

# The Brief

## Management Techniques for the Agribusiness.

“One specialist in futures market and one on Anti-trust Laws will be the other members . . . Although you are free to choose how you will address the subject, I think you should consider evaluating how the different operational research techniques are used to enhance agribusiness management.”



- Management & Operational Research?
- Relationship between OR and Management?
- Management Techniques - what are they?
- OR Techniques - do they have a future?



•Farm Management and Agri-business Management are, perhaps, “borrowers” when it comes to the use of OR techniques; possibly not a fair comment. Let us leave it till we come to the discussion part of the session.



“Management (from old French, 'the art of conducting, directing', from Latin 'to lead by the hand') ...



[is] the process of leading and directing all or part of an organisation, often a business, through the deployment and manipulation of resources (human, financial, material, intellectual or intangible).



“functionally [it is] the action of measuring a quantity on a regular basis and of adjusting some initial plan ... to reach one's intended goal”



“Operations research, operational research, or simply OR, is the use of mathematical models, statistics and algorithms to aid in decision-making.”



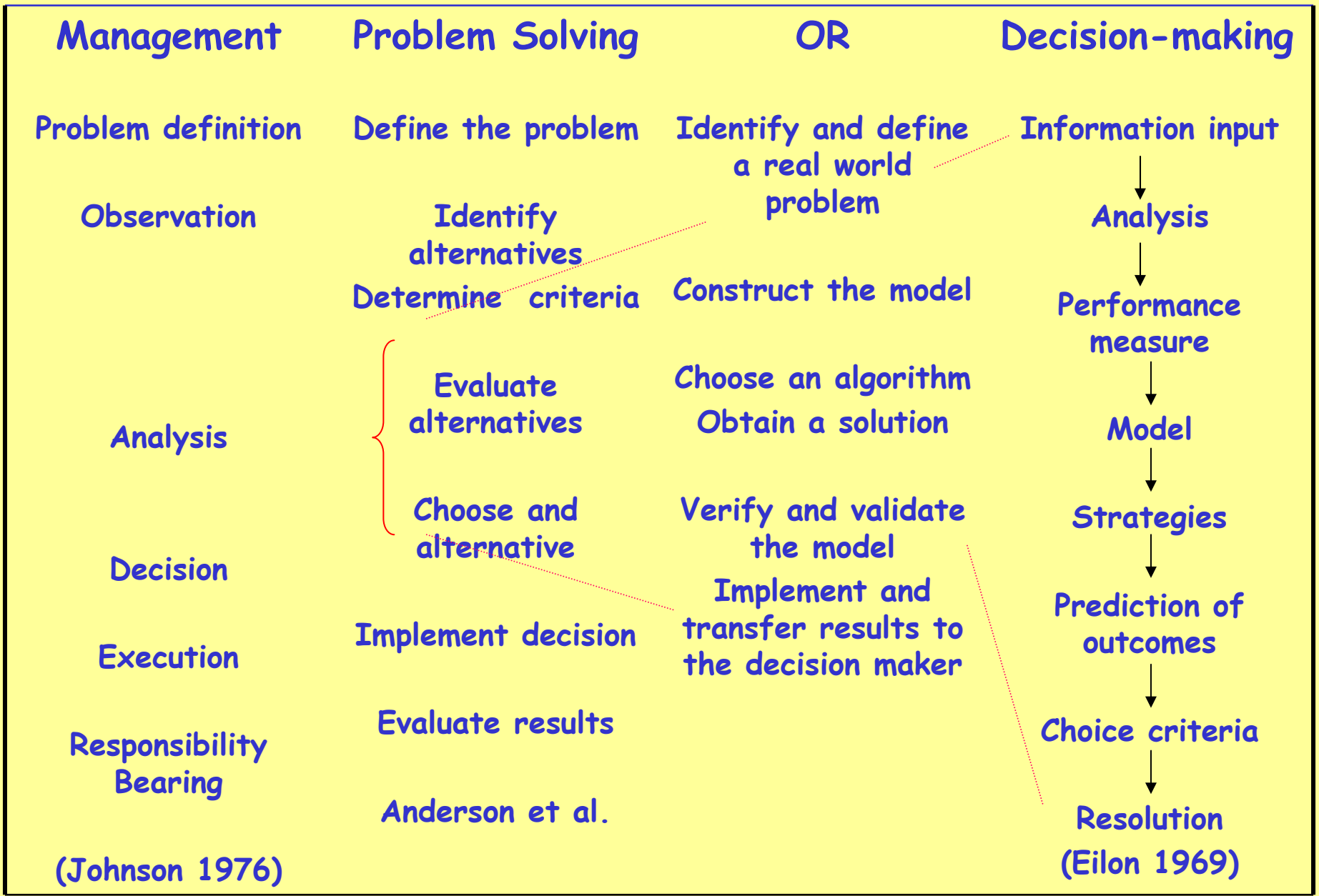
It is most often used to analyse  
complex real-world systems,  
typically with the goal of improving  
or optimising performance”



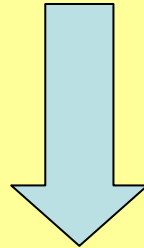


In short, OR supplies information and insights, gained through analysis, to decision-makers to improve their decision-making

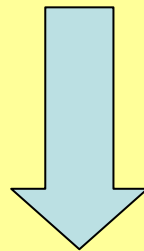




**Data  
&  
Information**



**Technique (s) of Analysis**



**Preferred Solution (a proposed course of action)**

**Intuition**

**"SIXTH SENSE"**

**Judgement**

**+**

**Data** → **Technique** → **Information** → **Evaluation of Alternatives** → **Decision**

**Preliminary Processing**

**Choice of techniques related to purpose**

**ANALYSIS**



**Core Concern for Management is  
Decision-making and for OR it is  
Analysis in order to improve  
Decision-making**



“Future” for the use of OR  
techniques in management:

“Future is past”



It seems to be a case of “re-discovering” some thorough bred horses from a rather large stable



But quite possibly the “tracks”  
in which those “horses” are to  
run are new and may even need  
to be developed anew





Propose to raise 5 questions,  
which will hopefully lead to  
some thought and discussion on  
the future use of OR  
techniques



**“How well is my business doing  
(performing), when compared to  
my peers?”**

**(Performance/Benchmarking)**

**In relation to some expectation**

# DEA

## Data Envelopment Analysis

### WHAT is it and WHY use it?



**“How ‘green’ is my business?”**

**DEA again!**

**WHY?**



"I have many things that I wish to achieve for my business, for my self. How do I work out what I give up and what are the 'trade offs' please?"

The MCDM framework!

Whatever is that, sounds rather unfamiliar?

**“What I hold dear (what is important to me) and makes me what I am and shapes my business, please will someone sort me out?”**

**“Before you give me advice, do you know me?”**



**Market is changing: consumers are concerned with food-safety, health care and some say they are becoming obsessed with obesity, is there anything there for agri-businesses to move into?**



# “Designer Diets”

Oh no! You are not talking about that enduring work-horse, Linear Programming? You **cannot be serious** that what we have learned in livestock diet formulation can help us move in this market? Oh yes, it can!

