

wbs

WARWICK BUSINESS SCHOOL
THE UNIVERSITY OF WARWICK

**For the
Open
Minded**

Week 1: Creating Value with Operations

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So, what's an Operation?

Operations are everywhere...

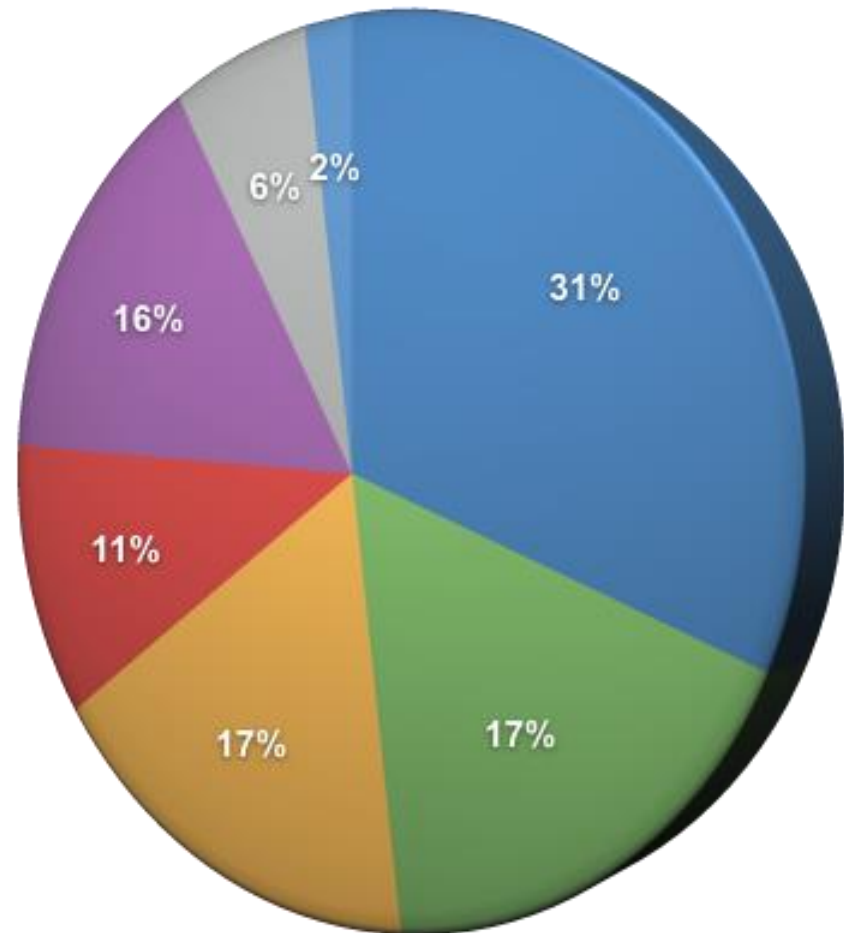
- ⦿ Look around...
- ⦿ Everything you can see...
- ⦿ Every service or product you consumed today...
- ⦿ Operations 'managers' were involved.



The operations function is fashionable...

When organisations spend money on consultancy, this is how they spend it:

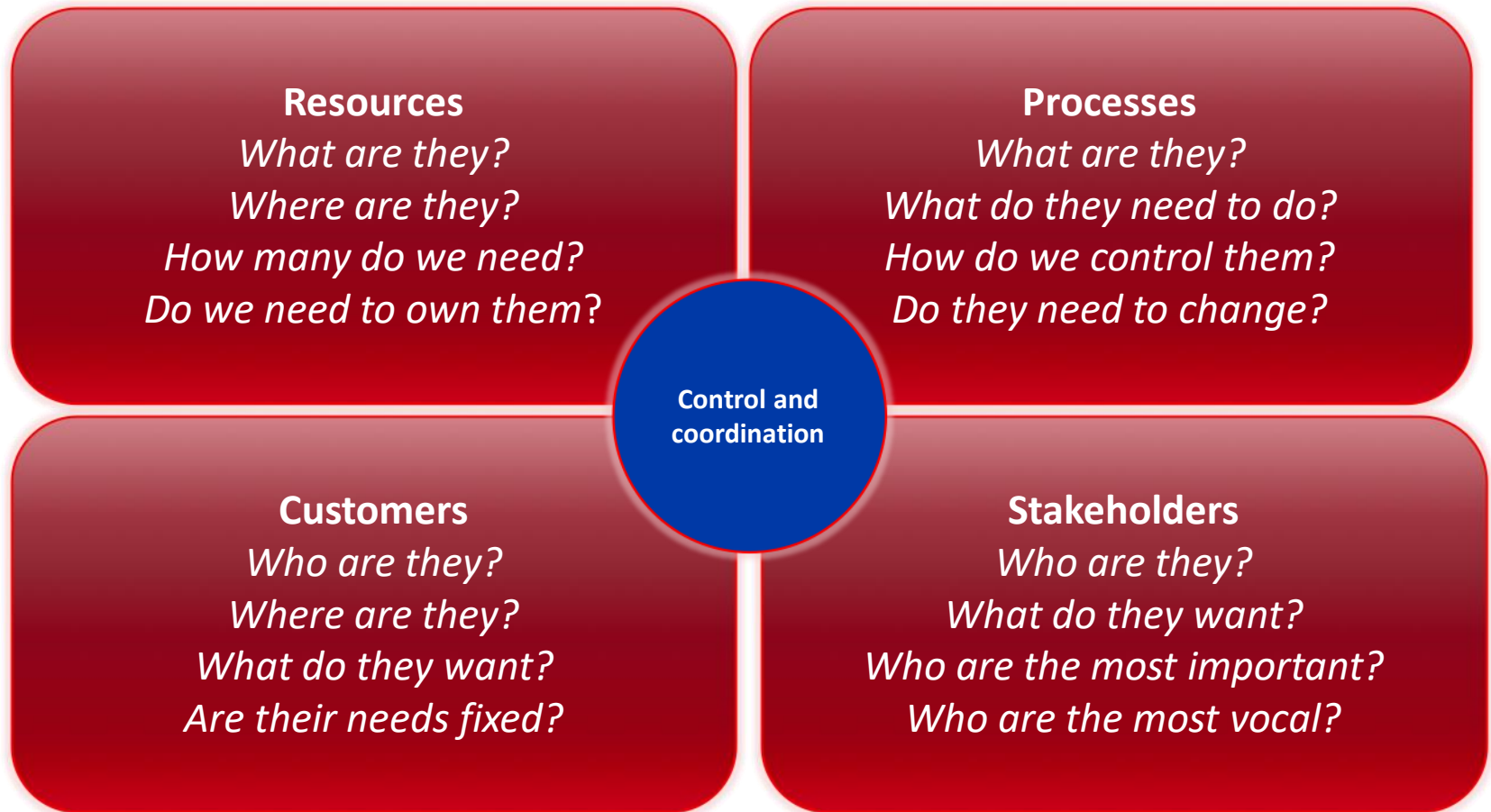
- operations and process management
- corporate strategy
- IT strategy
- Organisational design
- benefits / actuarial
- financial
- marketing / sales



