Substitutes to Strategy

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Look at four of the most commonly adopted approaches to operations that are often used as 'substitutes for strategy'

- Total quality management

  - Lean operations

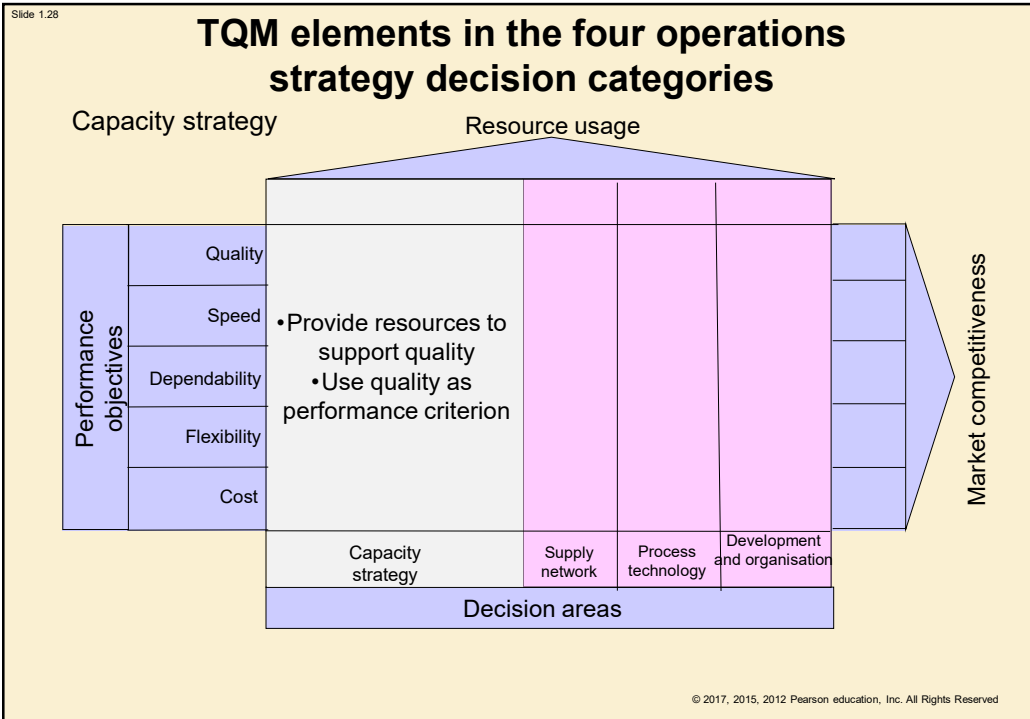- Business process reengineering

  - Six Sigma

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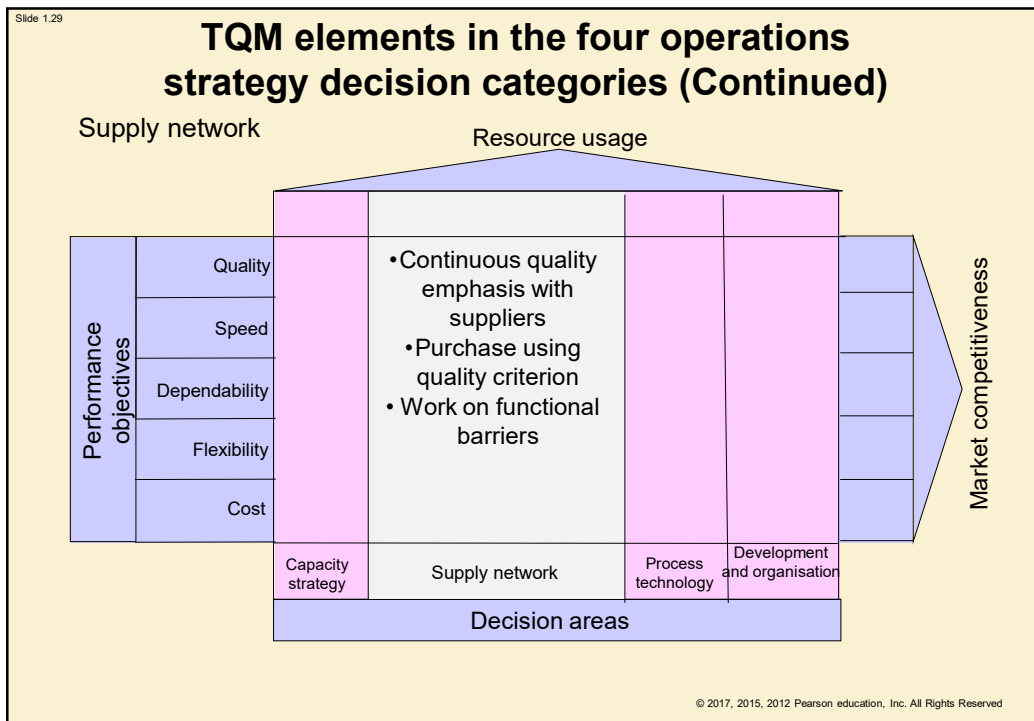# Feigenbaum (generally held to be the originator of the term) defines TQM as…

