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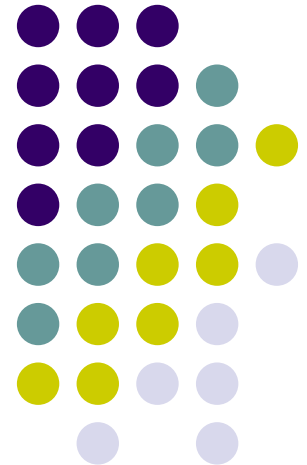
15.351 Managing Innovation and Entrepreneurship
Spring 2008

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15. 351 Managing Innovation & Entrepreneurship

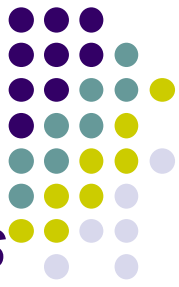
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2008

Class Four



Module One:

Exploring innovations – processes & methods



Exploring Innovations

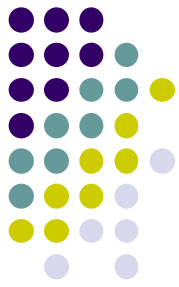
Key processes

Five Cases-Five methods

- BIG vs. IDEO – opportunity identification, brainstorming, failure
- Advanced Inhalation Research – uncertainty analysis & experimental design
- Team New Zealand – prototyping & learning
- Innovation @ 3M – lead user learning
- Iridium – failed innovation processes & scenario methods

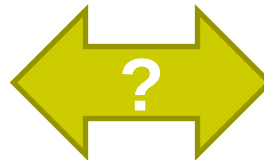
Focus on Front End

Understanding the discovery process for opportunities



Search

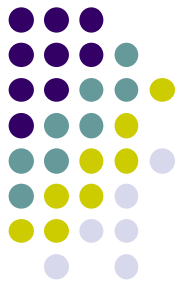
- Relative differences in the costs & benefits of search (Stiglitz 1994)
- Lead some entrepreneurs to search and find opportunities more than others



Recognition

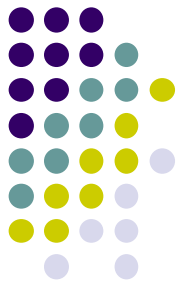
- Can't search because by definition opportunities are unknown until discovered (Kirzner 1997)
- Entrepreneurs vary in the degree to which their prior knowledge triggers opportunity recognition

None of the entrepreneurs considered the other “opportunities”

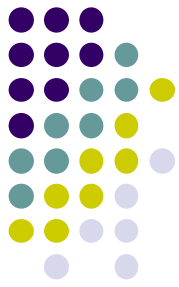


- No competition over license scope – all considered specific opportunities
- Opportunity definition strongly shaped by prior knowledge
- Opportunities were discovered triggered by differences in prior knowledge

Can we overcome the “narrow” scope of typical opportunity identification?



- What types of people?
- What types of methods?

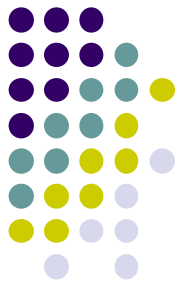


What types of people?

- Need to self-consciously manage diversity of people
 - People with diverse “solution” backgrounds
 - People with diverse “problem” backgrounds

Two approaches

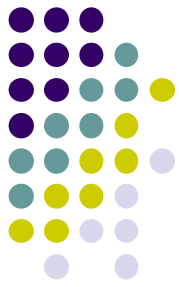
- Internally
 - IDEO has a “diverse” group of people on each team
 - Potential as an entrepreneur to choose your team
- Externally
 - Use a broad (but narrowing) group of advisors
 - Broadcast your problem to those with solutions (BIG, InnoCentive)
 - Broadcast your solution to those with problems (?)



