



Decision Making



Decision Making

1



Dr. Ali Eisa Al Zahrani

Dr. Muhammad Al Tikriti
Alpha Training UK Limited

د. علي بن عيسى الزهراني - خبير التدريب في البورد العربي - مستشار (ACA) - مدرب معتمد (HRDA) dr.al.easa@gmail.com 57

Dr. Ali Bin Isa Al-Zahrani
Training and human resources development
Certified Trainer
From the British Academy of Human Resource Development
Trainer, consultant at Herman scale of thinking
Trainer and consultant in the automated decision-maker
Membership in a number of administrative councils
He chaired a number of committees
Trained more than 10,000 trainees
The commander of the founders of a certified US states
Training expert in Arab Board for Training and Consulting
A member of the Network of Arab trainers
consultant at ACA

د. علي بن عيسى الزهراني - خبير التدريب في البورد العربي - مستشار (ACA) - مدرب معتمد (HRDA) dr.al.easa@gmail.com 57 2



Presentation Outline



- Define the decision making process
- Functions of a human brain and how it works
- Rules – The Lens Model
- Decisions
 - ◆ Quantity and qualitative decisions
 - ◆ Individual and collective decisions
 - ◆ Decisions based on intuition and Decisions based on analysis
- A good decision and an effective decision – conditions of an effective decision
- Examples of decision making processes
- Steps in the decision making process
- Tools for decision making (Brain storming, Symbolic Groups, Delphi's method, Power areas, Fish Pond Method, Quaid's Method, Mutual deduction Method)
- Multi-criteria decision (Introduction)
- Exercises, examples and various activities

د. علي بن عيسى الزهراني - خبير التدريب في البورد العربي - مستشار (ACA) - مدرب معتمد (HRDA) dr.al.easa@gmail.com 57 3



What you will learn from this course



- At the end of this course, each participant would have knowledge of the following:

- Types of Decisions
 - ◆ Decisions based on intuition and Decisions based on analysis
 - ◆ Individual and collective decisions
 - ◆ Quantity and qualitative decisions
- How to get to an effective decision
 - ◆ What is a good decision
 - ◆ What is an effective decision and what are its conditions
- Steps towards making an analytical decision
- Tools for making a descriptive analytical decision
- A multi-criteria decision and how to make it



What is decision-making?



- What is the difference between making a decision and undertaking a decision?

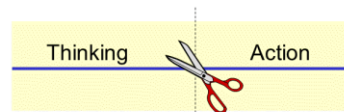
- Making a decision:
 - ◆ A dynamic process that passes through a number of stages, starting from the designing stage and ending with undertaking the decision
- Undertaking a decision:
 - ◆ An administrative term that is not a synonym of the term making a decision. Both are regarded as stages in the process of the decision, since undertaking a decision is the conclusion that a decision maker arrives at.
 - ◆ It is choosing the best solution from among a number of decisions made by the person responsible.



What is decision-making?



- It is a selection process that leads to a particular action
- The word decision means “to cut” – cutting the process of thinking



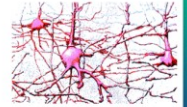
“No affair have i decided except in your presence”
Quraan: Suraatul Naml



The Human's Brain



- 10,000 million cells
- Every cell links with 10,000 links to the nearby cells
- (10) x 800 connection links result from this connection
- A human being only uses 10% of his brain energy



Interconnection of the Brain Cells

د. علي بن عيسى الزهراني - خبير التدريب في البورد العربي - مستشار (ACA) - مدرب معتمد (HRDA) dr.al.easa@gmail.com 57

7



Exercise – Brain Exercise

Groups of 2
Time: 10 Mins



- You have six match sticks. How can you create 4 triangles, with equal sides using these six match sticks?
- Note: You are not allowed to break the match sticks.