Operations Management is...

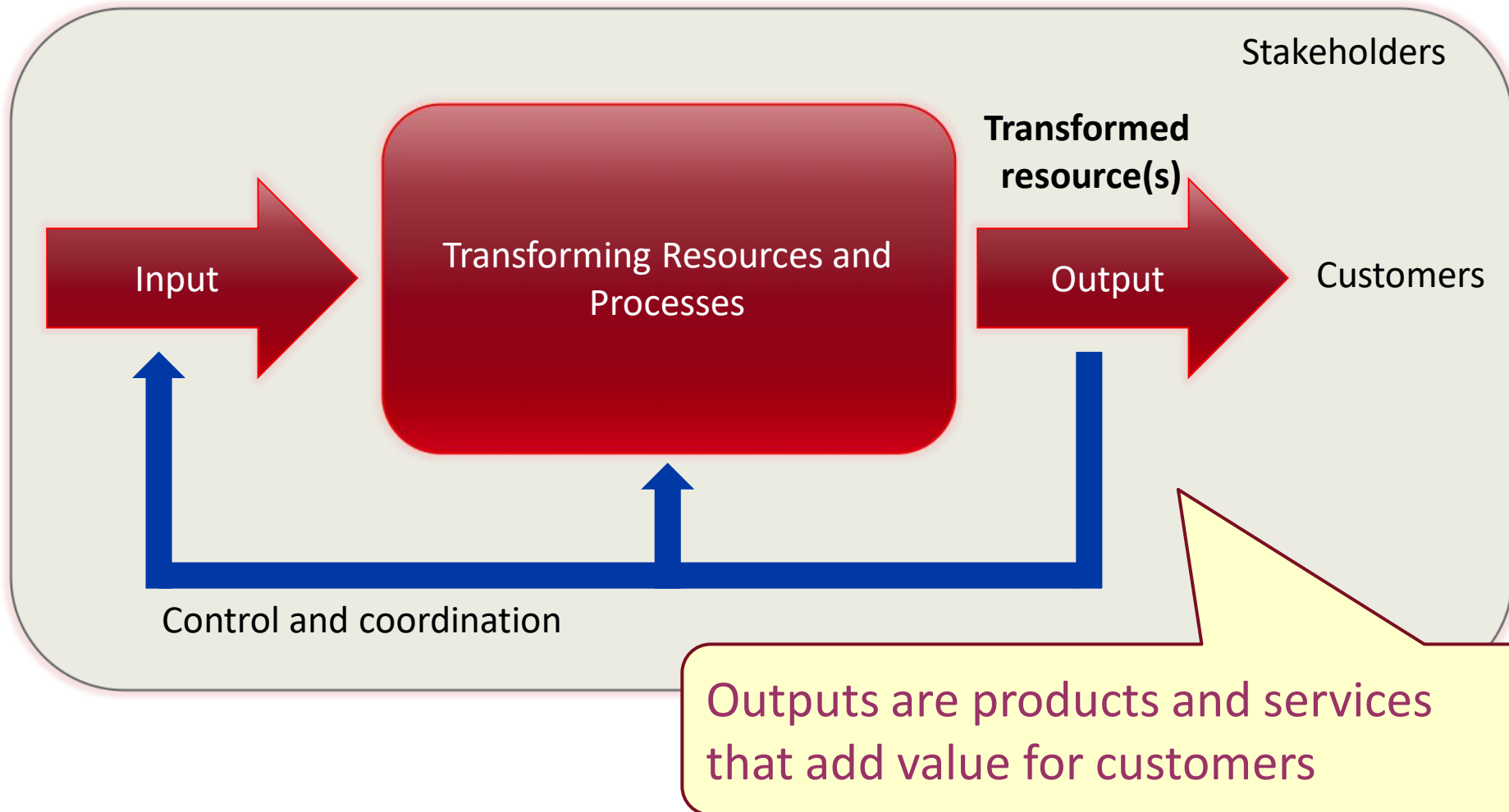
*The design, control and coordination of resources and processes to provide customer and stakeholder **value**.*

Now, let's deconstruct that...



