MANCHESTER 1824

The University of Manchester

BMAN61102

GROUP PROJECT WORK

GROUP 3

- Kiousi, Maria
- Udoisang, Blessing Sunday
- Paraskevas, Eleftherios
- Wang, Shulin
- Filippou, Chrysostomos Georgios
- Sampigehalli Anand Murthy,Mahindra

MANCHESTER 1824

The University of Manchester

CONTENTS

- Introduction
- About the Group Project Work
- Problem Formulation
- Research and Modelling
- Results and Analysis
- Summary

MANCHESTER 1824

The University of Manchester

INTRODUCTION

Where it all began…

INTRODUCTION
The Case: TV & Internet Package

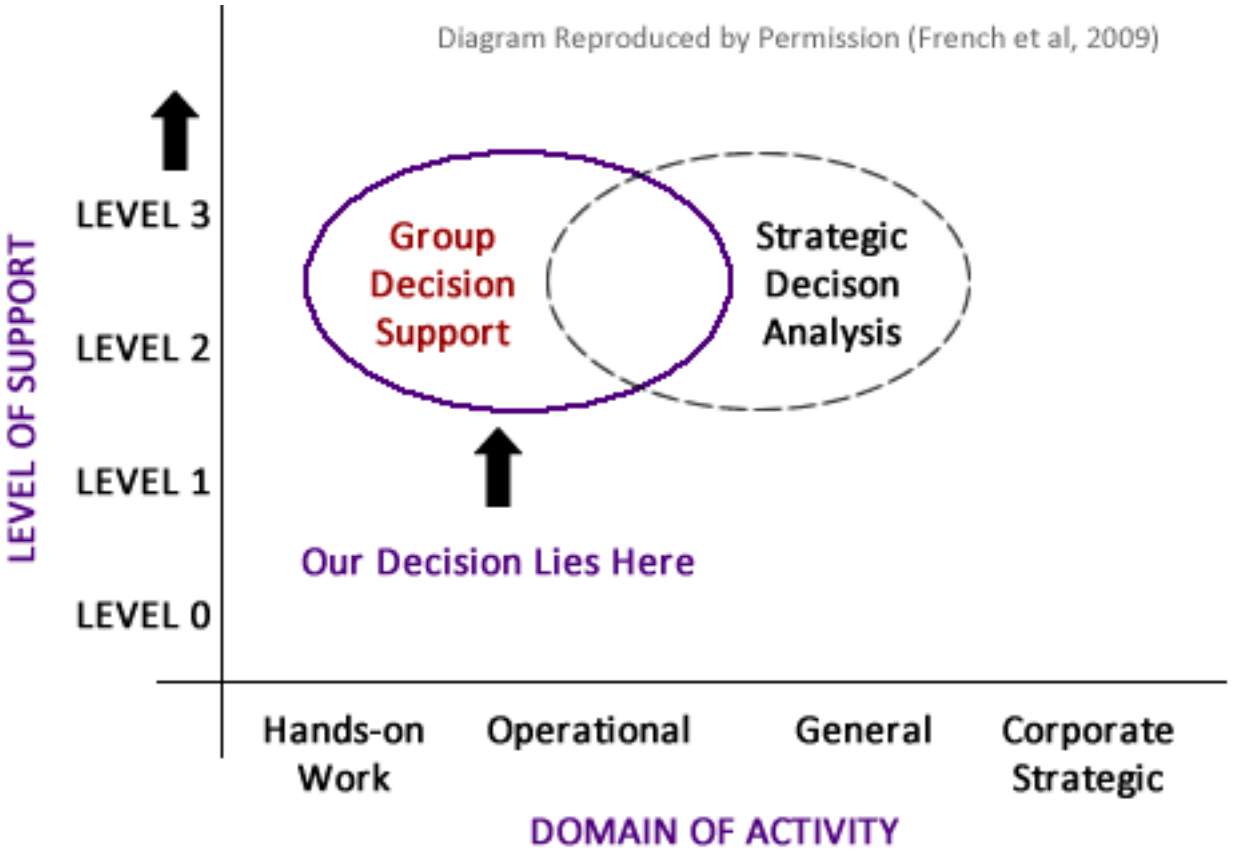
TASK

- Decide as a group, on how to provide TV and internet in our house

BACKGROUND

- A group of 7 students
- Just moved in and staying for 18 months
- No broadband or cable presently in the house
- One modern TV available from one of us with capacity to receive Freeview & Freesat