د. علي بن عيسى الزهراني - خبير التدريب في البورد العربي - مستشار (ACA) - مدرب معتمد (HRDA) dr.al.easa@gmail.com 57

8



The Human's Mentality - Thinking



- A human's mind is the system responsible for processing information
- No one knows how the processing of information takes place
- What is known:
 - A human being has got limited mental capacity to process information
 - A human being's acquisition of knowledge is selective and not comprehensive
 - Processing of information in the mind takes places in a sequential manner
 - Human memory capacity is limited
 - A human being has the ability to adapt



د. علي بن عيسى الزهراني - خبير التدريب في البورد العربي - مستشار (ACA) - مدرب معتمد (HRDA) dr.al.easa@gmail.com 57

9



The Upper Functions of the Brain



The brain has three upper functions:

- **Analysis:** Separating the whole into small parts
- **Construction:** Drawing up a whole from the parts
- **Verification:**
 - Objective verification
 - Subjective verification



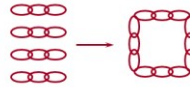
A man and his brain is like a bow with its string, should the string be removed from the bow, it becomes a mere stick

57 dr.ail.easa@gmail.com (HRDA) - مدرب معتمد (ACA) - مستشار (ACA) - خبير التدريب في البورد العربي - 10



Exercise - Chain

Individually
Time: 10 Minutes



You have four small chains. Each chain is made up of three closed rings/loops as in the shape.

What is requested is one round chain made from these four small chains.

The manufacturer requested from you the following prices:

Cost of opening the ring = K10

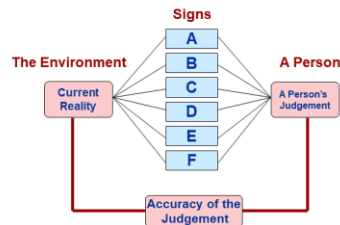
Cost of closing the ring/loop = K15

How much will you pay the manufacturer to make a closed chain?

57 dr.ail.easa@gmail.com (HRDA) - مدرب معتمد (ACA) - مستشار (ACA) - خبير التدريب في البورد العربي - 11



The Lens Model



When a person passes judgement over a particular matter (e.g. his predictions on the state of the economy in the following year), he issues his judgement based on certain information (indicators), like the state of the economy today, economic indicators, political stability.

The **quality** of this judgement depends on the compatibility of relations (lines) on both sides of the lens:

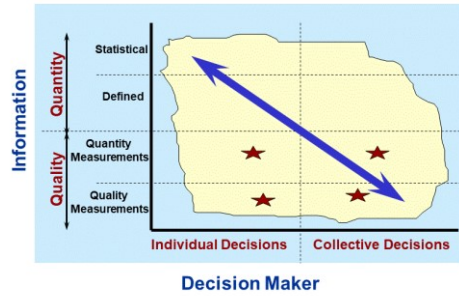
*The reality of what is currently happening, or will happen

*A person's knowledge and his judgement

57 dr.ail.easa@gmail.com (HRDA) - مدرب معتمد (ACA) - مستشار (ACA) - خبير التدريب في البورد العربي - 12



The Decision Space – Types of Decisions



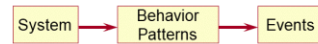
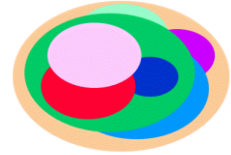
13 د. علي بن عيسى الزهراني - خبير التدريب في البورد العربي - مستشار (ACA) - مدرب معتمد (HRDA) dr.al.easa@gmail.com 57



Systemic Thinking



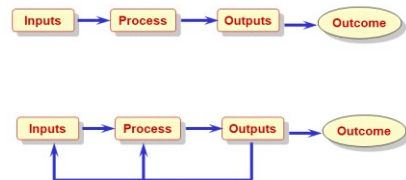
- A system is a whole that is composed of interconnected parts that affect each other
- A human being is a complicated system that connects with other complicated systems (family, value system, political system, the environment, creation...)
- Events seem to be independent and yet they are not independent
- Events and things are interconnected
- Causes and effects
- Interconnectedness of inputs and outputs



14 د. علي بن عيسى الزهراني - خبير التدريب في البورد العربي - مستشار (ACA) - مدرب معتمد (HRDA) dr.al.easa@gmail.com 57



Open and Closed System



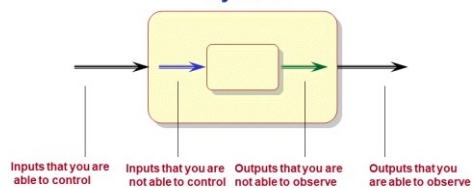
15 د. علي بن عيسى الزهراني - خبير التدريب في البورد العربي - مستشار (ACA) - مدرب معتمد (HRDA) dr.al.easa@gmail.com 57