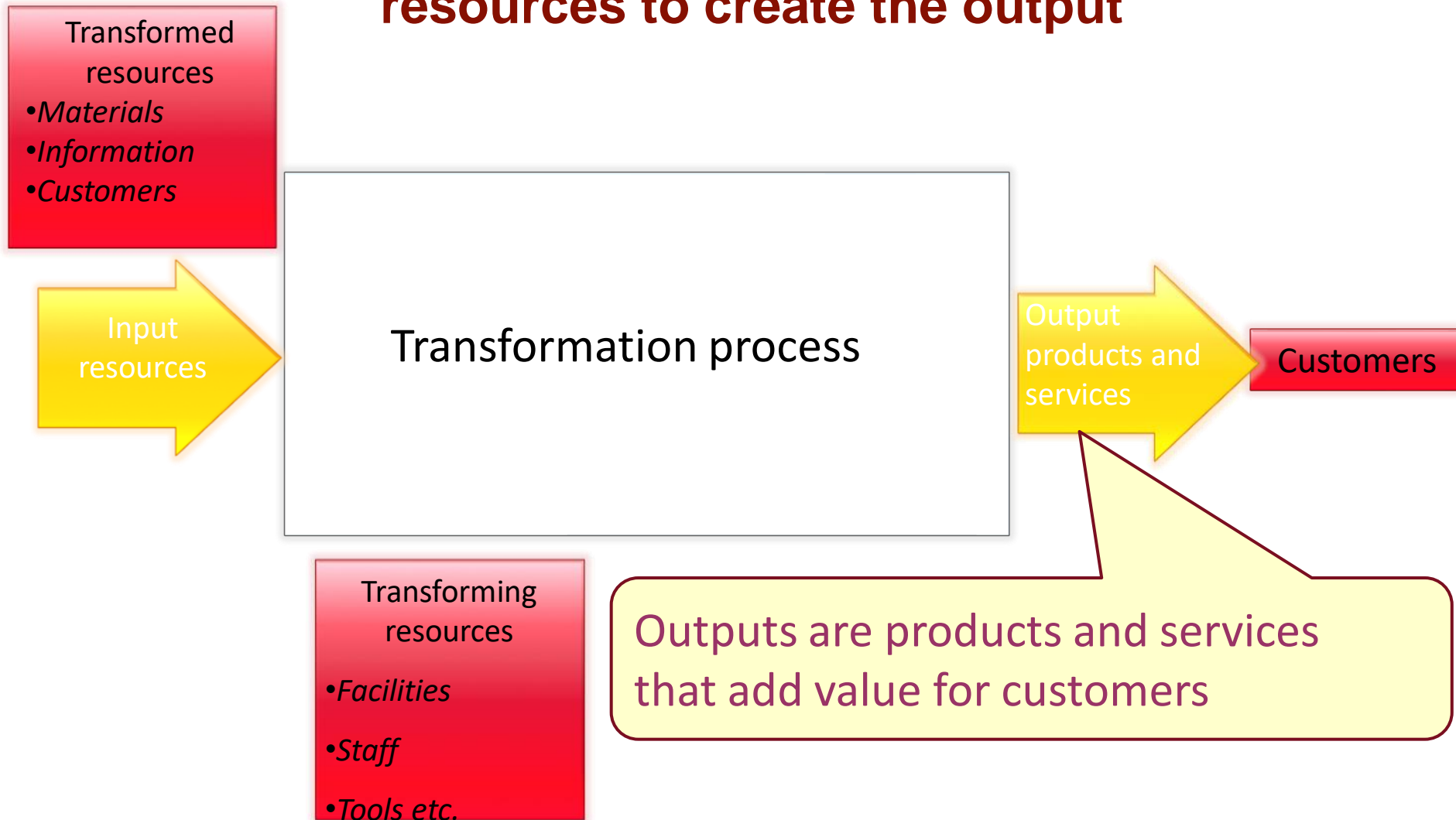
**So, is there a simple model of
an Operation?**

Operations principle – operations transform inputs into outputs of products / services