INTRODUCTION
Domain of Decision Making



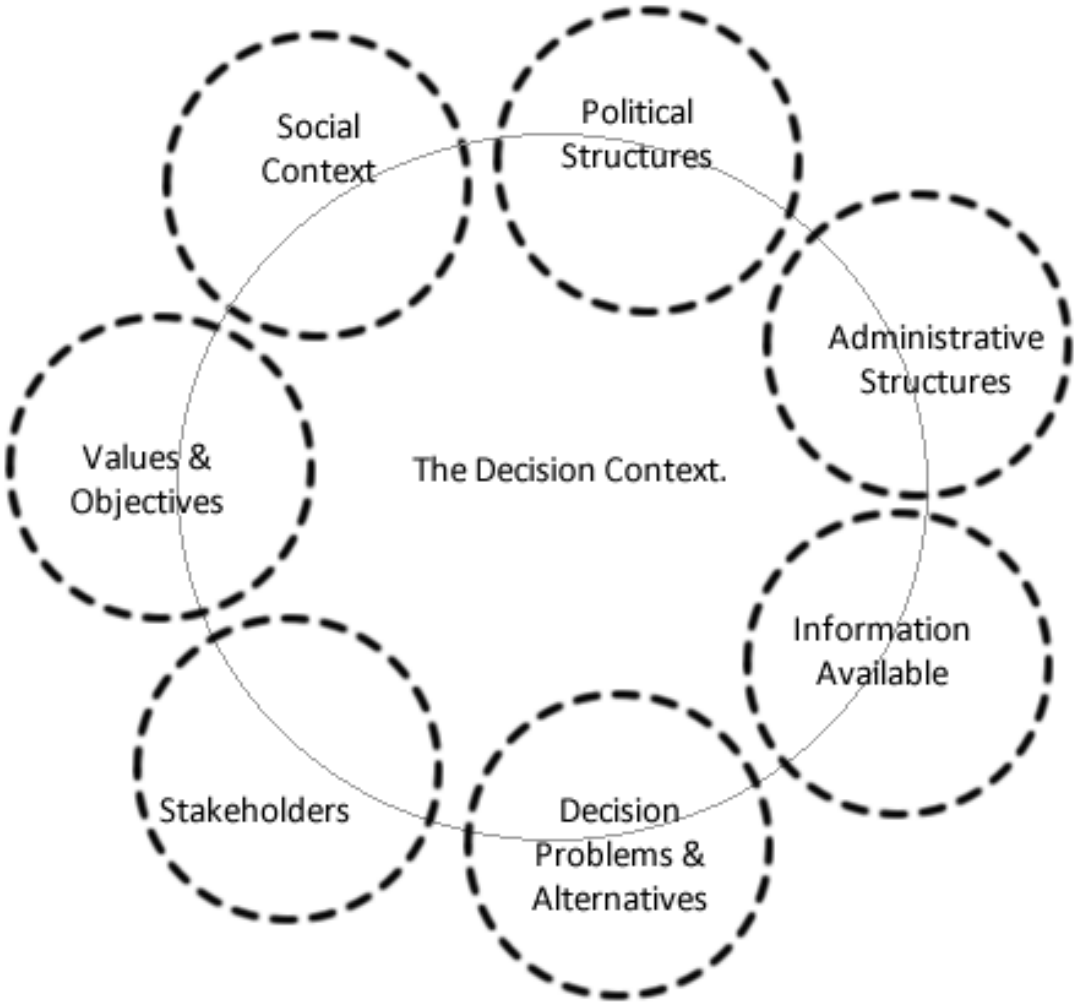
PROBLEM FORMULATION

Understanding what is to be done and deciding the best approach

PROBLEM FORMULATION
Overview of Tasks

- The Decision Context
- The Objectives
- The Decision alternatives
- Hierarchical Organisation of Objectives
- The Attributes

