

School of Engineering

Engineering Management – Business Strategy

Mark Sandford

Engineering Management Business Strategy

- ❑ As engineers should be aware of the business environment you find yourself working within
- ❑ You should be aware of the strategy that your company is following
- ❑ You will contribute in to strategy in specialist areas (i.e. technological changes, competitors)
- ❑ You will be effected as your company changes strategy

Therefore you need to understand how strategy is developed, what tools may be applied and how change can be managed

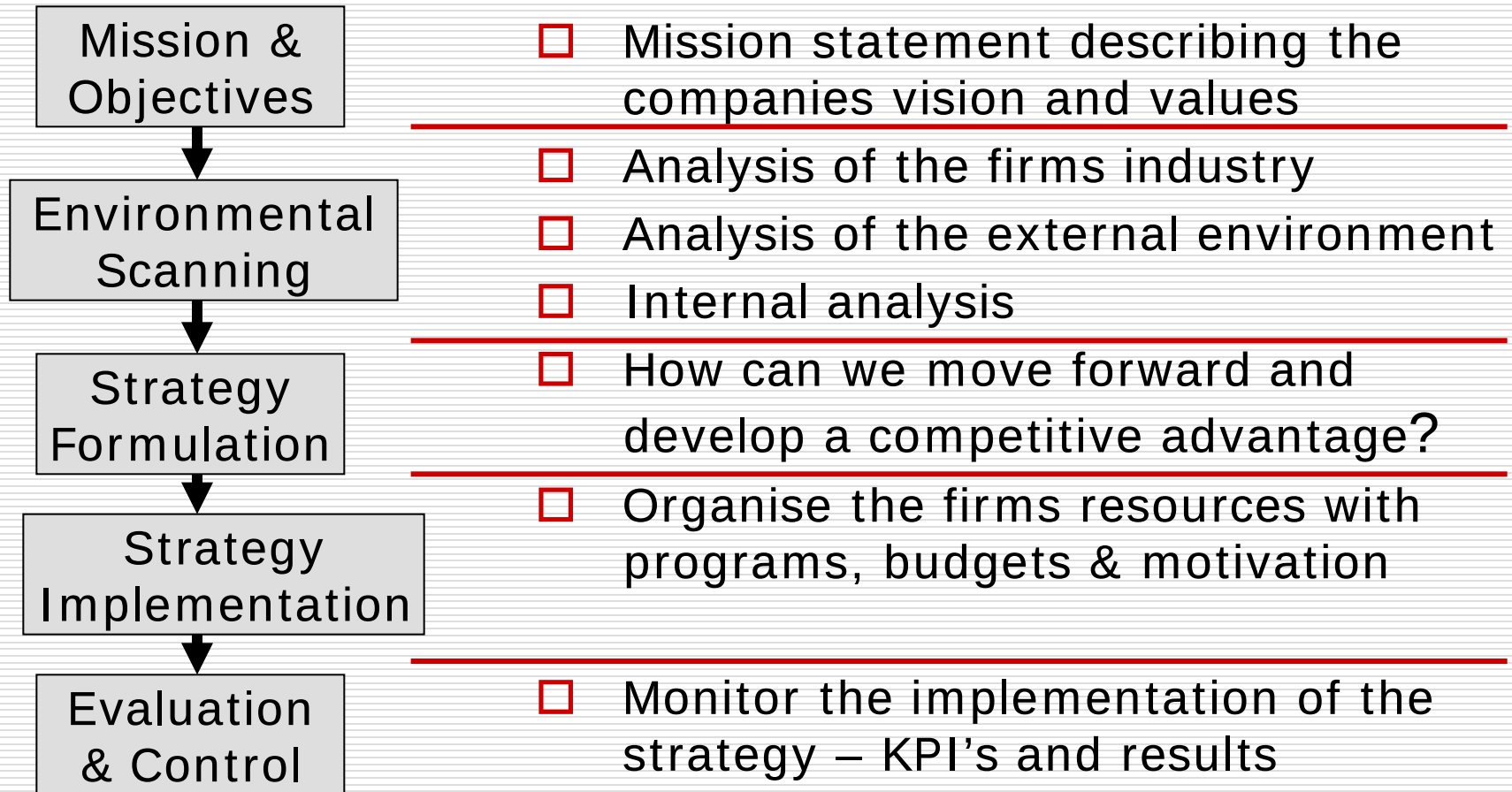
Strategy – 3 basic levels

- Corporate strategy
 - Applicable to larger organisations and their structure
 - Business strategy
 - The key issue is determining competitive strategy
 - Operational strategy
 - How can we deliver the business strategy?
 - Ensuring we have an appropriate structure with clear roles and responsibilities
 - Ensuring that we have the right resources (people, premises and equipment)
-

