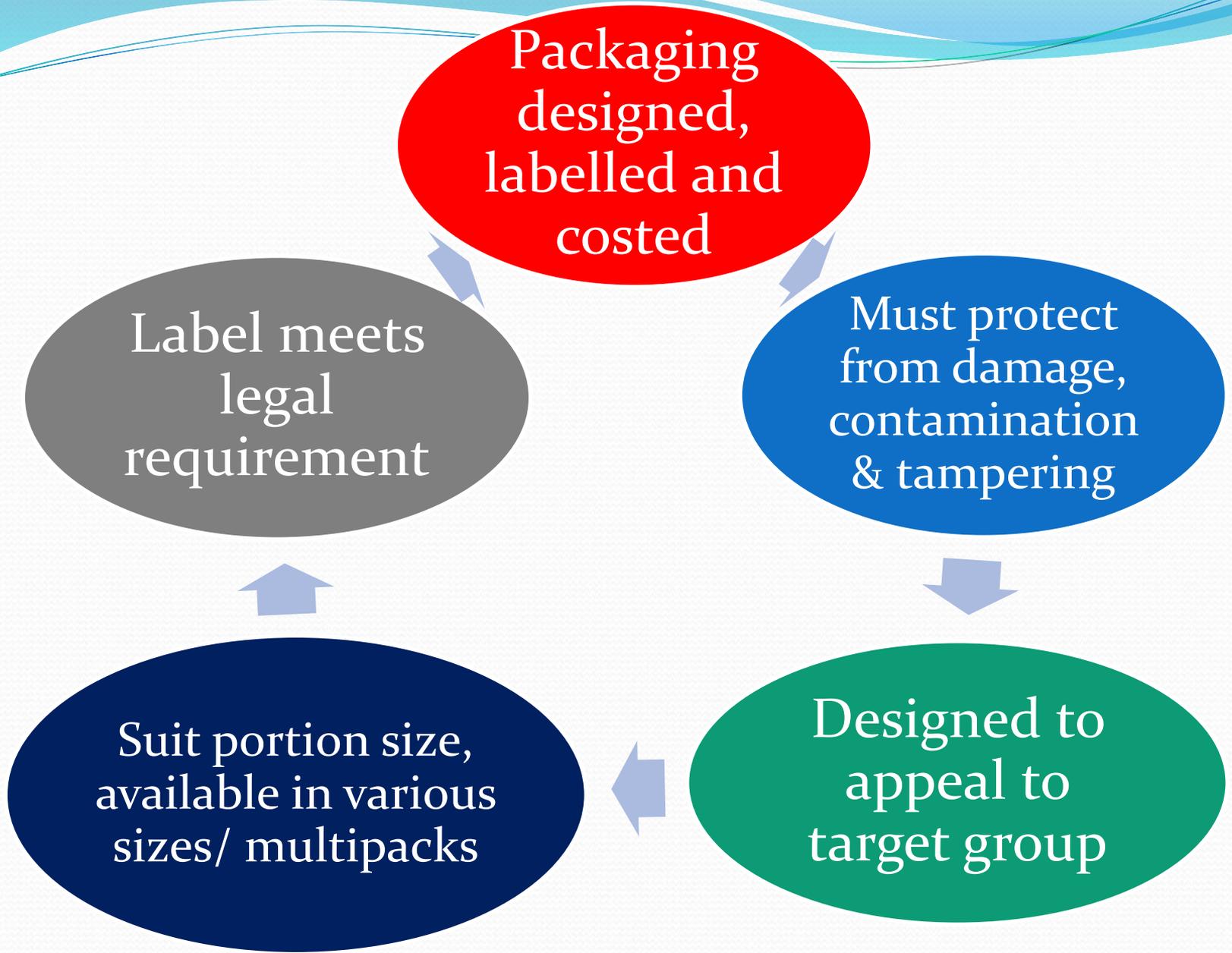
Packaging designed,
labelled and
costed

Label meets
legal
requirement

Must protect
from damage,
contamination
& tampering

Suit portion size,
available in various
sizes/ multipacks

Designed to
appeal to
target group





PRICE

INITIAL PRICE WILL DEPEND ON TARGET GROUP

PRODUCT SHOULD BE MARKETED INITIALLY AT A LOW COST TO ATTRACT INTEREST

PRODUCTS COULD BE MARKETED AT MID/HIGH COST TO DENOTE QUALITY FOR A PARTICULAR GROUP



**PLACE TO BE
SOLD**

Where to
sell the
product?