> *'An effective system for integrating the quality development, quality maintenance and quality improvement efforts of the various groups in an organisation so as to enable production and service at the most economical levels which allow for full customer satisfaction'.*

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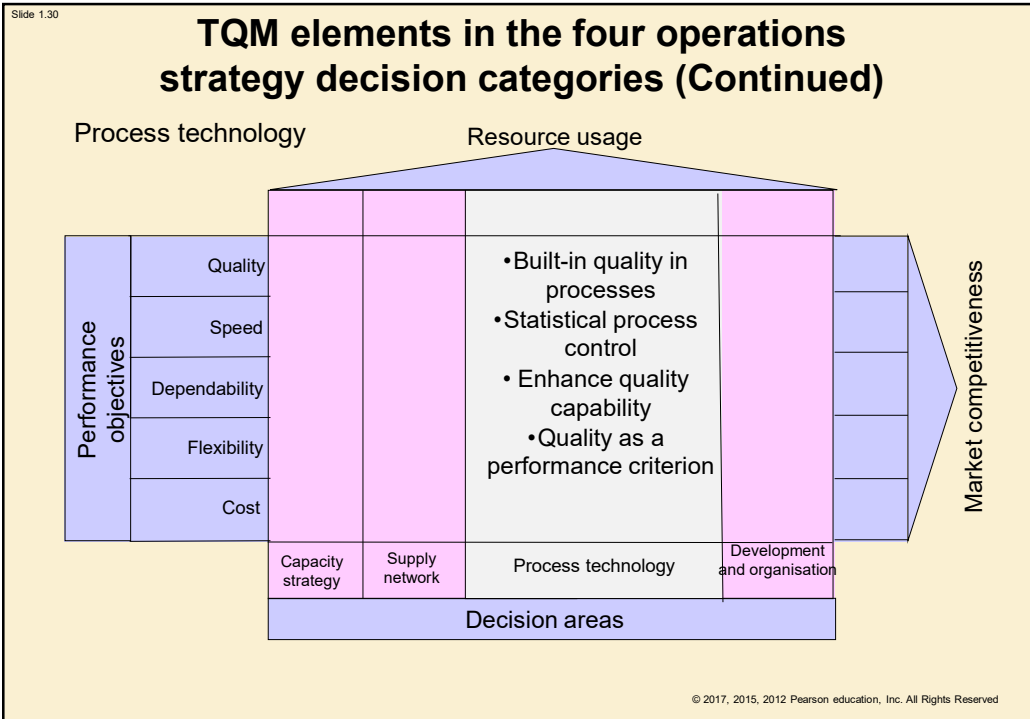# The elements of TQM

- Meeting the needs and expectations of customers
  - Covering all parts of the organisation
  - Including every person in the organisation
- Examining all costs that are related to quality, especially failure costs
- Getting things 'right first time', that is, designing-in quality rather than inspecting it in
- Developing the systems and procedures that support improvement.

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TQM elements in the four operations strategy decision categories

Capacity strategy

Resource usage

Performance objectives

| | | Quality |
| Speed |
| Dependability |
| Flexibility |
| Cost |

•Provide resources to support quality
•Use quality as performance criterion

Market competitiveness

| Capacity strategy | Supply network | Process technology | Development and organisation |

Decision areas

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TQM elements in the four operations strategy decision categories (Continued)

Supply network

Resource usage

Performance objectives

| Quality |
| Speed |
| Dependability |
| Flexibility |
| Cost |

•Continuous quality emphasis with suppliers
•Purchase using quality criterion
• Work on functional barriers

Market competitiveness

| Capacity strategy | Supply network | Process technology | Development and organisation |

Decision areas

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TQM elements in the four operations strategy decision categories (Continued)

Process technology

Resource usage

	Capacity strategy	Supply network	Process technology	Development and organisation
Performance objectives — Quality, Speed, Dependability, Flexibility, Cost			•Built-in quality in processes •Statistical process control • Enhance quality capability •Quality as a performance criterion	

Decision areas

Market competitiveness

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TQM elements in the four operations strategy decision categories (Continued)

Development and organisation

Resource usage

	Capacity strategy	Supply network	Process technology	Development and organisation
Performance objectives — Quality, Speed, Dependability, Flexibility, Cost				• Long-term plans • Quality culture • Continuous improvement • Quality performance measurement and control • Training and education emphasis • Operational supervision is important • Communication • Appropriate organisational structure