Business strategy – 5 questions

- ☐ What markets and segments should we be trying to compete in?
 - ☐ How should we try and compete in those markets ?
 - ☐ What competencies or capabilities do we need to compete successfully?
 - ☐ What do we look like now? What might prevent us from changing?
 - ☐ How can we move forward?
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Strategic planning process



Strategic analytical tools

☐ Porters Five Forces

- Analysing the competitive environment
- What influences (or may) our competitiveness

☐ PEST, PESTLE

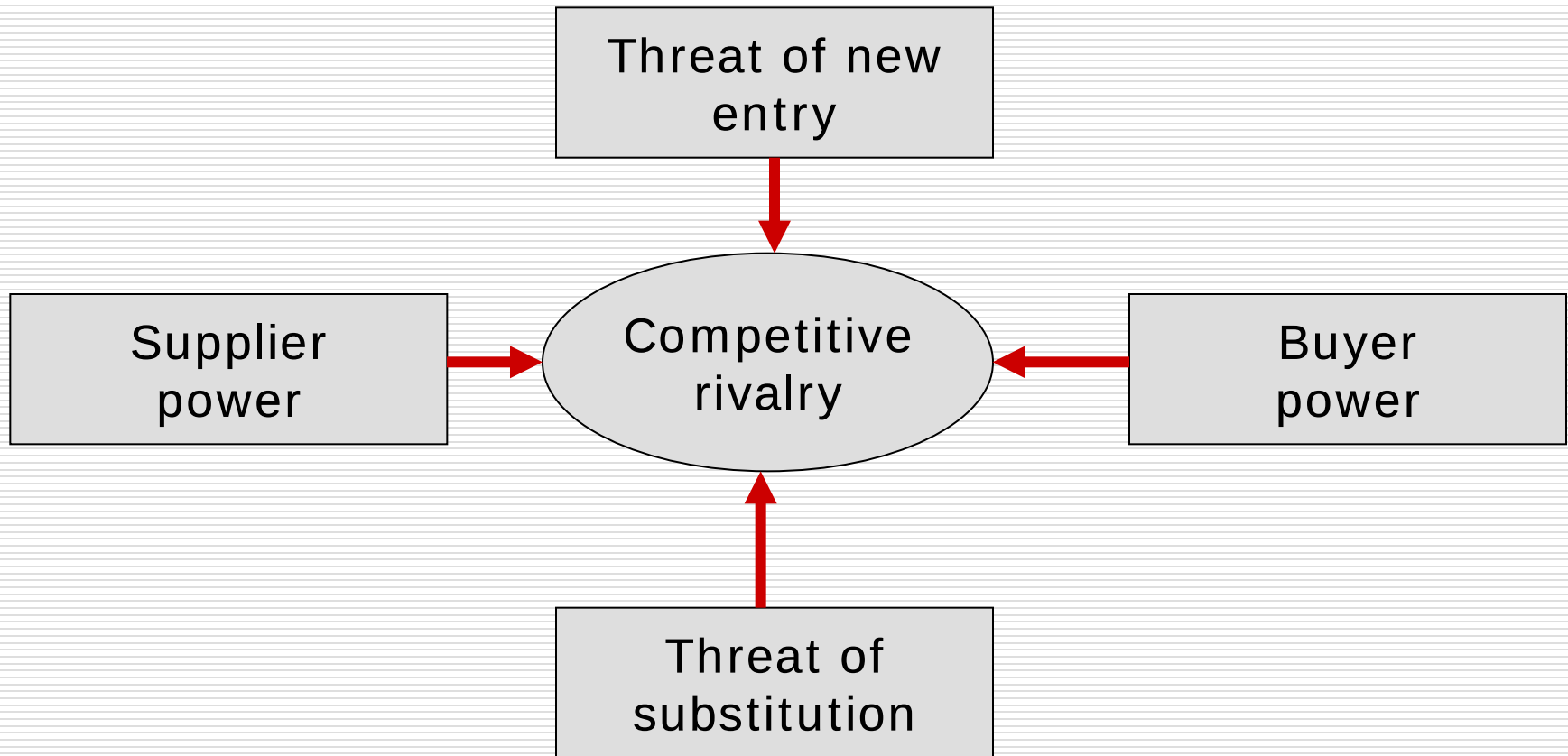
- Analysing the external macroenvironment
- What external factors could influence our business

☐ SWOT

- Analysing where we are now
 - Indicating how we should change
-

Porters five forces

Analysis of competitive position



Norton Commando



Modec Van

MODEC AT WORK



Porters 5 forces –supplier power

Supplier Power:

Here you assess how easy it is for suppliers to drive up prices. This is driven by the number of suppliers of each key input, the uniqueness of their product or service, their strength and control over you, the cost of switching from one to another, and so on. The fewer the supplier choices you have, and the more you need suppliers' help, the more powerful your suppliers are.