Observation and Control



System



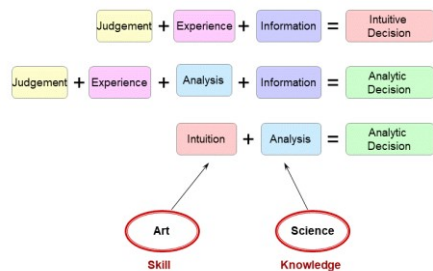
A man does not get everything that he desires, sometimes, winds blow contrary to the desires of a ship

د. علي بن عيسى الزهراني - خبير التدريب في البورد العربي - مستشار (ACA) - مدرب معتمد (IHRDA) 57 dr.ail.easa@gmail.com

16



Intuition and Analysis

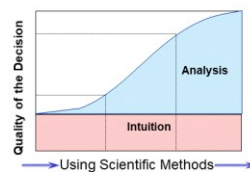


د. علي بن عيسى الزهراني - خبير التدريب في البورد العربي - مستشار (ACA) - مدرب معتمد (IHRDA) 57 dr.ail.easa@gmail.com

17



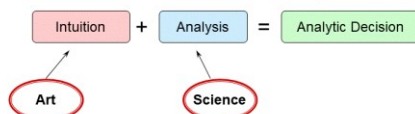
An Analytic Decision



An analytic decision consists of two elements:

- *Analysis
- *Intuition

Whenever we lean much on scientific methods, the rate of the analytical element increases. However we cannot totally avoid intuition



د. علي بن عيسى الزهراني - خبير التدريب في البورد العربي - مستشار (ACA) - مدرب معتمد (IHRDA) 57 dr.ail.easa@gmail.com

18



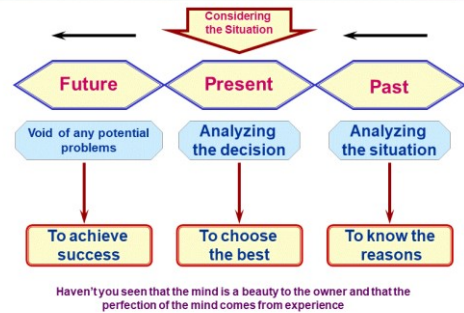
Example – Summer Trip



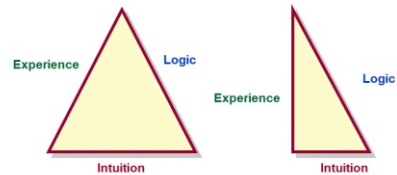
- On the occasion of the summer holiday, an idea popped up among a group of friends to undertake a holiday trip to one of the countries
- As the holiday drew nearer, there was need to undertake a decision to choose which country the group would travel to
- How will they undertake the decision?



Time Dimension



Elements of Decision Making



- Experience
- Logic
- Intuition

إذا رأيت ثيوب الليث بارزة فلا تظن أن الليث يبتسم
If you see the teeth of a snake, do not think that the snake is smiling



A Good Decision and an Effective Decision



A Good Decision

- Achieves the desired goal
- With the most possible cost-efficiency
- Within the most little time possible

An Efficient Decision

- It is that decision that meets two conditions:
 - Quality: Achieves the goal with less cost and little time
 - Acceptance: Complied with by its implementers
- Examples?
 - Adding two to four hours in staff time is a good decision (produce more - customer satisfaction).
 - If staff do not accept it, this will be an unacceptable decision.



The Required Decision



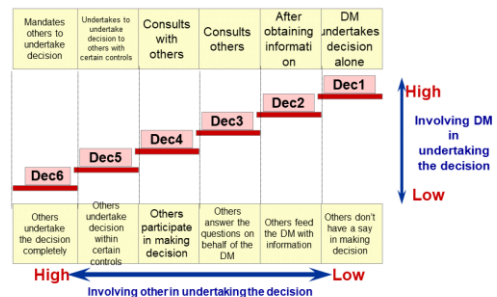
- A decision can be good but not accepted or complied with by its implementers

The Required Decision

- ✳ Is the one that achieves the goal with less costs possible and with little time possible and is respected by its implementers