Decision areas

Market competitiveness

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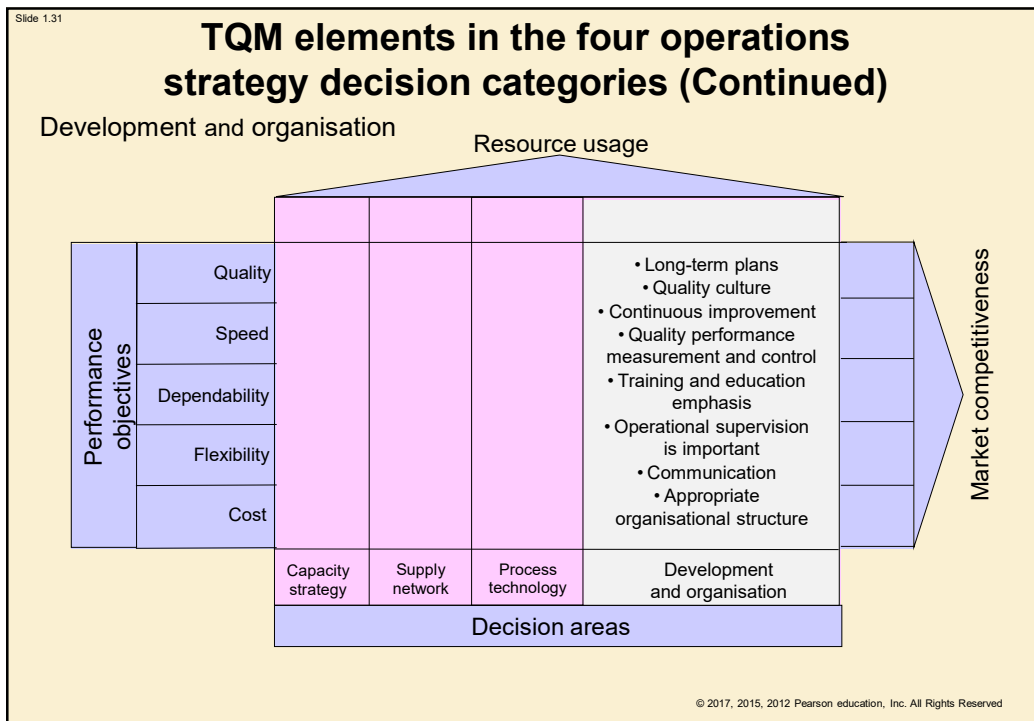
4

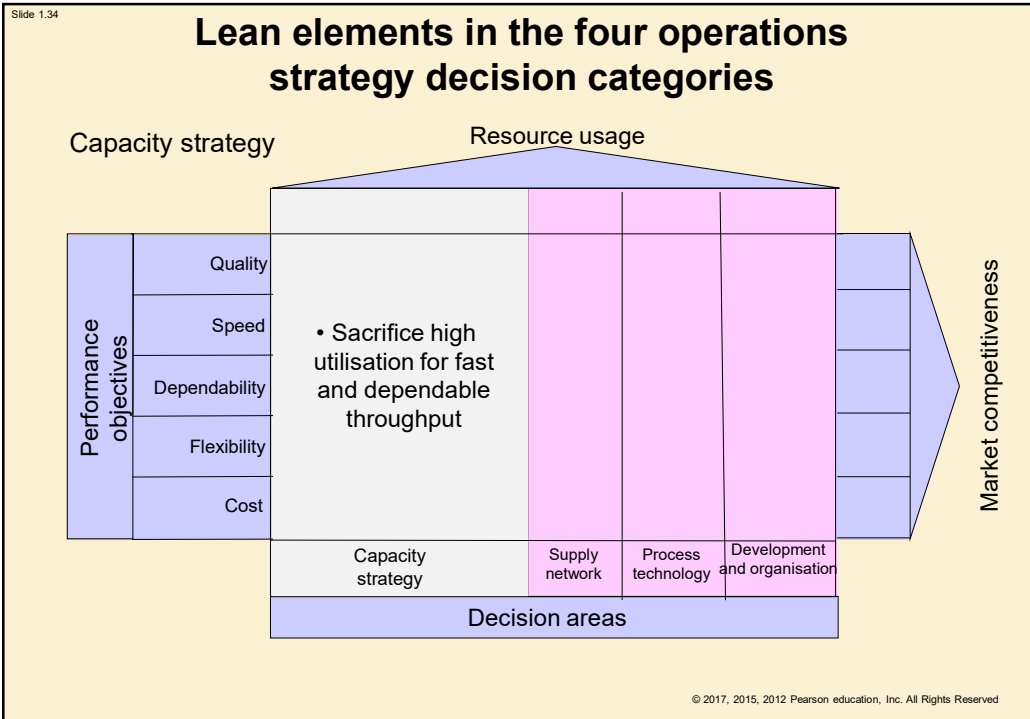# The lean approach aims to meet demand instantaneously, with perfect quality and no waste

