

Creativity, Innovation and Intellectual Property (LCMB7007)

Week – 4 (Part 1)
Problem solving

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Problem solving is important

Businesses face challenge:

- Objectives, Resources, and Opportunities have to be balanced creatively
- Resources are often short in supply or not quite the “right” resources
- The situation may change, often frequently and sometimes rapidly
- Teams, individuals or projects may fail or achieve something which is no longer relevant or desirable

All problems often seem in general to be something like this.... But often they are far more complex than first meets the eye.

Solving Problems

- Solving “Points of Pain”:
 - To Notice Inefficiency, Inconveniences, & Other Forms of “Points of Pain” & Use these to Build New Business Opportunities
and
Solutions

Solutions?

- What do we mean by solutions?
- In this context, it could mean
 - new processes to help us do something better
 - new ways of using existing products
 - new services to supply to new or existing customers etc.
- New ways of thinking about things!

Defining problem:

- Defining a problem is hard, how we define it often informs us of the solution

activity 1.

“You are driving to a meeting which is to start in 30 minutes time, 15 minutes from your destination your car engine cuts out and you glide to a complete halt.” Take a few minutes to reflect, and describe what you think is your problem.

A more complex problem

- Problems often seem to involve human dimensions.

Activity 2

Take 10 minutes to consider this:

“Petra and Laura work as salespersons at “House of Vanessa” (HoV) a fragrance products distributor selling to department stores. Laura is promoted to sales director despite Petra’s superior sales record and length of service. Petra is very upset as she has built up several key accounts and is highly regarded by her clients.

HoV is moving towards exclusive distribution contracts with several small scale highly exclusive manufacturers. As a result older fragrance suppliers are not being managed with the same commitment and delays are occurring.

Petra is further inflamed as her customer orders are being jeopardised, she makes a hostile phone call to Laura making veiled threats, Laura retaliates by accusing Petra of being opportunistically self interested and only concerned with her sales commission and not the future of HoV.”

Who has what problem?

A simple model of Problem Solving

- A simple model of problem solving:
 1. Problem Identification
 2. Solution/option generation
 3. Evaluate and select most appropriate
 4. Devise action plan and implement
 5. Monitor performance
- Whilst this seems simple, application of this is often very complicated

Reflections on Problem Solving

- Whose “eyes” did we see the problem through? How objective was it?
- Who owns the problem?
- Did we see it from the organisation’s perspective?
- Do we see the organisation as a complex set of relationships working like a system?
- Do you see problems as “political” or solely as Human problems?
- Is it just about money?
- Problem solving is rational or irrational?
- Can a sense of priority help?
- Should we ignore the “little people”?
- When we solve problems can the change be difficult?
- Have we really solved the problem or are there more complex underlying problems?

Helpful techniques

- Fishbone diagrams
problem is the head of the fish – work through related issues like a fish skeleton
- Forcefield Analysis
List factors for and factors against possible solutions, which are more numerous or powerful?
- Difficulty/Importance/Frequency
3 factors to use like questions to help prioritise problems and resources to apply

Problem Solving – what is the problem?

- Who owns the problem?
 - The local manager?
 - The implicated individuals?
 - Or The whole organisation?
- Who solves the problem?
 - The chief executive?
 - The person who caused the problem?
 - Anybody who seizes the situation?
 - Or Teams?
- Defining the problem is the first stage of solving it

A way of diagnosing

- Organisations are a “Whole” made of “Parts”;
inputs, outputs, transformation, activities, processes, relationships
- Problems cannot be separated from people
definition of problem varies between different people – we all see the world differently – all a matter of perspective
- Build a model of the business like an “engine”; conceptually and sometimes as a picture, see all perspectives
- Think of the mission, values, and objectives of the business
- Finally address; “what is the problem?”

Generating Solutions

- Share the sense of purpose, invest in empowerment, inspire, incentivise creativity, and drive out fear of failure and blame
- Solve problems in teams if possible more effective than individuals
- Brainstorming
- Synectics
- List Attributes
- Structure of problem and the relationships between the factors
- Challenge assumptions
- Ask searching questions
- Take a different perspective
- Combine the unusual (Forced Relationships)
- Adopt, adapt, improve
- Change the rules

Brainstorming

- Alexander Osborn at Arthur D. Little consultants evolved the technique in the early 1960's before writing about it in 1963
- 6-10 people in the team, non-experts are keenly sought
- Specific known problem
- Sessions last about one hour preferably in the morning
- Chairperson “moderates” – encourages quantity of ideas, writes ideas on board
- No evaluations
- No criticism
- As much freewheeling as possible
- Combining and improving on each others idea is good

Synectics

- William J. J. Gordon felt Osborn's Brainstorming sessions produced solutions too quickly, more perspectives were possible
- Like Brain Storming but without constraints and no understanding of the initial problem, as group progresses facts are introduced and finally the problem
- Much less commonly used
- Believes that group and individual creativity is similar
- The emotional, irrational, irrelevant may be useful to stimulate creativity
- Participants know what to expect – trained in the approach and creativity
- Participants can be more creative if they know how creativity works
- 5 principles; deferment of solutions, problem is allowed to be developed and run free, commonplace should be used to launch ideas about the unusual, alternate between involvement and detachment, use metaphor

List Attributes

- Can be used individually or in a group
useful for new product development
- 2 stage approach
 1. list all attributes
 2. modify to make an improvement

try: ask the following questions; put to other uses?, adapt?, magnify?, minify?, substitute?, rearrange?, reverse?, combine? (Osborne 1963)

The problems - dimensions and their relationships

- Look at the problem and ask what is the source of the problem supposed to do? – these are the dimensions of the problem
- Secondly seek to reorganise these dimensions and their relationships seek to improve, alter, modify, or add new elements..... Find novel combinations
- Group or individual use

Challenge Assumptions

- In groups or individuals
- Seek to identify the hidden “rules” or “values” behind the problem source
- What would happen if these were changed or are they not realistic or credible?

Asking Searching Questions

- In groups, or as individuals, alone or as interview
- Ask awkward difficult questions, the “sharp pointy” questions which people find uncomfortable
- Avoid the “round reassuring” questions

Different Perspectives

- Find more points of view, what do many more stakeholders or implicated individuals think or see the problem as?
- Do they have any ideas?
- Groups, individuals, and as interviews

Combining the Unusual, forcing unusual relationships

- Take the attributes and force unusual relationships
- Be imaginative change things
- Thoroughly “shake-up” the existing problem
- Useful in groups or as individuals to produce bold ideas

Adopt, Adapt, Improve

- The normal way of trying to be creative
- Can be effective if one can challenge oneself sufficiently

Change the rules

- Challenge the assumptions and policies ask
who?, what?, why?, where?, when?, which?, how?

Evaluation and selection of solutions

- Assess each idea performance possibility against a weighted set of criteria – effectiveness, efficiency, equity, will we meet objectives.
- Build a business case for the surviving ideas pick the better ones;
- Develop the solution and plan through the implications
- Test
- launch