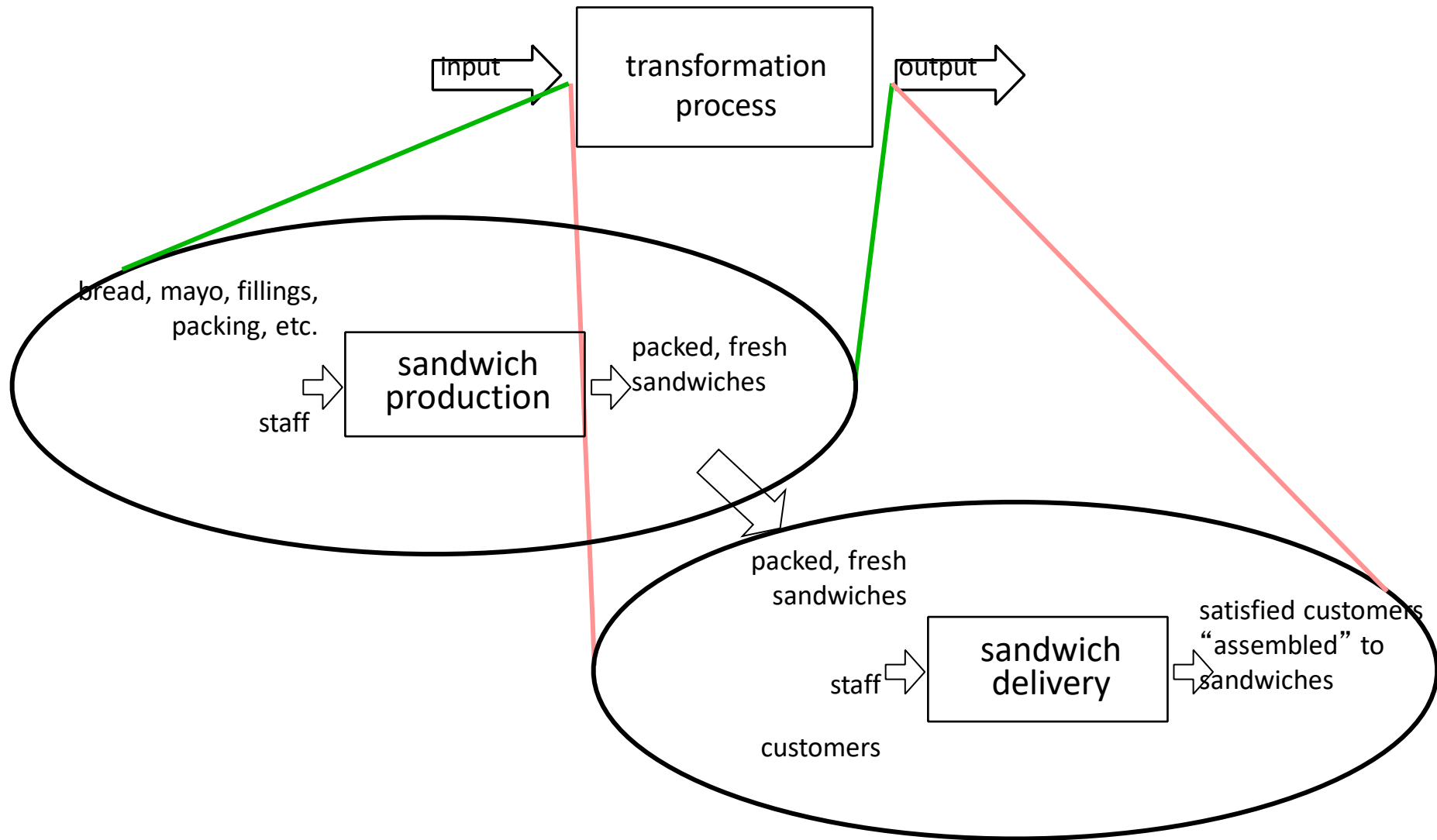


Transformed resources are the “input”

Transforming resources act on the “transformed” (input) resources to create the output

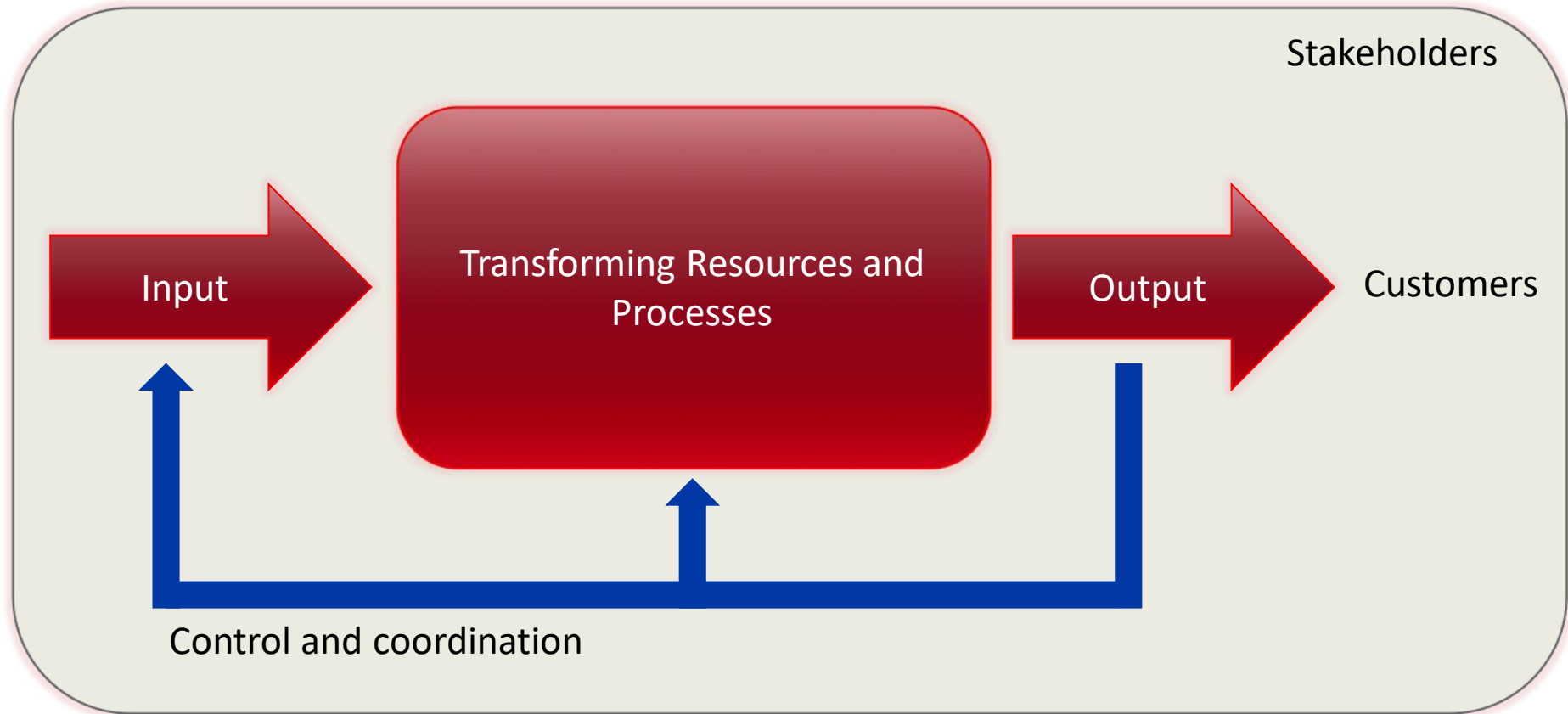


An example: The two main processes at Pret a Manger...