PROBLEM FORMULATION
The Decision Context - 1



PROBLEM FORMULATION
The Decision Context - 2

- **The Decision Problem**
  To Provide TV & Internet in the House.
- **The Decision Makers**
  The Group (Also responsible for the Consequences)
- **Decision Alternatives**
  See note below and Table of Alternatives Attached.
- **Our Values**
  Performance (high priority), Satisfaction, Entertainment, Prompt Attention

PROBLEM FORMULATION
The Decision Context - 3

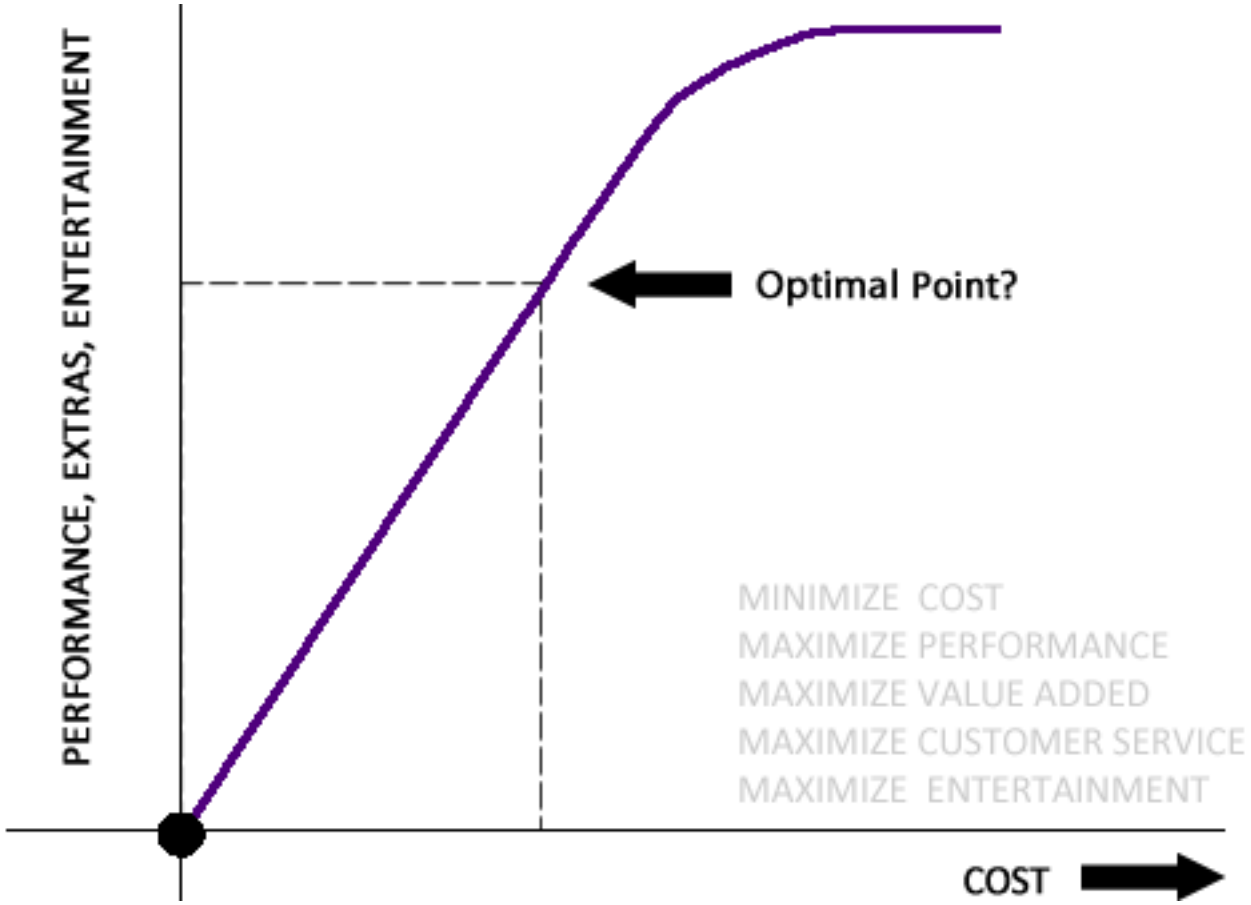
- **The Stakeholders**
  Friends, Course mates, Neighbours, Family, Tax Authorities, Licensing Authorities.
- **The Social Context**
  Differences in Opinions, Taste & Preferences; Differences in Demands
- **Information Sources**
  The Internet, Sales Brochures, Interviews, Sales Agents & Friends
- **Timespan of Discretion**
  Very Short, Almost Immediately