It means that the flow of products and services always delivers…

- exactly what customers want (perfect quality);

- in exact quantities (neither too much nor too little);

- exactly when needed (not too early or too late);

- exactly where required (not to the wrong location);
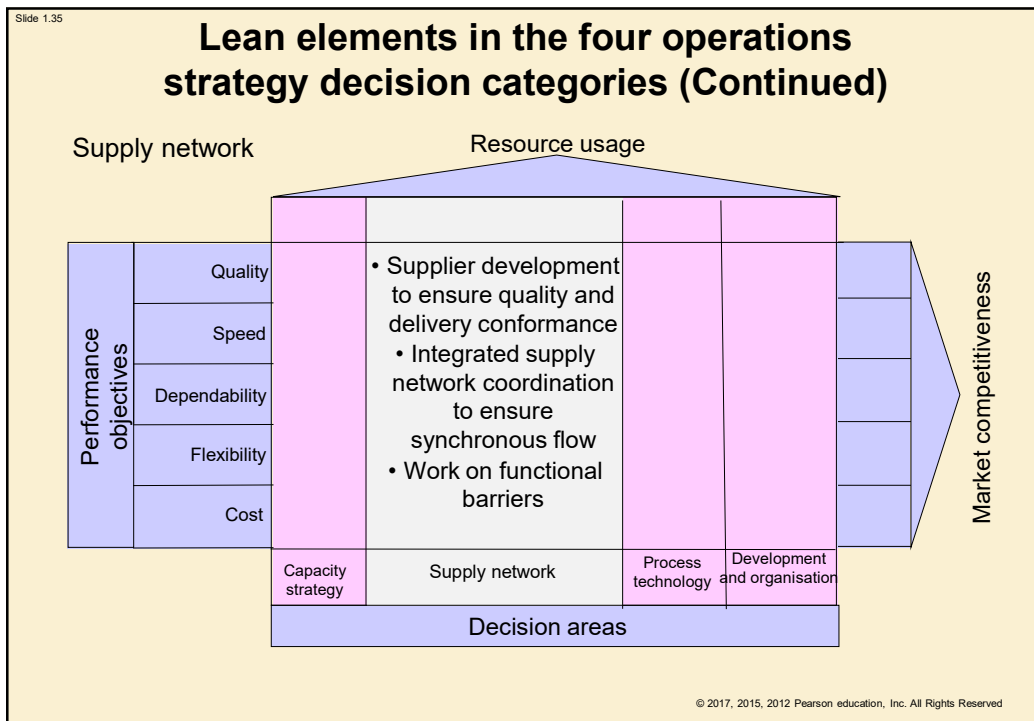
- at the lowest possible cost.

It results in items flowing rapidly and smoothly through processes, operations and supply networks.

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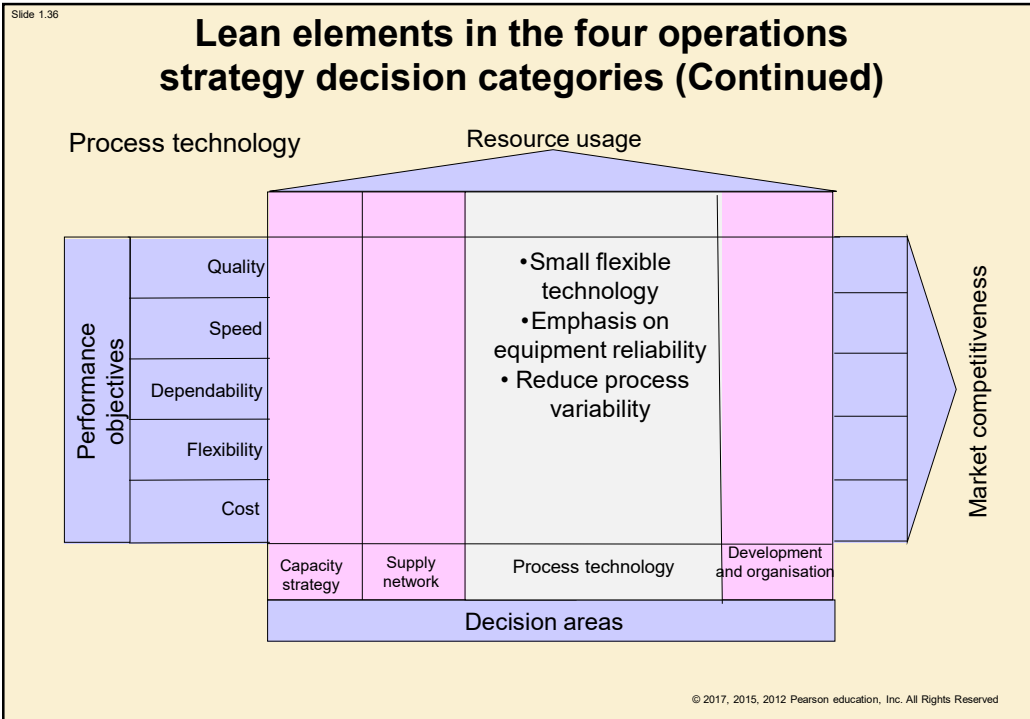# The lean approach to operations includes…