What are the resources, processes, inputs, outputs and transformation here?





What are the resources, processes, inputs, outputs and transformation here? Transformed and Transforming resources?



Recap

- ⦿ Operations can be considered as having inputs, processes, resources and outputs.
- ⦿ Consider what are the transformed resources and what are the transforming resources.

What are the characteristics of an Operation?

Operations have 4 V's:

- ◎ The Volume of their output.
- ◎ The Variety of their output.
- ◎ The Variation in the demand for their output.
- ◎ The degree of Visibility which customers have of the creation of their output.

Reducing effective variety...



An example operation to be analyzed: Dabbawallas



The Volume of their output.

Consider the following...





The Variety of their output.

Consider the following...





Extra Value Meals

Medium meals* from
Large meals* add



Chicken Legend⁺
with Spicy Tomato Salsa 515
or Cool Mays 550



6 Chicken McNuggets⁺ 250
Served with a choice of dip 40



Filet-O-Fish⁺ 350



Quarter Pounder⁺ 490
with Cheese



McChicken⁺ 385
Sandwich

A LA CARTE (SAMPLE)



STARTERS

Red Mullet Soup

Saffron rouille, garlic toasts £12

Red Wine Poached Duck Egg

Mushrooms, bacon, spinach, sour dough crisp, red wine sauce £11

Crispy Fried Pork Terrine

Violet mustard, peppery leaves, celeriac, pickled apple £11

Wild Cepe Mushroom Risotto

Parsley, chicken jus, parmesan £11

Citrus Cured Sustainable Sea Trout

Cucumber sorbet, radishes, buttermilk, dill £12

Charcoal Grilled Mackerel

Warm potato salad, pickled grelots, horseradish, watercress £11

MAIN COURSES

Pavé of Beef Sirloin & Braised Ox Cheek Pie

Grilled onions, carrots, beef fat mash, pickled walnut & ale sauce £30

Slow Cooked Pork Loin

Tiger prawns, crispy polenta, creamed sweetcorn & pepper fondue £27

Roast Guinea Fowl

Potato Terrine, green beans, girolles, pancetta, shallot & sherry vinegar jus £27

Cornish Cod Fillet

Chorizo, white beans, tomato, purple sprouting broccoli £26

Cornish Plaice

Romanesco, grapes, hazelnuts, crushed potato, verjus sauce £27

FROM THE GRILL



Hereford Rump Cap Steak £27

Sirloin on the bone £34

Both served with triple cooked chips, onion rings, green salad

The Variation in the demand for their output.

Consider the following...



Demand

January

Month

December



Demand

January

Month

December

The degree of Visibility which customers have of the creation of their output.

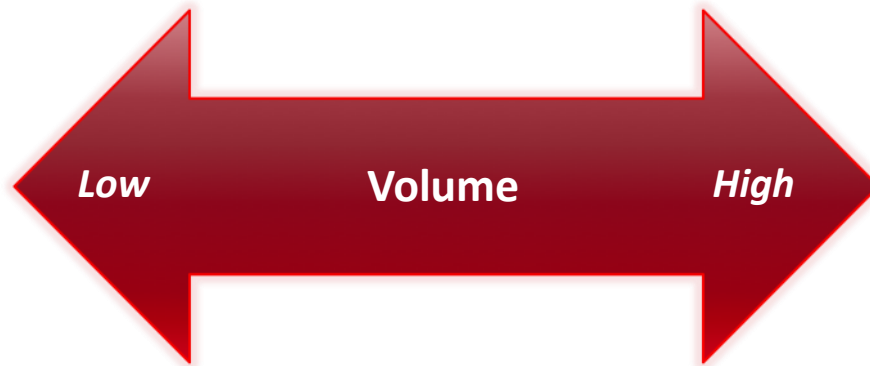
Consider the following...





The implications of Volume are...

- Low repetition
- Each member of staff performs more tasks
- Less systematization
- Higher unit costs



- Specialization
- Systematization
- Capital intensive
- Low unit costs

The implications of Variety are...

- Flexible
- Complex
- Match customer needs
- High unit costs



- Well defined
- Routine
- Standardized
- Regular
- Low unit costs

The implications of Variation in demand are...

- Changing capacity
- Anticipation
- Flexibility
- In touch with demand
- High unit costs



- Stable
- Routine
- Predictable
- High utilization
- Low unit costs

The implications of Visibility are...

- Short tolerance to waiting
- Satisfaction governed by customer perception
- Customer experience management critical
- Received variety is high
- High unit costs



- Time lag between production and consumption
- Standardized
- Low contact skills
- High staff utilization
- Centralization
- Low unit costs