What types of methods

- Take people who already have “knowledge” & give them a richer “background” in
 - Problem context e.g. customer anthropology
 - Solution context e.g. papers, lab time
- Brainstorming (e.g. IDEO)
 - Focus on either finding the right “problem” for your solution
OR
 - Focus on the right “solution” to your problem (e.g. shopping cart)

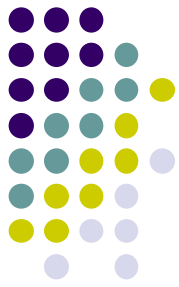
Process for identifying opportunities - brainstorming



PURPOSE

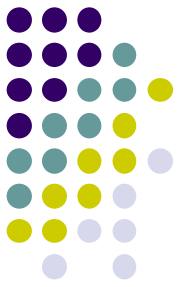
- Gather additional relevant information in a structured way (even when that way is deliberately unstructured)
- Tap into/allow for more creative thinking

Alex Osborn's Original Rules of Brainstorming

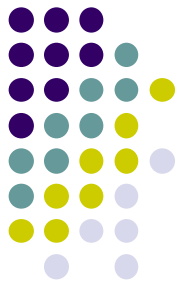


Idea Generation

- Criticism is ruled out
- Freewheeling is welcomed
- Quantity is wanted
- Combination and improvement are sought

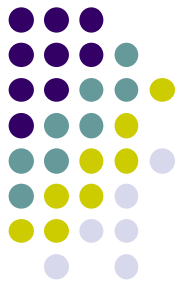


Caveat - Who has been in a meeting and put a good idea forward which has been followed by laughter and dismissal?



Caveat - Who has been in a meeting and put a good idea forward which has been followed by the comment ‘that won’t work, we have tried that before?’

Edward de Bono's Six Thinking Hats™



White hat

Data, facts and
information



Green hat

Creative
possibilities,
new ideas



Yellow hat

Positives,
benefits, good
things



Red hat

Feelings,
intuitions



Black hat

Negatives,
warnings, pitfalls



Blue hat

Control or
direction in
thinking

Edward deBono's Mental Valleys Model for Thinking

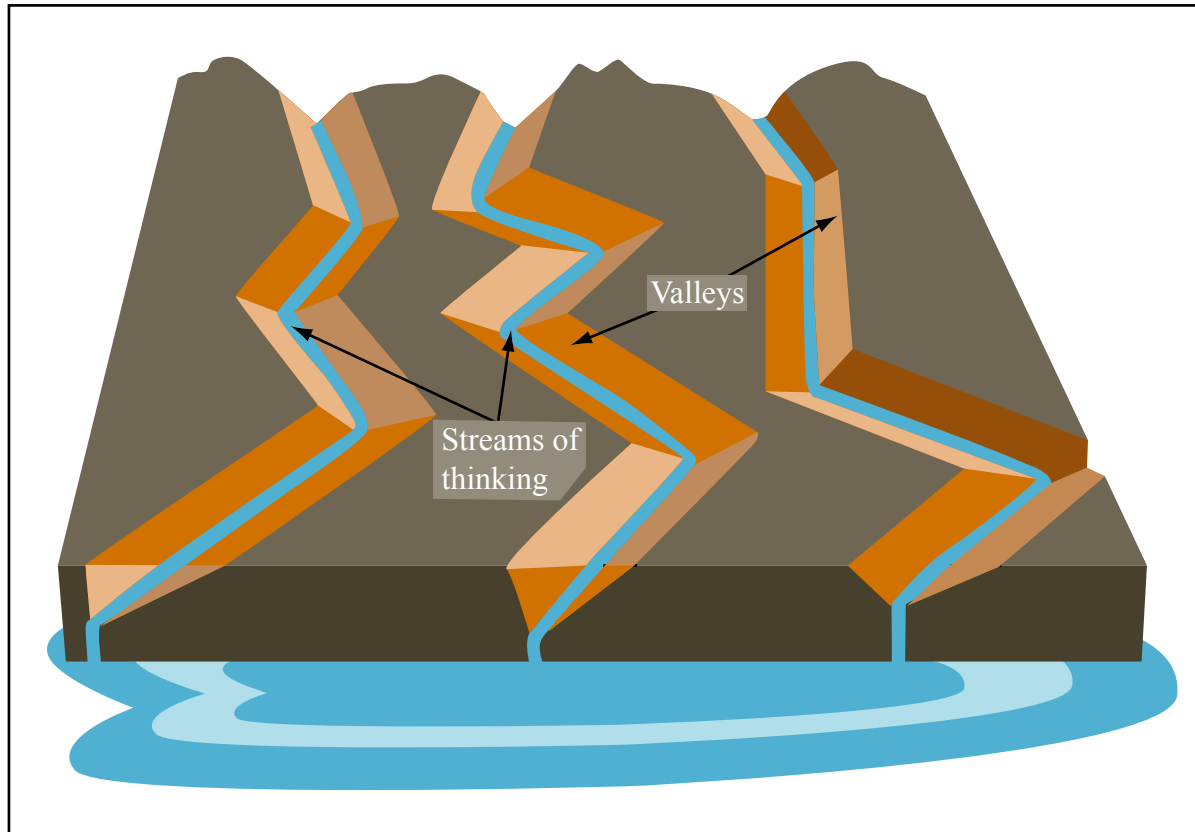
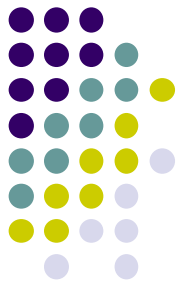