Porters 5 forces –buyer power

Buyer Power:

Here you ask yourself how easy it is for buyers to drive prices down. Again, this is driven by the number of buyers, the importance of each individual buyer to your business, the cost to them of switching from your products and services to those of someone else, and so on. If you deal with few, powerful buyers, they are often able to dictate terms to you.

Porters 5 forces – competitive rivalry

Competitive Rivalry

What is important here is the number and capability of your competitors – if you have many competitors, and they offer equally attractive products and services, then you'll most likely have little power in the situation. If suppliers and buyers don't get a good deal from you, they'll go elsewhere. On the other hand, if no-one else can do what you do, then you can often have tremendous strength.

Porters 5 forces – Threat of substitution

Threat of Substitution

This is affected by the ability of your customers to find a different way of doing what you do – for example, if you supply a unique software product that automates an important process, people may substitute by doing the process manually or by outsourcing it. If substitution is easy and substitution is viable, then this weakens your power.

Porters 5 forces – Threat of new entry

Threat of New Entry

Power is also affected by the ability of people to enter your market. If it costs little in time or money to enter your market and compete effectively, if there are few economies of scale in place, or if you have little protection for your key technologies, then new competitors can quickly enter your market and weaken your position. If you have strong and durable barriers to entry, then you can preserve a favorable position and take fair advantage of it.

Porters 5 forces – example

Porter's Five Forces

Threat of New Entry:

- Time and cost of entry
- Specialist knowledge
- Economies of scale
- Cost advantages
- Technology protection
- Barriers to entry
- etc.

Threat of
New
Entry

Competitive Rivalry:

- Number of competitors
- Quality differences
- Other differences
- Switching costs
- Customer loyalty
- Costs of leaving market
- etc.

Supplier
Power

Competitive
Rivalry

Buyer
Power

Supplier Power:

- Number of suppliers
- Size of suppliers
- Uniqueness of service
- Your ability to substitute
- Cost of changing
- etc.

Threat of Substitution:

- Substitute performance
- Cost of change

Threat of
Substitution

Buyer Power:

- Number of customers
- Size of each order
- Differences between competitors
- Price sensitivity
- Ability to substitute
- Cost of changing
- etc.

Now let's do one

CCM GP450



London Taxi



McLaren P1



McLaren MP4-12C

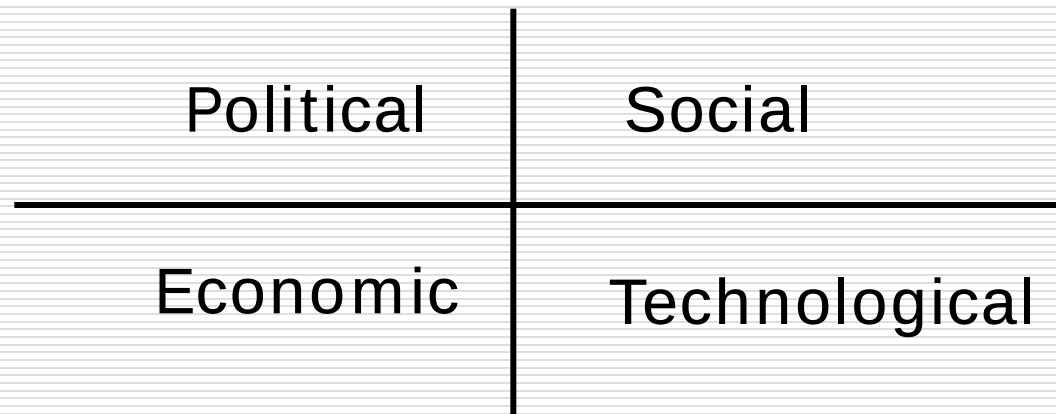


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PEST / STEP

Analysis of macroenvironment



An extension can be used **PESTLE**

Incorporating:

Legal
Environmental

PEST

Political

Political

ecological/environmental issues
current legislation home market
future legislation
European/international legislation
regulatory bodies and processes
government policies
government term and change
trading policies
funding, grants and initiatives
home market lobbying/pressure groups
international pressure groups
wars and conflict

PEST

Economic

Economic

home economy situation

home economy trends

overseas economies and trends

general taxation issues

taxation specific to product/services

seasonality/weather issues

market and trade cycles

specific industry factors

market routes and distribution trends

customer/end-user drivers

interest and exchange rates

international trade/monetary issues

PEST

Analysis of macroenvironment

Social

lifestyle trends

demographics

consumer attitudes and opinions

environmental awareness

ethical considerations

media views

law changes affecting social factors

brand, company, technology image

consumer buying patterns

fashion and role models

PEST

Analysis of macroenvironment

Technological

competing technology development

research funding

associated/dependent technologies

replacement technology/solutions

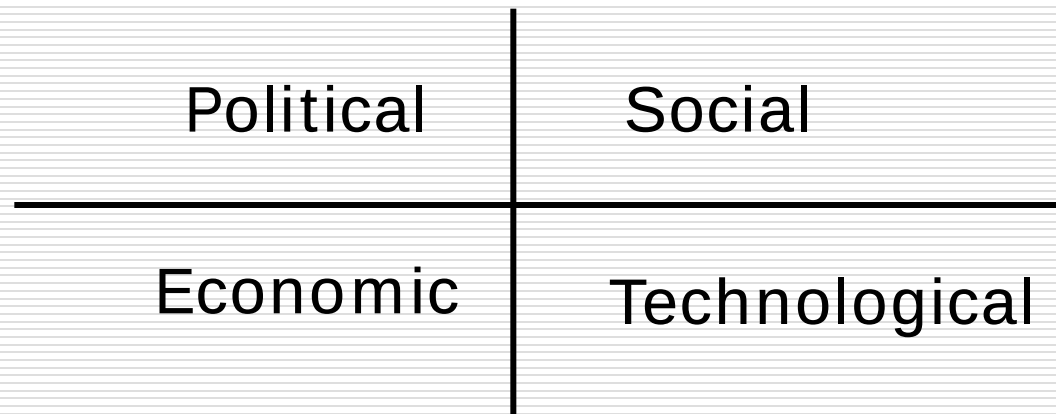
maturity of technology

manufacturing maturity and capacity

development of supplier technology

PEST / STEP

Analysis of macroenvironment



An extension can be used **PESTLE**

Incorporating:

Legal
Environmental

SWOT

Analysis of a business unit

Strengths	Weaknesses
Opportunities	Threats

A SWOT analysis is a very simple and universal technique and can also be used when comparing technological Solutions or assessing possible purchase/supplier decisions

SWOT - Strengths

Strengths

End-user sales control and direction.

Right products, quality and reliability.

Superior product performance vs competitors.

Better product life and durability.

Spare manufacturing capacity.

Some staff have experience of end-user sector.

Staff have specialist knowledge.

Direct delivery capability –dealer network.

Product innovations ongoing.

Can serve from existing sites.

Products have required accreditations.

Processes and IT should cope.

Management is committed and confident.

SWOT - Weaknesses

Weaknesses

Customer lists not tested.
Some gaps in range for certain sectors.
We would be a small player.
No direct marketing experience.
We cannot supply end-users abroad.
Need more sales people.
Limited budget.
No pilot or trial done yet.
Don't have a detailed plan yet.
Some staff need training.
Customer service staff need training.
Processes and systems, etc
Management cover insufficient.

SWOT - Opportunities

Opportunities

- Could develop new products.
- Local competitors have poor products.
- Profit margins will be good.
- End-users respond to new ideas.
- Could extend to overseas.
- New specialist applications.
- Can surprise competitors.
- Support core business economies.
- Could seek better supplier deals.
- Legislative changes pending

SWOT - Strengths

Threats

Legislation could impact.

Environmental effects would favour larger competitors.

Existing core business distribution risk.

Market demand very seasonal.

Retention of key staff critical.

Could distract from core business.

Possible negative publicity.

Vulnerable to reactive attack by major competitors.

Impatient investors

Engineering Management Business Strategy -conclusions

- ☐ Every organisation is affected by the environment in which it operates.
 - ☐ The external environment is forever changing
 - ☐ An organisation must be able to analyse the effects of the changing environment
 - ☐ An organisation will have to develop a strategy
 - ☐ An organisation will have to change
 - ☐ You will be part of these changes
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