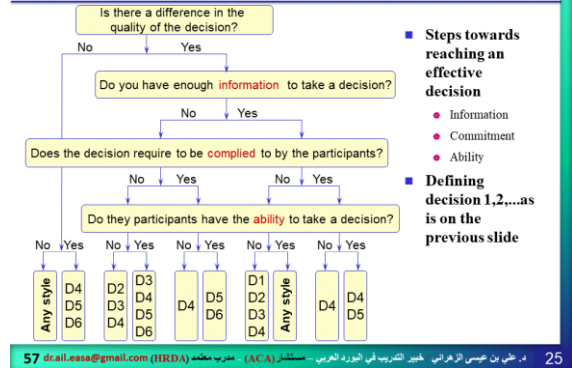


The types of participation in undertaking a decision (Dec)





An Effective Decision



Stages of the Decision-making Process - Simon



Understanding

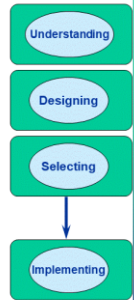
- Realizing the situation that requires making a decision

Designing

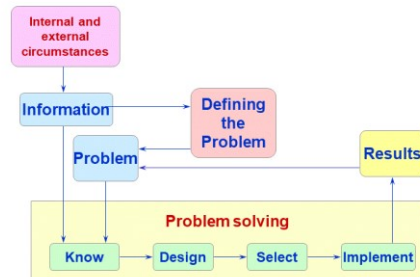
- Structuring the situation

Selecting

- Solving the situational problem

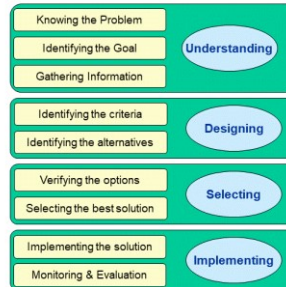


The Simon Model





Steps in the Decision-Making Process



Example: Summer Trip

On the occasion of the summer holiday, an idea popped up among a group of friends to undertake a holiday trip to one of the countries. As the holiday drew nearer, there was need to undertake a decision to choose which country the group would travel to.

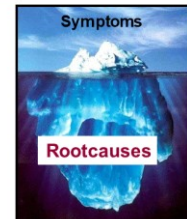
How will they undertake the decision?



Understanding the Problem



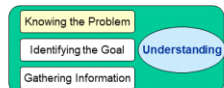
- Knowing the Problem
- Defining the Goal
- Gathering Information



Knowing the Problem



- Knowing the real problem, not the symptoms
- Articulating the problem accurately
- Articulating the problem in the form of questions



Six questions:

- What is it?
- Who is it?
- Why?
- When?
- Where?
- How?

Using the Formula
W₅H

Summer Trip
Articulating the Problem



Identifying the Goal



■ Goal Structure

- Primary goals
- Strategic goals
- Operational goals

■ Goal Requirements

- They should be specific
- Measurable
- Agreed
- Realistic
- Time Bound

Using
SMART
Specific
Measurable
Agreed
Realistic
Time Bound

Knowing the problem
Identifying the Goal
Gather Information

Understanding

Summer Trip
Trip Goals



Gathering Information



- What is the required information?
- Where and how can we get this information?
- Is the information related to the problem?

Identifying the Problem
Defining the Goal
Gathering information

Understanding

Summer Trip
Information relating to
the trip



Designing



- Defining the criteria
- Defining the alternatives

Defining the criteria
Defining the alternatives

Designing

Summer Trip
Alternatives
(Countries)

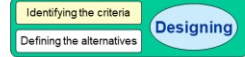
Summer Trip
Trip Criteria



Defining Criteria



- Criteria List
- Identifying risks in each of the criteria
- The extent of the relationship between the criteria and the problem
- Weighing the criteria



Summer trip
Trip Criteria

34 د. علي بن عيسى الزهراني - خبير التدريب في البورد العربي - مستشار (ACA) - مدرب معتمد (IHRDA) dr.al.easa@gmail.com 57



Identifying the alternatives



- What are the reliable alternatives?
- Do they reflect the values you believe in?
- What are they results of each alternative?