- Customer-based demand triggers

- Synchronised flow

- Enhanced improvement behaviour

    - Waste elimination

  - Waste from irregular flow

  - Waste from inexact supply

- Waste from inflexible response
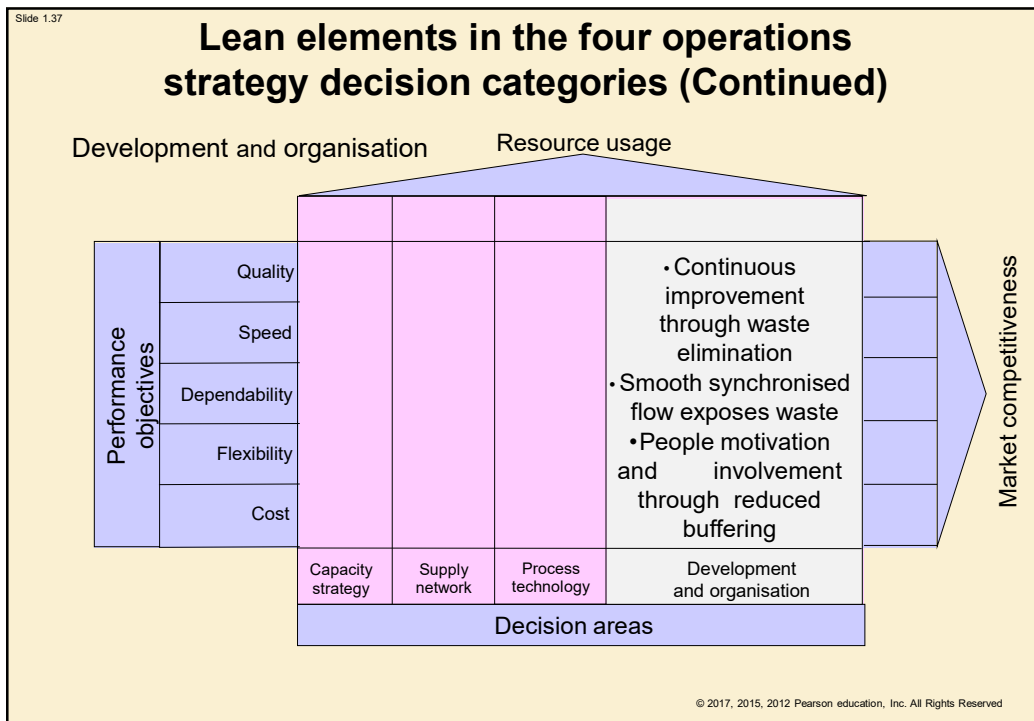
    - Waste from variability

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Slide 1.34

Lean elements in the four operations strategy decision categories

Capacity strategy

Resource usage

Performance objectives

- Quality
- Speed
- Dependability
- Flexibility
- Cost

- Sacrifice high utilisation for fast and dependable throughput

Capacity strategy | Supply network | Process technology | Development and organisation

Decision areas

Market competitiveness

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Slide 1.35

Lean elements in the four operations strategy decision categories (Continued)

Supply network

Resource usage

Performance objectives

- Quality
- Speed
- Dependability
- Flexibility
- Cost

- Supplier development to ensure quality and delivery conformance
- Integrated supply network coordination to ensure synchronous flow
- Work on functional barriers

Capacity strategy | Supply network | Process technology | Development and organisation

Decision areas

Market competitiveness

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Lean elements in the four operations strategy decision categories (Continued)

Process technology

Resource usage

Performance objectives
- Quality
- Speed
- Dependability
- Flexibility
- Cost

- Small flexible technology
- Emphasis on equipment reliability
- Reduce process variability

Market competitiveness

Decision areas
- Capacity strategy
- Supply network
- Process technology
- Development and organisation

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Lean elements in the four operations strategy decision categories (Continued)

Development and organisation

Resource usage

Performance objectives
- Quality
- Speed
- Dependability
- Flexibility
- Cost

- Continuous improvement through waste elimination
- Smooth synchronised flow exposes waste
- People motivation and involvement through reduced buffering

Market competitiveness

Decision areas
- Capacity strategy
- Supply network
- Process technology
- Development and organisation

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What is BPR?

BPR has been defined as…

'… the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed.'

Hammer, M. and Champy, J. (1993) *Reengineering the Corporation: A manifesto for business revolution.* New York: Harper Business.