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“Creative thinking involves breaking out of established patterns (valleys) in order to look at things in a different way.” de Bono

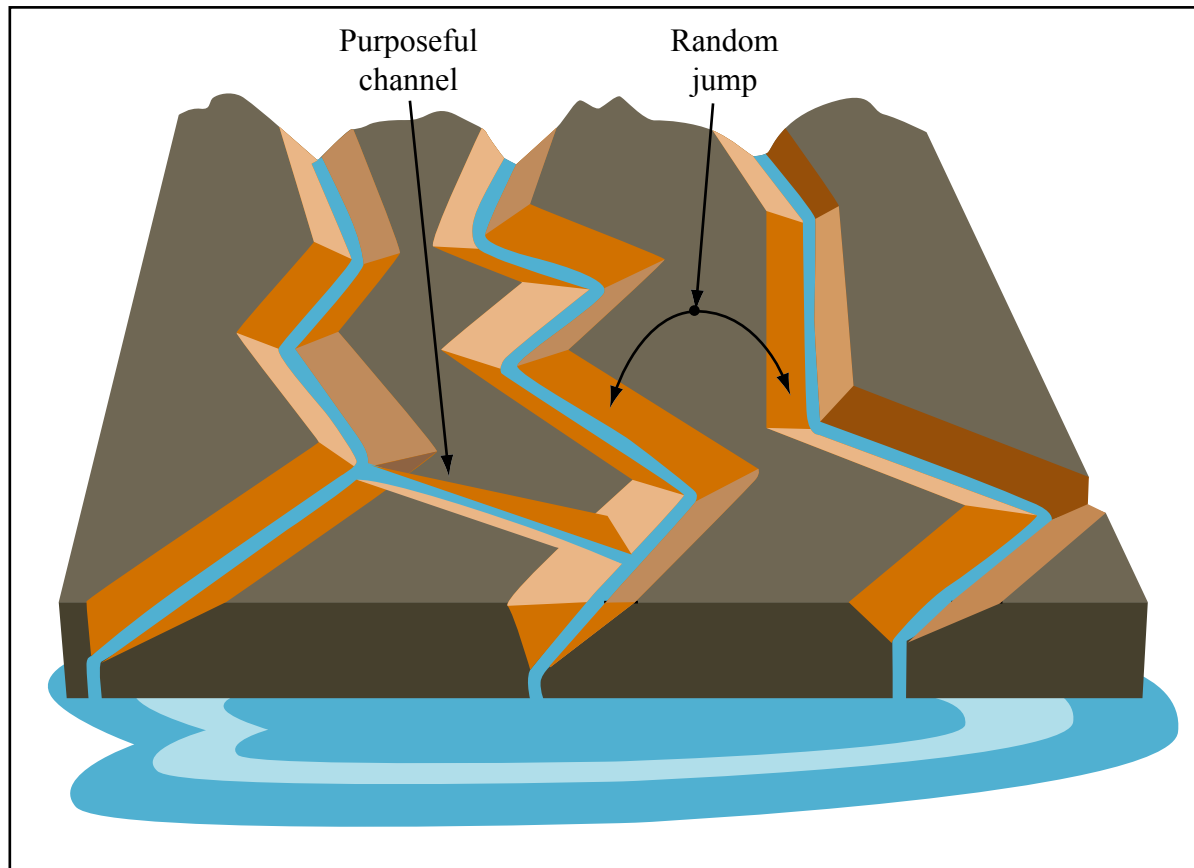
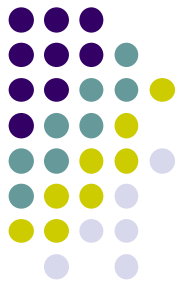


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