Summer Trip
Alternatives
(Countries)

35 د. علي بن عيسى الزهراني - خبير التدريب في البورد العربي - مستشار (ACA) - مدرب معتمد (IHRDA) dr.al.easa@gmail.com 57



Selecting the Alternatives



- Evaluating the Alternatives
- Weighing the alternatives in light of the criteria



Summer Trip
Evaluating the
Alternatives

- Selecting the best alternative



Summer Trip
Selecting amongst the
best Alternatives

36 د. علي بن عيسى الزهراني - خبير التدريب في البورد العربي - مستشار (ACA) - مدرب معتمد (IHRDA) dr.al.easa@gmail.com 57

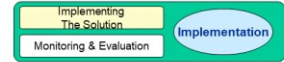


Implementation



- Implementing the selected resolution

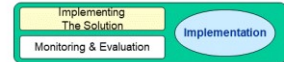
”When have decided, depend (on Allah)”



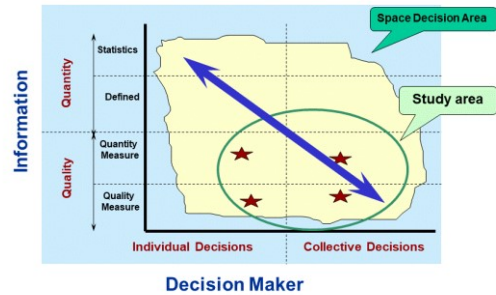
- Monitoring the solution

- Evaluating the results

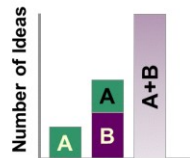
- Adjusting the solution



Decision-Making Methods – Decision Space



Individual and Collective Decisions



- Collective Decision – Finding Alternatives

- Alone, individual A finds F1 in ideas
- Alone, individual B finds F2 in ideas
- When the two work together, the number of ideas they will find = $2 \times (F1 + F2)$

Join your idea, to another person's idea and consult. The truth cannot be hidden from two people



Exercise – Paper Clip

Groups of 4
Time: 20 minutes



- Try to find as many uses as possible for the Paper Clip that is provided here
- Write a list



- Measurement of new ideas
- Number of new ideas
- Quality of new ideas

57 dr.ail.easa@gmail.com (HRDA) - منرب معتمد (ACA) - مستشار (ACA) - خير التدريب في الورد العربي - د. علي بن عيسى الزهراني 40



Advantages and Disadvantages of Collective Decisions



Comparison

Disadvantages

- Costly
- Compromises and bargaining
- Failure to agree
- Influence of the chair of the Committee
- Irresponsibility
- Influence of a number or more towards a certain direction
- Delay in decision making
- Pre-occupied with research
- Going ultravires

Advantages

- Saves time and effort to explain the topic
- Helps to coordinate between the members of the group
- Motivates the participants and raises the level of commitment to the decision
- Sharing responsibility
- Acquiring multiple and varied experiences
- Training and Exercise for the members of the group
- Wide space for alternatives and options
- Increased creativity
- Ability to delay taking a decision (if there is desire to delay it)

57 dr.ail.easa@gmail.com (HRDA) - منرب معتمد (ACA) - مستشار (ACA) - خير التدريب في الورد العربي - د. علي بن عيسى الزهراني 41



Tools for Decision Making



■ Examples:

You can use these tools:

- ❖ Identifying the Problem
- ❖ Identifying the Goals
- ❖ Finding criteria and alternatives
- ❖ Weighing criteria and alternatives
- ❖ Selecting the best alternative
- ❖ Evaluating the results

- ❖ Brainstorming
- ❖ Symbolic Group Method
- ❖ Delphi Method
- ❖ Fish Pond Method
- ❖ Mutual Deduction Method
- ❖ Power Area Method
- ❖ Ratio Scheme

57 dr.ail.easa@gmail.com (HRDA) - منرب معتمد (ACA) - مستشار (ACA) - خير التدريب في الورد العربي - د. علي بن عيسى الزهراني 42



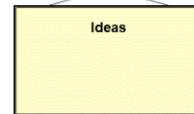
Brain Storming

All Participants
Time: 20 Mins



■ Brainstorming Rules

1. It is not allowed to judge ideas nor evaluate any of them
2. Welcoming strange ideas
3. The goal is to reach a high number of ideas
4. Encourage modification, adjustment and development of ideas



Summer Trip
Ideas regarding the Trip

57 dr.ail.easa@gmail.com (HRDA) - منبر معتمد (ACA) - مستشار (ACA) - خبير التدريب في البورد العربي - 43