Product may
be sold in
certain
branches of a
supermarket
to see how
well it sells
before it is
launched
nationally

Shops have
to decide
where the
product will
be situated
to attract
most
customers

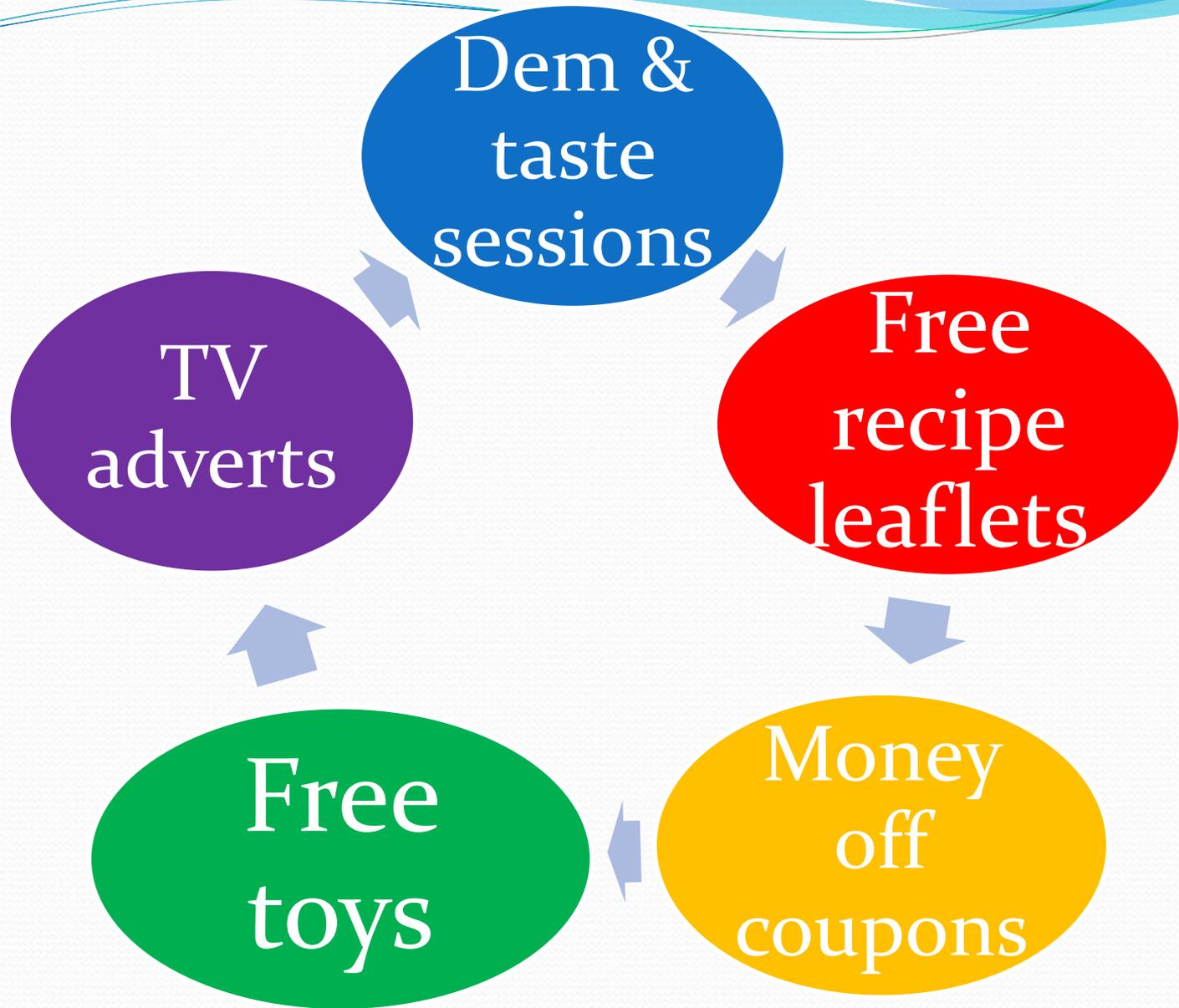


Promotion of the product

Allows for the development
of a range of activities to
promote the product
e.g. where it is to be sold/
position in shops/ offers to
promote



It is important to
promote the product to
ensure maximum sales





Impact on the product development process

- It is essential to get price, packaging, promotion and place in the market correct to gain maximum sales of the product.

LAUNCH

- Important stage of the plan as the item is

NOW ON SALE

Piloting of the product will be carried out to monitor sales in a small area initially.

From experience gained here adjustments are made before going world wide.

Sales figures checked to provide feedback.

Impact on the product development process

- This allows the product to be continually refined and improved so that it still appeals to the market in which it is being sold.



DISASSEMBLY OF PRODUCTS



**To disassemble means to take something
apart.**

**Gaining information about the
composition and proportions of a food
product allows manufacturers to
see why it is successful.**

Who uses disassembly?