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BPR advocates reorganising (reengineering) processes to reflect the natural 'end-to-end' processes that fulfill customer needs

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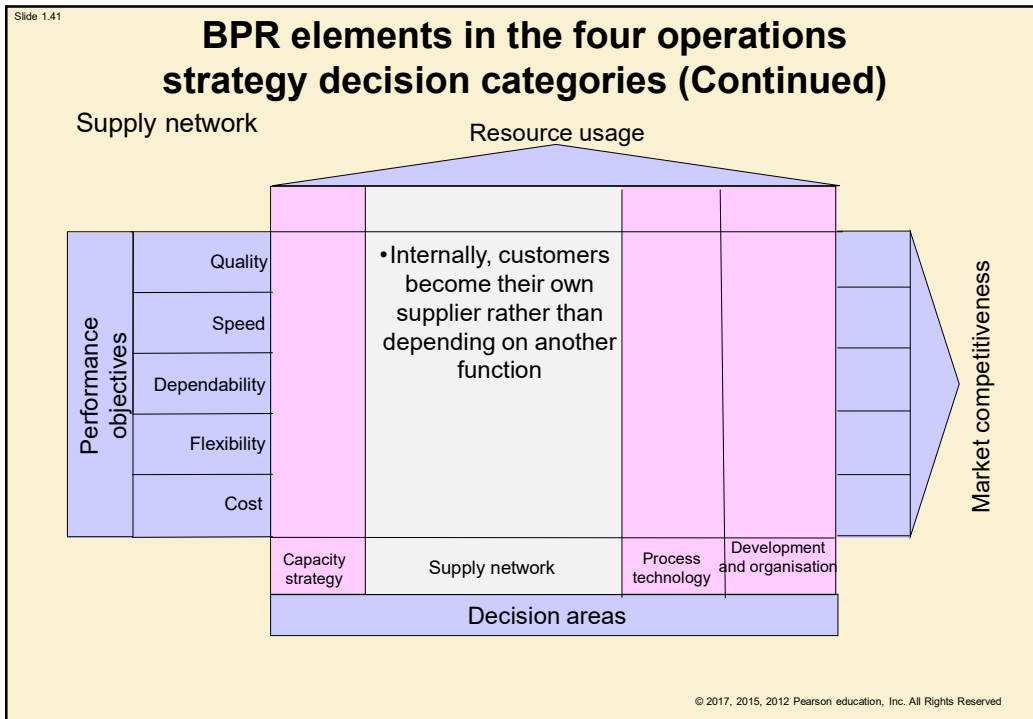# BPR elements in the four operations strategy decision categories

Capacity strategy

Resource usage

Performance objectives
- Quality
- Speed
- Dependability
- Flexibility
- Cost

•Balance capacity across end-to-end processes

Market competitiveness

| Capacity strategy | Supply network | Process technology | Development and organisation |

Decision areas

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BPR elements in the four operations strategy decision categories (Continued)

Supply network

Resource usage

Performance objectives
- Quality
- Speed
- Dependability
- Flexibility
- Cost

•Internally, customers become their own supplier rather than depending on another function

Market competitiveness

| Capacity strategy | Supply network | Process technology | Development and organisation |

Decision areas

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BPR elements in the four operations strategy decision categories (Continued)

Process technology

Resource usage

Performance objectives
- Quality
- Speed
- Dependability
- Flexibility
- Cost

•Information technology is an enabler of cost reduction

Market competitiveness

| Capacity strategy | Supply network | Process technology | Development and organisation |

Decision areas

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BPR elements in the four operations strategy decision categories (Continued)

Development and organisation

Resource usage

Performance objectives
- Quality
- Speed
- Dependability
- Flexibility
- Cost

•Locate decision making at the lowest practical level
•Rethink business processes in a cross-functional manner
•Dramatic cost reductions can come from the elimination of unnecessary process steps

Market competitiveness

| Capacity strategy | Supply network | Process technology | Development and organisation |

Decision areas

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What is Six Sigma?

Named because it requires the natural variation of processes (3 standard deviations, or 'sigma') should be half their specification range.

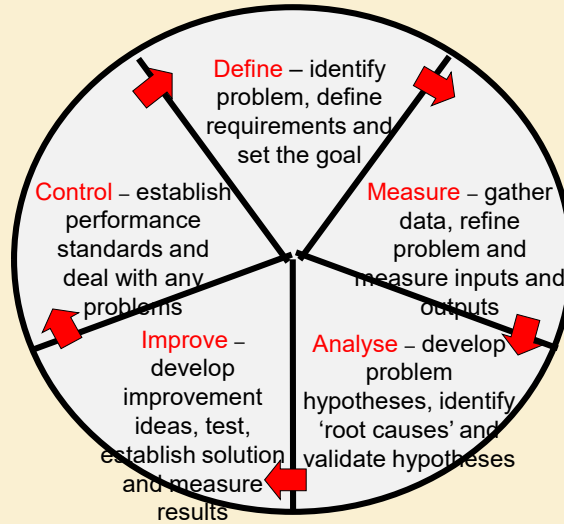So, the specification range of a product or service should be 6 standard deviation of the process.