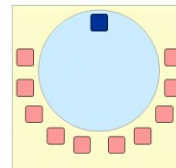


Fish Pond Method

Group of 5
Time: 20 Mins



- A chair is put in the middle
- No one is allowed to speak except for the one seated on the chair
- The others are only allowed to ask
- All the participants exchange sitting on the chair to present their views and defend them
- After exhausting the discussion, a vote is undertaken



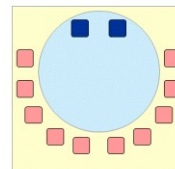
Summer Trip
Using the Fish Pond
Method (To select the
country)

57 dr.ail.easa@gmail.com (HRDA) - منبر معتمد (ACA) - مستشار (ACA) - خبير التدريب في البورد العربي - 44



Mutual deduction Method

A Group of 6
Time: 20 Mins



Summer Trip
Using the mutual
deduction method

- This method works when the decision is Yes or No
- One of them is requested to write a list of advantages (Yes)
- Another one is requested to write a list of disadvantages (No)
- The two sit down and dialogue with each defending his views while the others listen
- The facilitator controls proceedings by giving opportunity to each of the two parties
- The participants identify gaps in each of the two views
- Then a vote is undertaken to take a decision (Yes or No)
- This method is used if you have only two teams who have two different views regarding a particular issue

57 dr.ail.easa@gmail.com (HRDA) - منبر معتمد (ACA) - مستشار (ACA) - خبير التدريب في البورد العربي - 45



Decision Making



Decision Making

2



Dr. Ali Eisa Al Zahrani

Dr. Muhammad Al Tikriti
Alpha Training UK Limited

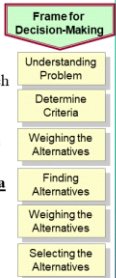
46 د. علي بن عيسى الزهراني - خبير التدريب في البورد العربي - مستشار (ACA) - مدرب معتمد (HRDA) dr.ali.easa@gmail.com 57



Multi-Criteria Decision Making القرار متعدد المعايير



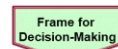
- **Determine Criteria**
 - Example: To buy a house, we can have three criteria
- **Weighing the Criteria**
 - Determining the importance of each criteria in relation to each other
- **Finding alternatives**
 - Here, creative plays a very important role to find alternatives
- **Weighing the alternatives**
 - Or, finding the relatively best alternative in light of each criteria
- **Selecting the Alternative**
 - And that is through calculating the relatively best options in relation to all criteria



47 د. علي بن عيسى الزهراني - خبير التدريب في البورد العربي - مستشار (ACA) - مدرب معتمد (HRDA) dr.ali.easa@gmail.com 57



Step 1 – Understanding The Problem



■ Problem:

- On the occasion of the summer holiday, an idea popped up among a group of friends to undertake a holiday trip to one of the countries.
- As the holiday drew nearer, there was need to undertake a decision to choose which country the group would travel to.
- How will they undertake the decision?

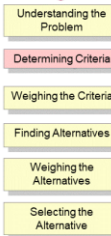
48 د. علي بن عيسى الزهراني - خبير التدريب في البورد العربي - مستشار (ACA) - مدرب معتمد (HRDA) dr.ali.easa@gmail.com 57



Step # 2- Determining Criteria



Frame for Decision-Making



- By using one of the decision making tools, we identify the criteria
- We found the following criteria:
 - Weather
 - Cost
 - Shopping

Criteria

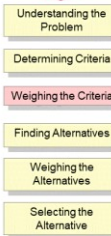
- Weather
- Cost
- Shopping



Step # 3- Weighing the Criteria



Frame for Decision-Making



- By using one of the decision-making tools, we determine the relative importance of each criteria.
- We have chosen a measurement of 10 points
- We have found that the relative importance of the criteria is:

• Weather	6
• Cost	3
• Shopping	1

Criteria

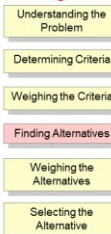
- Weather 6
- Cost 3
- Shopping 1



Step # 4 – Finding Options



Frame for Decision-Making



- By using one of the decision-making tools we determine the options
- We have found out that the options are:

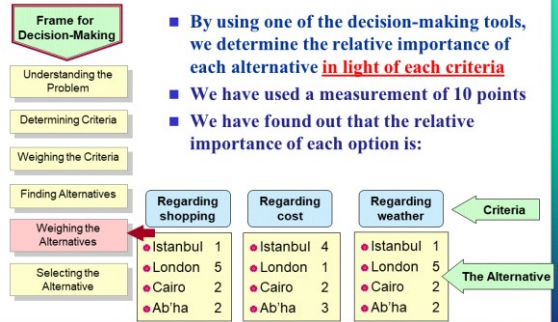
- Istanbul
- London
- Cairo
- Ab'ha

Alternatives

- Istanbul
- London
- Cairo
- Ab'ha



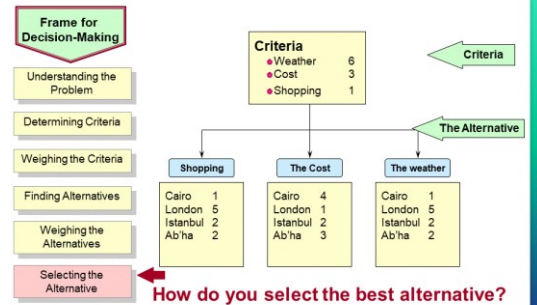
Step # 5- Weighing the Options



57 dr.ail.easa@gmail.com (HRDA) - مربي معتمد (ACA) - مستشار (ACA) - خبير التريب في البورد العربي - د. علي بن عيسى الزهراني



Step # 6 - Selecting the Alternative



57 dr.ail.easa@gmail.com (HRDA) - مربي معتمد (ACA) - مستشار (ACA) - خبير التريب في البورد العربي - د. علي بن عيسى الزهراني



The Decision Matrix



Shopping	Cost	Weather	Criteria
Cairo 1	Cairo 4	Cairo 1	Criteria
London 5	Istanbul 2	London 5	Weather 6
Istanbul 2	Ab'ha 3	Istanbul 2	Cost 3
Ab'ha 2		Ab'ha 2	Shopping 1

Criteria			Alternative
Shopping	Cost	Weather	
1	3	6	
1	4	1	
5	1	5	
2	2	2	Istanbul
2	3	2	Ab'ha

57 dr.ail.easa@gmail.com (HRDA) - مربي معتمد (ACA) - مستشار (ACA) - خبير التريب في البورد العربي - د. علي بن عيسى الزهراني



Calculations



Criteria			
Shopping	Cost	Weather	
1	3	6	
1	4	1	Cairo
5	1	5	London
2	2	2	Istanbul
2	3	2	Ab'ha

Alternative

1. We multiply each number from the alternative numbers with the criteria points against it

2. We get this table and then gather all alternative points to get to the decision

Decision	1	12	6	Cairo
19	1	12	6	Cairo
38	5	3	30	London
20	2	6	12	Istanbul
23	2	9	12	Ab'ha

57 dr.ali.easa@gmail.com (HRDA) - مدرب متعدد (ACA) - مستشار (ACA) - خبير التدريب في البورد العربي - 55



Multi Criteria Decision Making القرار متعدد المعايير



تدريب

مثال:

- مطلوب توظيف واحد أو أكثر من الأشخاص التالية اسماؤهم:
- علي
- أحمد
- سعد
- فائق

بناءً على المعايير الثلاثة التالية:

- الخبرة
- الثقافة
- الشخصية

البدائل

- علي
- أحمد
- سعد
- فائق

المعايير

- الخبرة
- الثقافة
- الشخصية

مجموعات من ثلاثة الزمن: ٢٠ دقيقة

تمرين

أكتب قائمة بالبدائل وأخرى بالمعايير لصنع قرار بشأن:

- شراء سيارة
- دراسة في جامعة
- رحلة عطلة صيفية
- استثمار في مشروع

قرار الرحلة الصيفية هو قرار متعدد المعايير

57 dr.ali.easa@gmail.com (HRDA) - مدرب متعدد (ACA) - مستشار (ACA) - خبير التدريب في البورد العربي - 56



We are done with this part



We shall be moving to the next part after the break

عادي
 بن يوسف الزهراني
 مدير التدريب في البورد العربي
 عضو رابطة المدربين العرب
 مستشار (ACA) - خبير التدريب في البورد العربي
 dr.ali.easa@gmail.com
 +966-505-703-203

57 dr.ali.easa@gmail.com (HRDA) - مدرب متعدد (ACA) - مستشار (ACA) - خبير التدريب في البورد العربي - 57