PROBLEM FORMULATION
The Objectives - 1

- MINIMIZE COST
- MAXIMIZE PERFORMANCE
- MAXIMIZE VALUE ADDED / EXTRAS
- MAXIMIZE CUSTOMER SERVICE
- MAXIMIZE ENTERTAINMENT

PROBLEM FORMULATION
The Objectives – 2

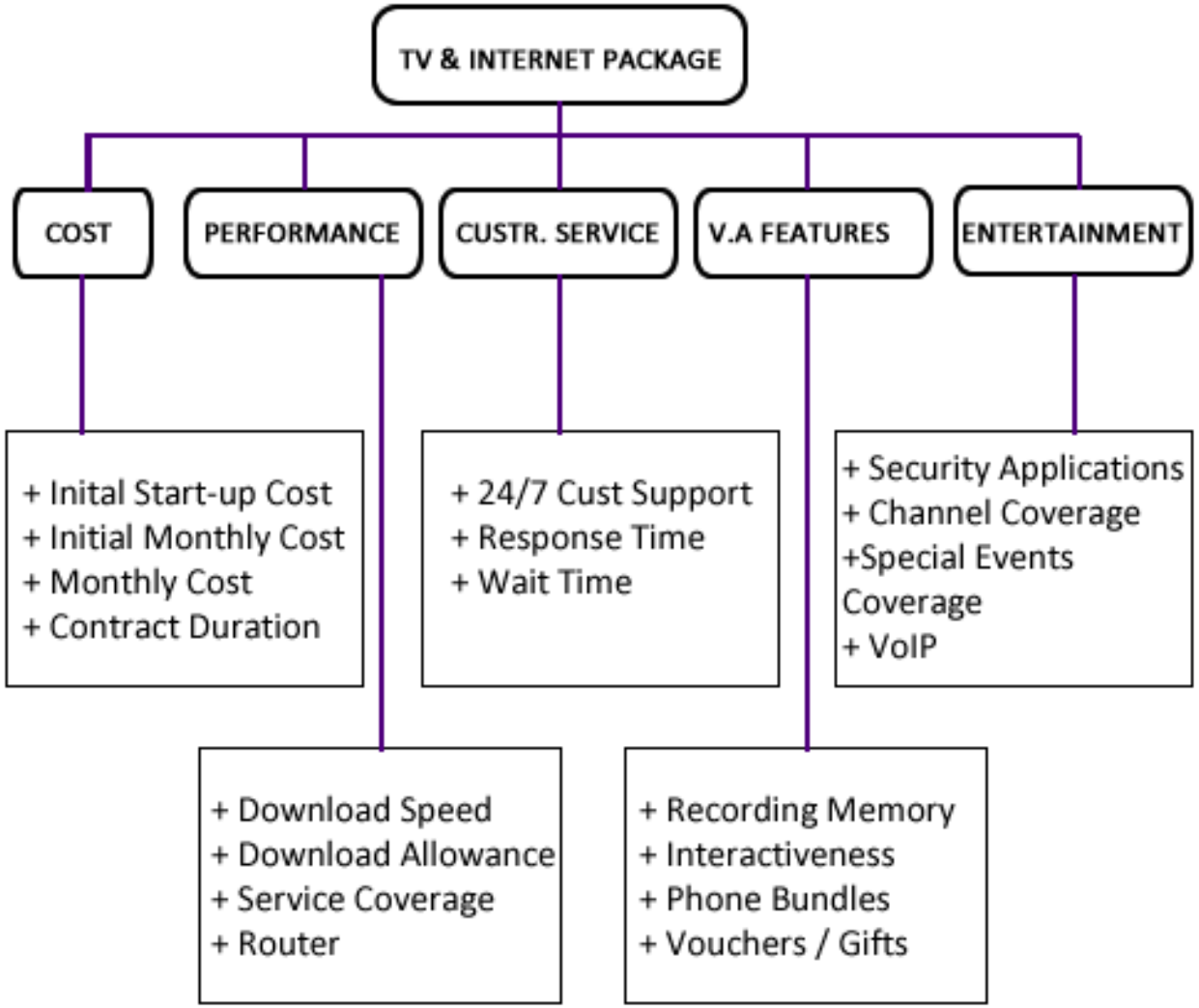
- **The Conflict of Interest**



PROBLEM FORMULATION
The Decision Alternatives

PACKAGE	PACKAGE TYPE	YYY	ZZZ
Package One	Single Provider	----	---
Package Two	Combined	----	----
Package Three	Combined	---	---
Package X	Single Provider	---	----