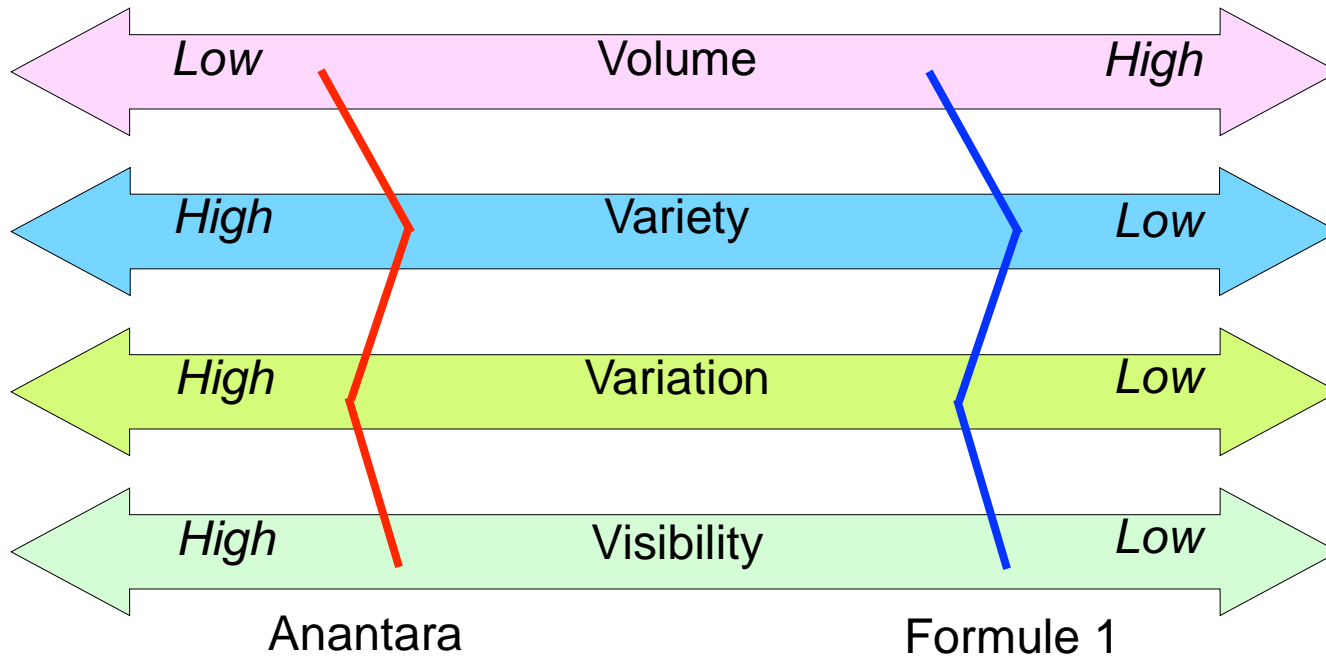


Anantara

BANGKOK • RIVERSIDE
RESORT & SPA



A 4 Vs profile of two operations



- Important to understand how different operations are positioned on the 4 V' s.
- Is their position where they want to be?
- Do they understand the strategic implications?