Now the definition of Six Sigma has widened to be defined it as…

… a disciplined methodology of defining, measuring, analysing, improving and controlling the quality in every one of the company's products, processes and transactions – with the ultimate goal of virtually eliminating all defects.
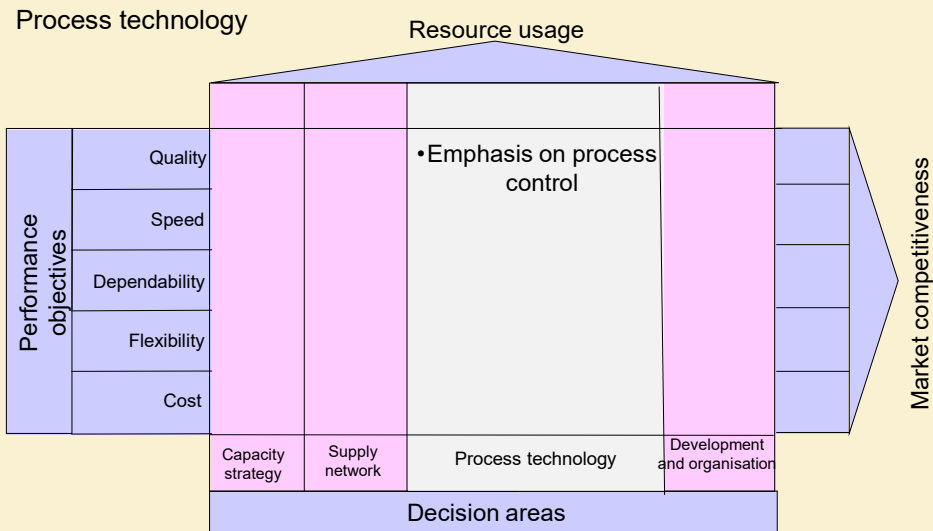
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The elements of Six Sigma

- Customer-driven objectives
- Use of evidence
- Structured improvement cycle
- Structured training and organisation of improvement
- Process capability and control
- Process design
- Process improvement

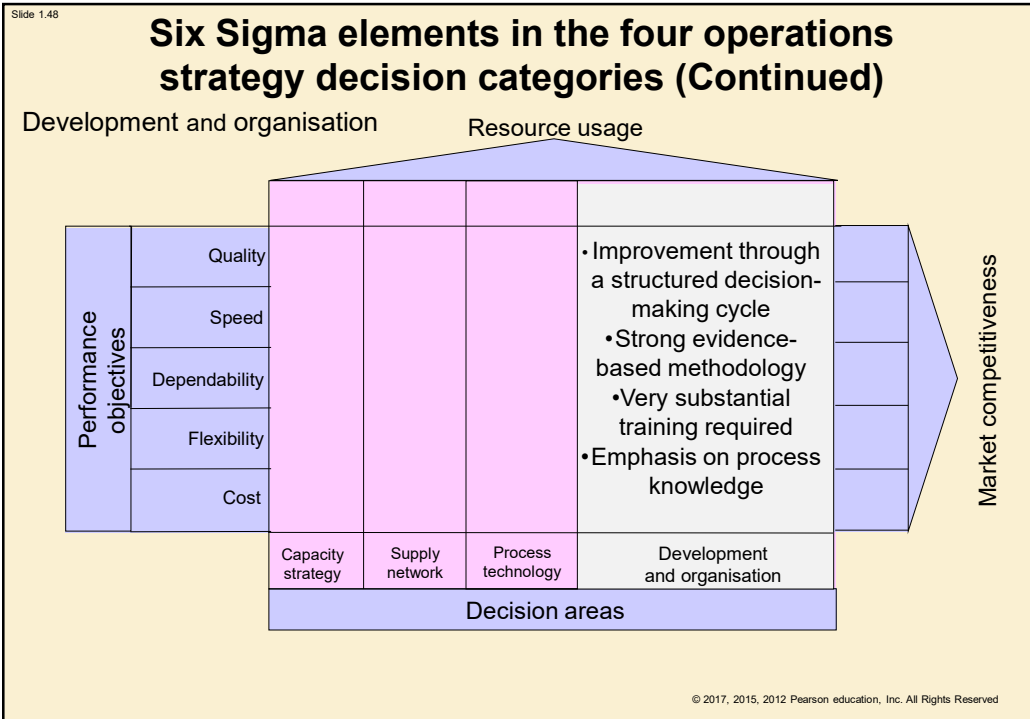45

The DMAIC cycle used in Six Sigma

Define – identify problem, define requirements and set the goal

Measure – gather data, refine problem and measure inputs and outputs

Analyse – develop problem hypotheses, identify 'root causes' and validate hypotheses