PROBLEM FORMULATION
Hierarchical Organisation of Objectives



PROBLEM FORMULATION
The Attributes - 1

ATTRIBUTE	DESCRIPTION	TYPE
MINIMIZE COST		
Initial Start-up Cost	Connection fees - Equipment Free or Not?	GBP
Way of Payment	Instalment /Pay as You Go/ Upfront	Constructed
Monthly Cost	Description Please?	(GBP)
TV Licence	Description Please?	Constructed or Unit?
Contract Duration	Description Please?	Constructed or Unit?

MANCHESTER 1824

The University of Manchester

PROBLEM FORMULATION
The Attributes - 2

ATTRIBUTE	DESCRIPTION	TYPE
MAXIMIZE PERFORMANCE		
Download Speed – Maximum Bandwidth	Connection fees - Equipment Free or Not?	Constructed or Unit?
Download Allowance	Unlimited – Limited	Constructed or Unit?
Service Coverage in our Area	Description Please?	Constructed or Unit?
Router	Does it have WiFi? Is it reliable for 7 people?	Constructed or Unit?
Working Time	Some broadband services only work during a range of a day, for example, AOL's service is only available from 8 to midnight	Constructed or Unit?

PROBLEM FORMULATION
The Attributes - 3

ATTRIBUTE	DESCRIPTION	TYPE
MAXIMIZE VALUE ADDED / EXTRA SERVICES		
Recording Memory	Description Please?	Constructed or Unit?
Interactiveness	Pause and Rewind TV, Shopping via TV	Constructed or Unit?
Phone Bundles	Description Please?	Constructed or Unit?

PROBLEM FORMULATION
The Attributes - 4

ATTRIBUTE	DESCRIPTION	TYPE
MAXIMIZE CUSTOMER SERVICE		
24/7 Customer Support	Description Please?	Constructed or Unit?
Response Time to Fix Problems	Description Please?	Constructed or Unit?
Wait time in Call centre	Description Please?	Constructed or Unit?

PROBLEM FORMULATION
The Attributes - 5

ATTRIBUTE	DESCRIPTION	TYPE
MAXIMIZE ENTERTAINMENT		
Channel Coverage	Description Please?	Constructed or Unit?
Special Events Coverage	Description Please?	Constructed or Unit?
VoIP	Description Please?	Constructed or Unit?
Security Applications	Description Please?	Constructed or Unit?

PROBLEM FORMULATION
Constructed Attributes

Put table of Constructed Attributes here if any. See sample below

attribute	level	description
continuing education	1	Employees are not engouraged to further education. Except for the introductory familiarisation, other training or cources are not provided.
	2	Employees are encouraged to continuing education. A limited amount of cources are offered.
	3	Employees are strongly engouraged to further education. Training and special cources are a part of the job description. A number of cources are offered.
atmosphere	1-5	An index describing atmosphere and corporate culture ranging from 0 (poor) to 5 (very good).

Sample Constructed Attribute (MCDA, HUT), Sample Purposes Only.

MANCHESTER 1824

The University of Manchester

PROBLEM FORMULATION
The Constraints

CONSTRAINT	DESCRIPTION
Contract Rigidity	Most contracts are fixed at 12 or 18 months, this made it difficult bla bla bla....
More?	Description Please?
More?	Description Please?
More?	Description Please?

MANCHESTER 1824

The University of Manchester

PROBLEM FORMULATION
Alternatives & Consequences

ATTRIBUTE	PACKAGE 1	PACKAGE 2
MAXIMIZE ENTERTAINMENT		
Channel Coverage	Score?	Score?
Special Events Coverage	Score?	Score?
VoIP	Score?	Score?
Security Applications	Score?	Score?