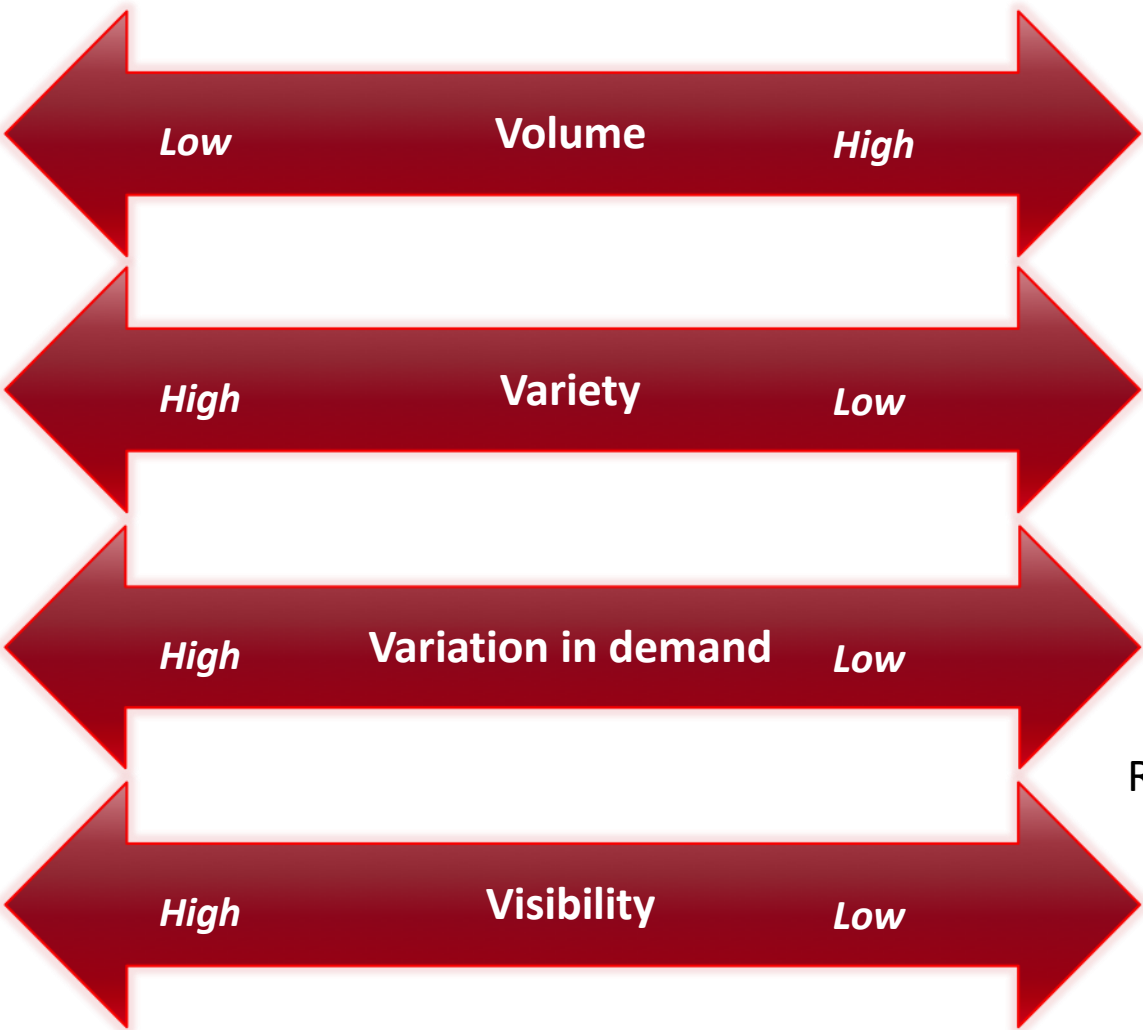
Draw the 4 Vs profile of two operations



Tailor made suits



Ready made suits



Recap

- ⦿ Operations are characterized by volume, variety, variation and visibility
- ⦿ These characteristics have wider implications that affect:
 - ⦿ Cost
 - ⦿ Efficiency
 - ⦿ Human resources
 - ⦿ ...and more.

How do we determine whether an Operation is delivering the value that the customer needs?

The five performance objectives are...

- ⊙ Doing it right...
 - Quality
- ⊙ Doing it fast...
 - Speed
- ⊙ Doing it on time...
 - Dependability
- ⊙ Doing different things...
 - Flexibility
- ⊙ Doing it cheaply...
 - Cost

Quality has different types...



SPECIFICATION



CONFORMANCE

Why is quality important?

- ◎ Quality reduces costs
- ◎ Quality increases dependability
- ◎ Quality leads to increased customer satisfaction
- ◎ Quality can lead to a price premium

What does quality mean here?



Two general types of “Quality” in operations

Quality as the *conformance* with which the product or service is produced

e.g. Fast food restaurants such as McDonalds may buy less expensive, standard meat.

Quality as the *specification* of a product or service

e.g. A high-end restaurant buy locally sourced organic meat from farmers

Why is speed important?

- ◎ Speed reduces inventories
- ◎ Speed reduces risks caused by demand variability
- ◎ Speed can create competitive advantage

What does speed mean here?



Why is dependability important?

- ⦿ Dependability saves time
- ⦿ Dependability saves money
- ⦿ Dependability gives stability

What does dependability mean here?



Why is flexibility important?

- ◎ Flexibility speeds up response
- ◎ Flexibility saves time
- ◎ Flexibility maintains dependability

What does flexibility mean here?



MINI MIX & MATCH

> MINI MIX & MATCH HOME

MINI COOPER CONVERTIBLE (AFTER 03/09)

The MINI Cooper Convertible allows you to open up to the world of Genuine MINI Accessories and be as creative as you wish. We've selected just a few accessories as a starting point. For the full range of accessories available visit your local MINI Dealer.



◀◀  MINI ONE (BEFORE 11/06)  MINI COOPER CONVERTIBLE (BEFORE 03/09)  MINI COOPER (AFTER 03/09) ▶▶

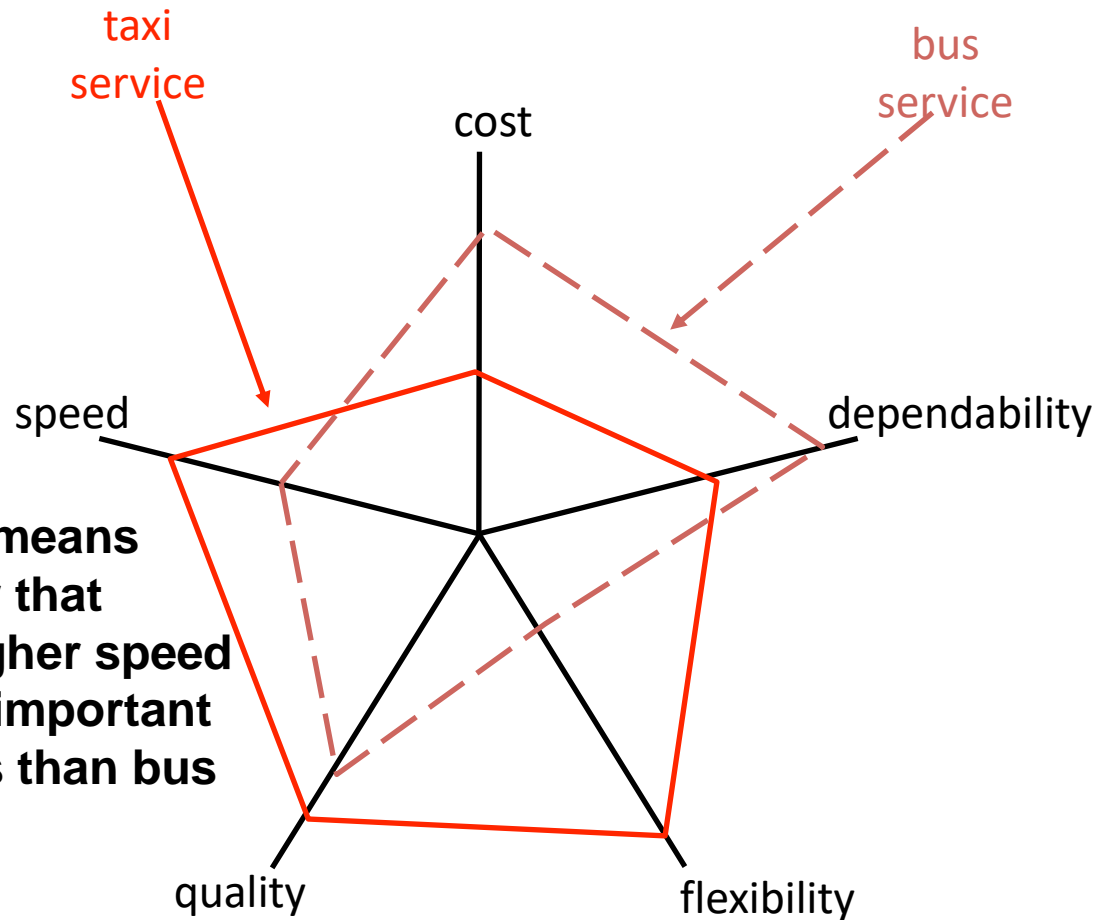
Flexibility has different types...