Improve – develop improvement ideas, test, establish solution and measure results

Control – establish performance standards and deal with any problems

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Six Sigma elements in the four operations strategy decision categories

Process technology

Resource usage

Performance objectives

- Quality
- Speed
- Dependability
- Flexibility
- Cost

•Emphasis on process control

Market competitiveness

Capacity strategy

Supply network

Process technology

Development and organisation

Decision areas

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Six Sigma elements in the four operations strategy decision categories (Continued)

Development and organisation   Resource usage

Performance objectives		Capacity strategy	Supply network	Process technology	Development and organisation	Market competitiveness
	Quality				• Improvement through a structured decision-making cycle • Strong evidence-based methodology • Very substantial training required • Emphasis on process knowledge	
	Speed					
	Dependability					
	Flexibility					
	Cost					

Decision areas

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Some points for discussion

- How much should one be influenced by the experiences of other organisations?
- Operations that rely on others to define what is 'best practice', are always limiting themselves to currently accepted methods of operating or currently accepted limits to performance.
- Best practice is not 'best' in the sense that it cannot be bettered, it is only 'best' in the sense that it is the best one can currently find.

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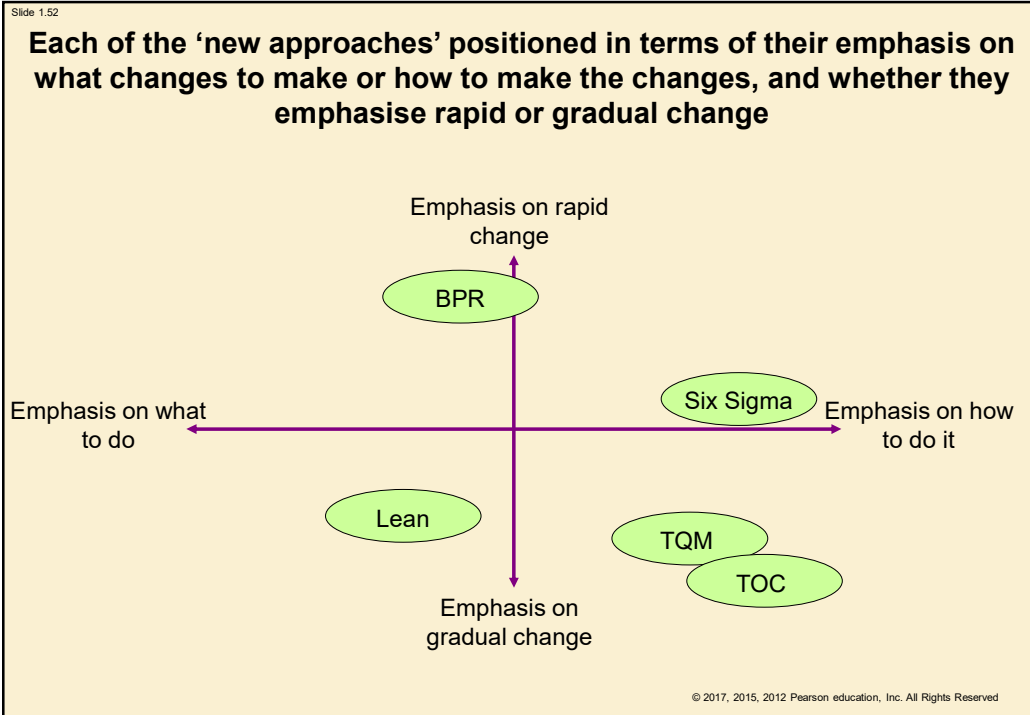## Some points for discussion (Continued)

- Senior managers sometimes use these new approaches without fully understanding them.
- If senior managers do not understand these approaches, how can the rest of the organisation take them seriously?
- The details of these approaches are not simply technical matters. They are fundamental to how appropriate the approach could be in different contexts.
- Not every approach fits every set of circumstances. So, understanding in detail what each approach means must be the first step in deciding whether it is appropriate.

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Some points for discussion (Continued)

- All these approaches are different.
- Does the approach emphasise a gradual, continuous approach to change, or a more radical 'breakthrough' change?
- What is the balance between whether the approach emphasises *what* changes should be made or *how* changes should be made?

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Each of the 'new approaches' positioned in terms of their emphasis on what changes to make or how to make the changes, and whether they emphasise rapid or gradual change

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Some points for discussion (Continued)

- These approaches are not strategies but they are strategic decisions.
- Operations strategy is the reconciliation of market requirements and operations resource capabilities.
- An individual enterprise's market requirements and operations resource capabilities are unique.
- Operations strategy is individual and specific to one organisation at one point in time, but these approaches are generic.
- They are an important part of a strategy, but not strategies in themselves.

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