We can put a few of the scores here then refer to the table and report in Microsoft word for more details, what do you think?

MANCHESTER 1824

The University of Manchester

RESEARCH AND MODELLING

Bringing Rationality into the Chaos

MANCHESTER 1824

The University of Manchester

RESEARCH AND MODELING
Overview of Tasks

- Preference Elicitation
- Weight Elicitation
- The Model

RESEARCH AND MODELING
Preference Elicitation - 1

- **Measuring our preferences on each objective**

  We need the model to discuss this.

RESEARCH AND MODELING
P. E. – Attribute Ranges

- **Measuring our preferences on each objective**

  Setting plausible ranges for each attributes especially the constructed ones
- We need the model to discuss & update this.

RESEARCH AND MODELING
P. E. – Weighting Methods

OBJECTIVE	ATTRIBUTE	TECHNIQUE
MAXIMIZE ENTERTAINMENT		
Channel Coverage	Constructed or Unit per period?	DR, AHP, SMART, Several?
Special Events Coverage	Constructed or Unit per period?	DR, AHP, SMART, Several?
VoIP	Constructed or Unit per period?	DR, AHP, SMART, Several?
Security Applications	Constructed or Unit per period?	DR, AHP, SMART, Several?

The above is only a sample, we need to discuss and update this as due

RESEARCH AND MODELING
P. E. – Attribute Scores

- **Attributes scores per alternative**

  We need the model to produce a table that should appear here. (Note to Blessing: See slide VII.B2, Also state clearly in the note that this table can be found in the Microsoft word document, Use ExcelMagic if possible).

RESEARCH AND MODELING
Weight Elicitation - 1

- **Adjusting the weights of each objective to reflect our priorities**

  We need the model to discuss this also.

RESEARCH AND MODELING
Weight Elicitation - 2

- **Attributes and Objective Weights**
  We need the model to discuss this of course (Note to Blessing: See slide VII.Hex, Also state clearly in the note that this table can be found in the Microsoft word document).

RESEARCH AND MODELING
The Model - 1

- **At last, a chance to display the mega model *woof woof***

  We need the model to discuss this also. A picture of the model should appear here.

MANCHESTER 1824

The University of Manchester

RESULTS AND ANALYSIS

The best alternative has been suggested but how sensitive is it to changes in our objectives? (and we're humans, we change, don't we?)

RESULTS AND ANALYSIS
Overview of Tasks

- Recommended Decision
- Sensitivity Analysis
- The Model

RESULTS AND ANALYSIS
Recommended Decision - 1

- **Okay, here we show off our recommended decision to the French Nadian Lecturers :D**
  A picture of the recommended decision alternative here.

RESULTS AND ANALYSIS
Sensitivity Analysis - 1

- **Okay people, here we show our sensitivity analysis….**

  A picture speaks a thousand words in silence.

RESULTS AND ANALYSIS
Sensitivity Analysis - 2

- **Okay people, here we show our sensitivity analysis…. 2**

  A picture speaks a thousand words in silence.

RESULTS AND ANALYSIS
Sensitivity Analysis - 3

- **Okay people, here we show our sensitivity analysis…. Again? Yes, the more, the better**
  A picture speaks a thousand words in silence.
  (Note to Blessing: Each Sensitivity Analysis shown should have a corresponding comprehensive description in the notes below)

SUMMARY

Okay, let’s go over it all, again please.

MANCHESTER 1824

The University of Manchester

SUMMARY

- Introduction
- Problem Formulation
- Research and Modelling
- Results and Analysis

MANCHESTER 1824

The University of Manchester

CONCLUSION

All is well that ends well.

MANCHESTER 1824

The University of Manchester

REFERENCES

- FRENCH, S., MAULE, J., & PAPAMICHAIL, N. (2009). Decision behaviour, analysis and support. Cambridge, UK, Cambridge University Press.
- Helsinki University of Technology, MCDA, 2002. Available at <http://www.mcda.hut.fi/value_tree/theory/> [Accessed, 01-04-2011]
- More Refs …. ?

Thank you!

Questions?

FIND REMINDERS IN NOTES HERE

REMINDER SLIDE