- *Product/service flexibility*: The products and services it brings to the market
- *Mix flexibility*: The mix of products & services it produces at any one time
- *Volume flexibility*: The volume of products and services it produces
- *Delivery flexibility*: The delivery time of its products and services

Why is cost important?

- ◎ It is how the vast majority of operations are measured
- ◎ Competition can be about price
- ◎ Firms exist to make profit - margin
- ◎ But... It is influenced by the other four performance objectives...

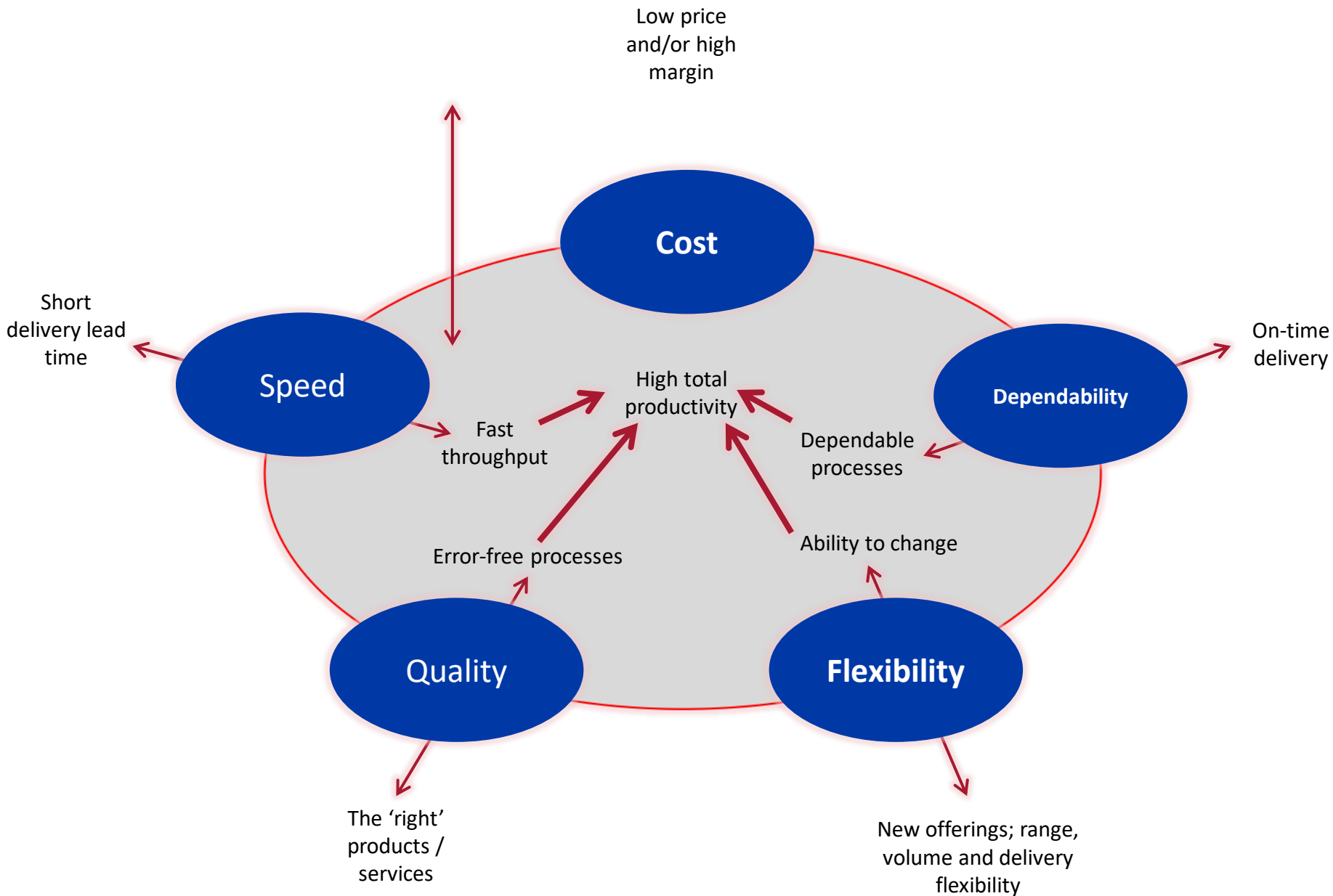
Polar diagrams indicate relative importance of each performance objective to operation/process



(closer to the text means More important for that Operation i.e. a higher speed operation is more important For taxi customers than bus commuters)

Please be clear that the cost dimension is reversed: high performance in terms of cost means low operational costs!

There are internal and external benefits and tradeoffs between the performance objectives...



Recap

- ⦿ There are five performance objectives
 - ⦿ Quality (specification vs. conformance)
 - ⦿ Speed
 - ⦿ Dependability
 - ⦿ Flexibility (product/service, mix/range, volume, delivery)
 - ⦿ Cost
- ⦿ Cost is a function of the previous for performance objectives
- ⦿ They bring internal and external benefits
- ⦿ There are trade-offs between them