A

food

manufacturer

A

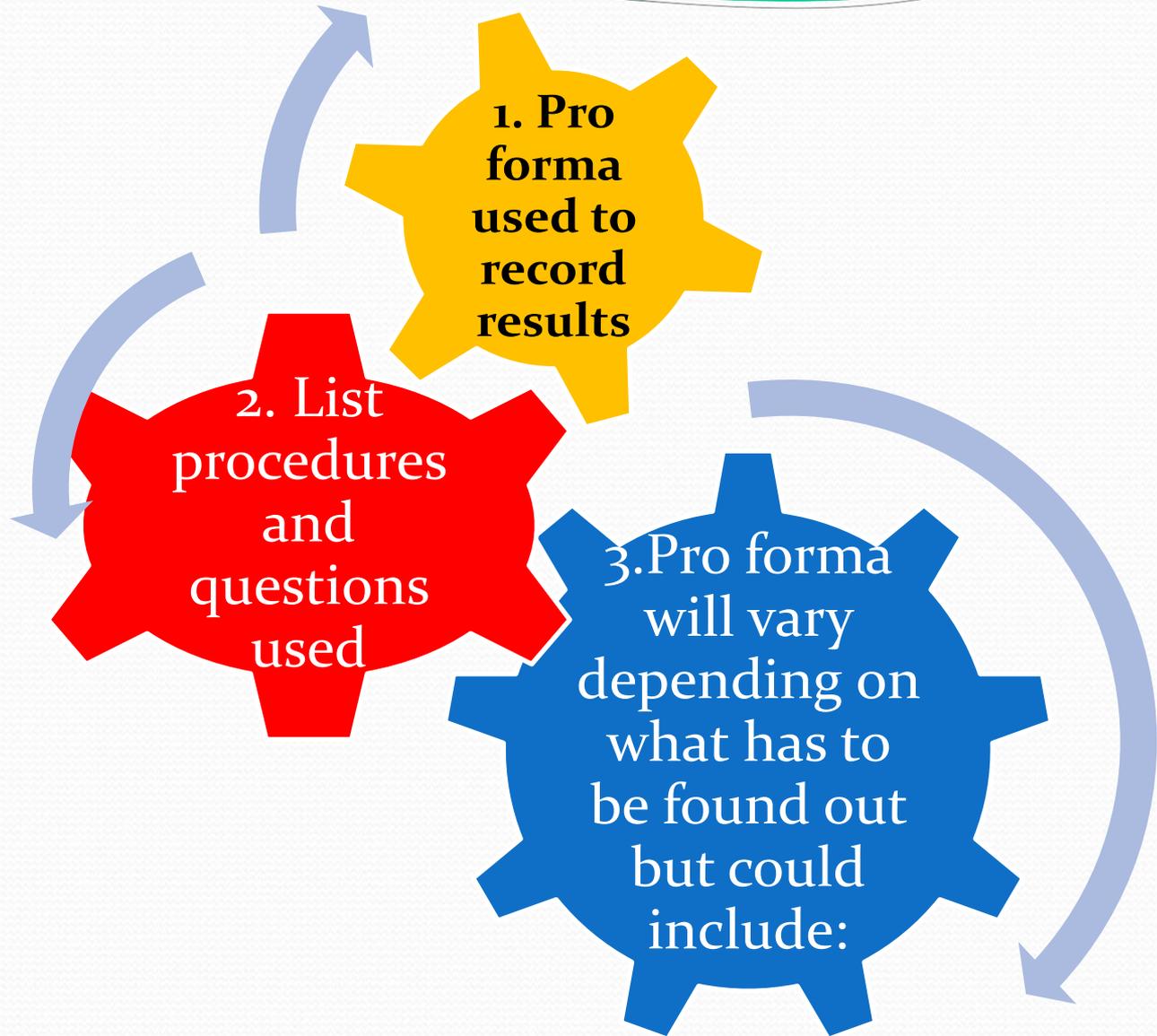
Trading

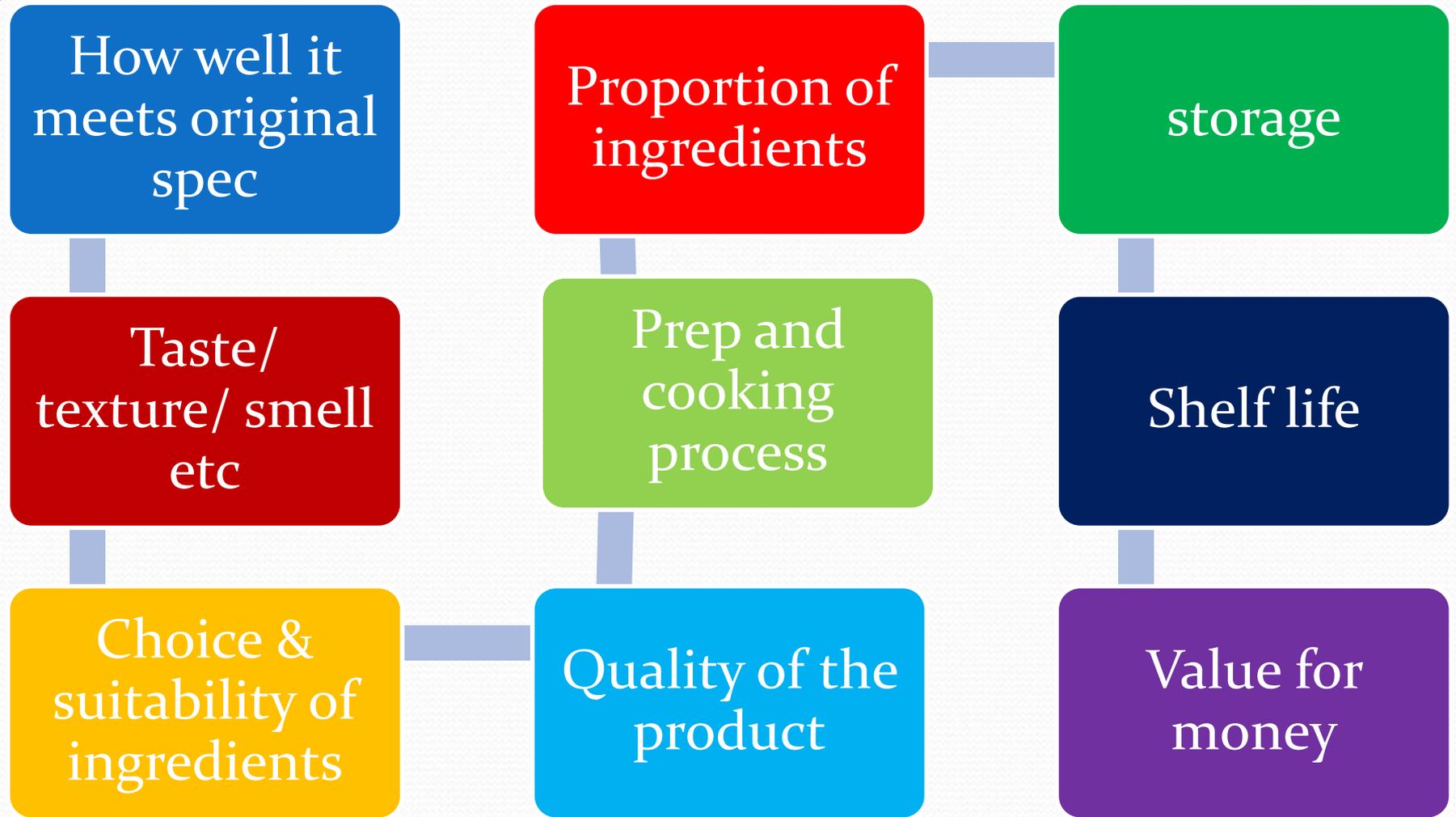
Standards

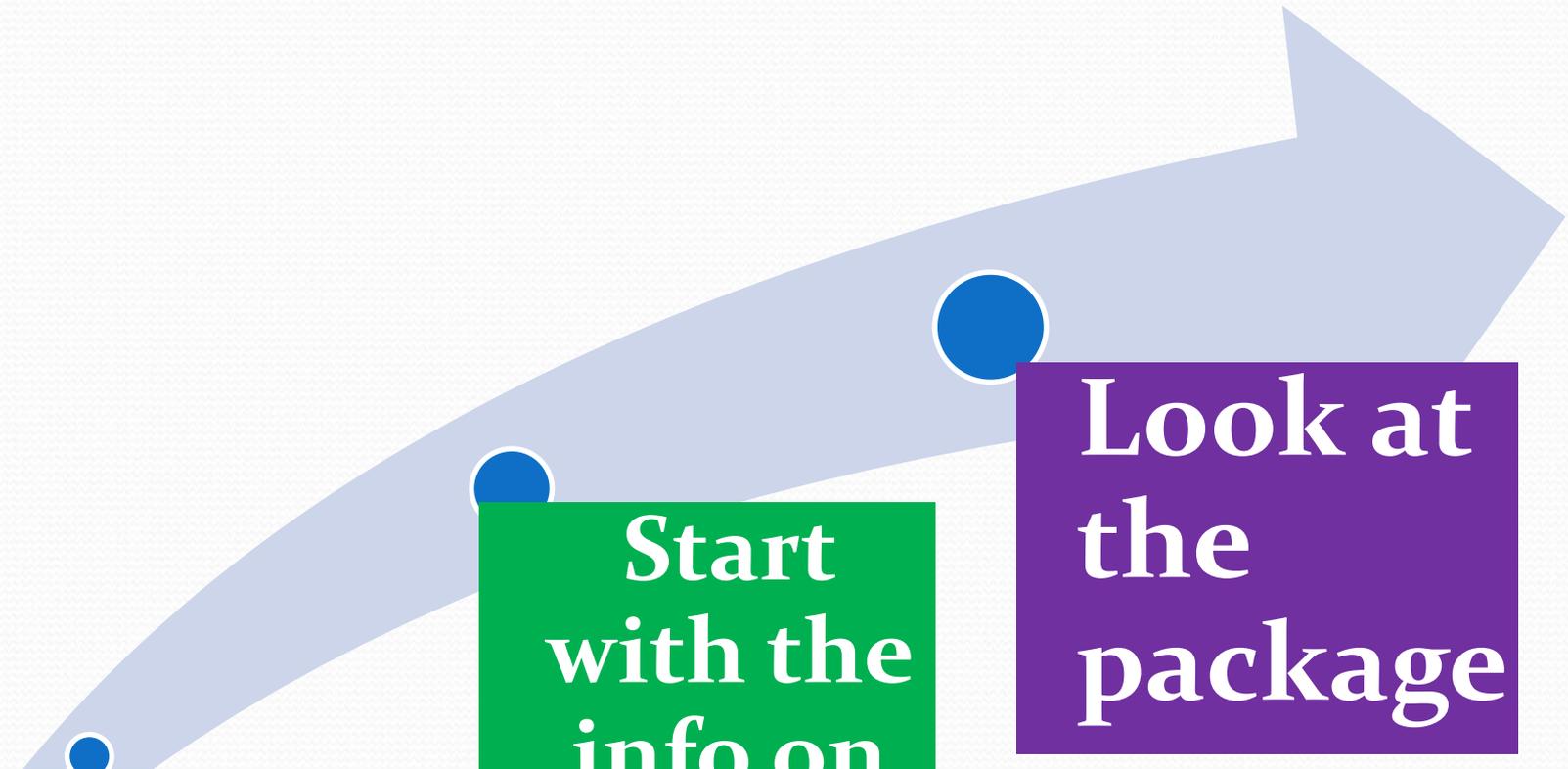
Officer



Stages of disassembly



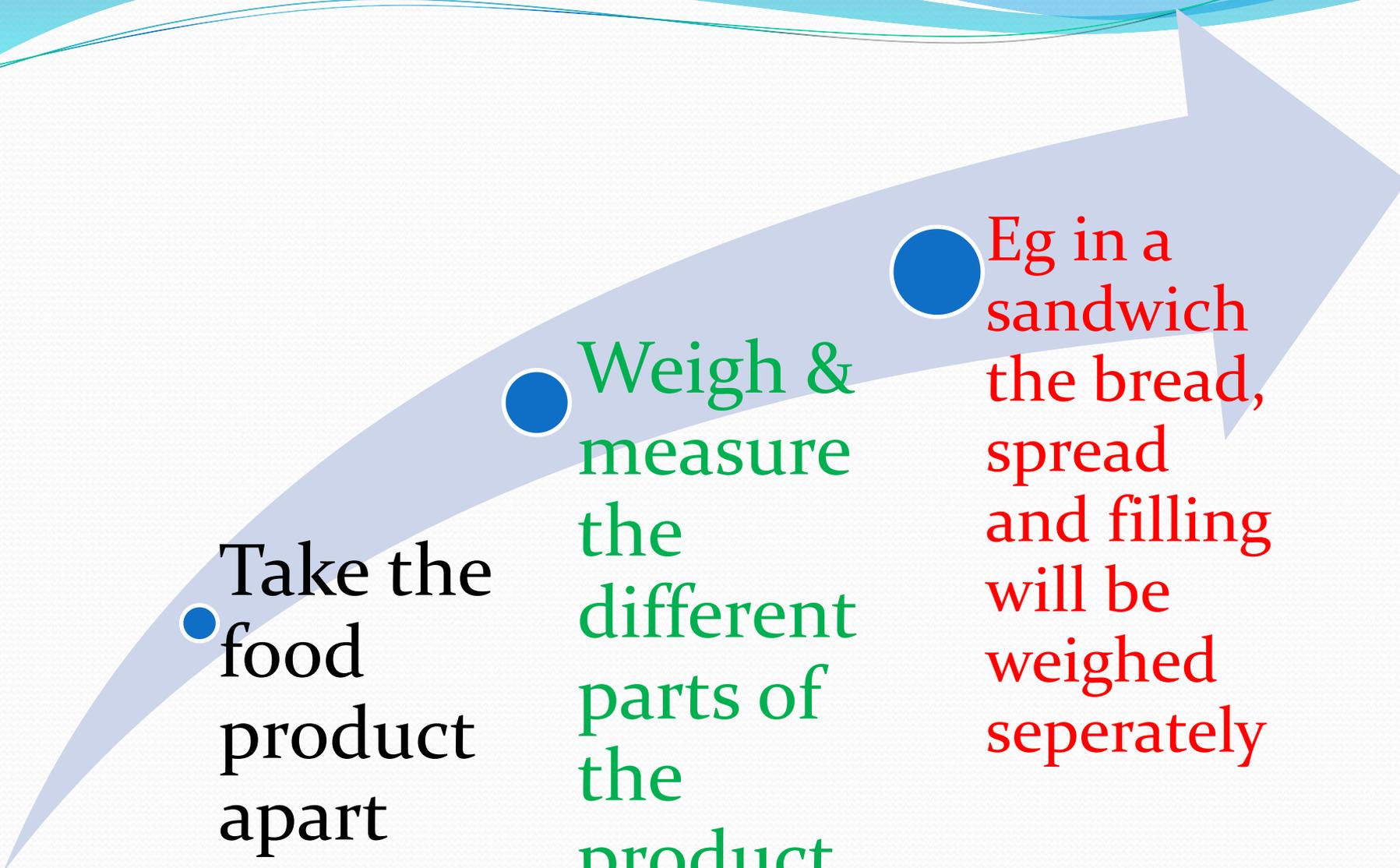




Disassemble
the
product

Start
with the
info on
the label

Look at
the
package



Take the
food
product
apart

Weigh &
measure
the
different
parts of
the
product

Eg in a
sandwich
the bread,
spread
and filling
will be
weighed
seperately

The last stage is to
COMPARE
the results of all
products disassembled



**Here is an example of what
might happen at each stage in
the development of a new
cookie biscuit.**

Concept generation

'The Thinking' Stage

- Development of new ideas
 - Identify gaps in the market
- Identify changes that could be made to existing products

- survey of existing cookies/ cookie dough on the market
- look at ingredients, cost, portion size, shelf life etc
- themes - healthy, luxury, fruit etc
- survey consumers to find out likes and dislikes
- disassemble competitors products

Concept
screening

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Time to consider
the ideas'

- Analyse ideas from the thinking stage
- Develop a specification
- Discard ideas that might be costly, difficult to process or do not meet all the requirements of the specification

Some spec points for the new
cookie dough

- Will be bought **frozen , ready to cook** - a questionnaire showed this was what consumers wanted and there is a gap in the market
- Will be **sold for no more than £5.00** as questionnaire stated this was an acceptable maximum price
- **Will contain orange** as this was the most popular choice by those questioned for a new flavour

Prototype
production

**Making samples of
a possible product'**

- Make up samples of what the product might look like

the new recipe is **made in the test kitchen**

- Make any changes that may be required

The **recipe is adapted** - less orange zest is used as it is too overpowering in flavour and will be expensive to use; orange essence will be used instead

<u>Product testing</u>	Sensory testing is carried out to get consumers' opinions	Consumers carry out a rating test on the cookie dough
	Changes can still be made to the product	Consumers felt the cookies were too small so portion size was increased
<u>First production run</u>	The new product is trialled in the factory for the first time to check it can be made in bulk	Product worked well so no changes required

Marketing plan

The marketing team plan how to promote the new product - they consider the 4 P's

- Product - how will it be packaged
- Place - -where will it be sold
- Price - what will the cost be
- Promotion - will there be any offers to attract consumers

- Packaged in 8 portion packs suitable available from the freezer compartment
- Sold in small city supermarkets
- Sold at £4.95 indicating a high quality price
- Launched on a social net working site, advertising free tasting in store and money off coupons in the supermarket magazine

Product
launch

Consumers can now buy the new cookie dough,
Sales will be closely monitored

The cookie dough is now available in the frozen section of **city supermarkets in Aberdeen and Dundee**
If sales are good it will be **rolled out across the UK.**

Complete a similar table showing what might happen at each stage in the development of either

1. low fat and sugar snack for the school tuck shop
2. healthy, cold dish to be served in the school canteen
3. a soup suitable for a packed lunch