INNOVATION & IDEATION

Helle Meibom Færgemann

AU CENTRE FOR
ENTREPRENEURSHIP AND INNOVATION

ERHVERVSSTYRELSEN

DEN EUROPÆISKE UNION

Den Europæiske Socialfond

Vi investerer i din fremtid

AGENDA

- » 12.30-13.30 Exposition of anomalies
- » 13.30.13.45 Break
- » 13.45-14.45 Lecture on innovation and ideation
- » 14.45 Groupwork

AU CENTRE FOR
ENTREPRENEURSHIP AND INNOVATION

ERHVERVSSTYRELSEN

DEN EUROPÆISKE UNION
Den Europæiske Socialfond
Vi investerer i din fremtid

PHASE 3 IN THE ME2-MODEL

DIFFERENT LEVELS OF INNOVATION

RADICAL INNOVATION	INCREMENTAL INNOVATION
Major developments which will cause changes in the society, lifestyle or habits. Will often be followed by several incremental innovations	Incremental innovation: Smaller developments, where you typically transfer a technology or process to a new market or use the same technology or process in a new way

AU CENTRE FOR
ENTREPRENEURSHIP AND INNOVATION

ERHVERVSSTYRELSEN

DEN EUROPÆISKE UNION
Den Europæiske Socialfond
Vi investerer i din fremtid
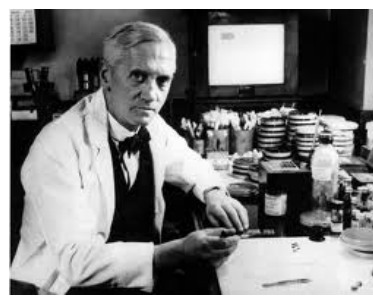
MAYBE MORE OF A CONTINUUM

RADICAL INCREMENTAL

PRODUCT, SERVICE, PROCESS = SYSTEM

» Component knowledge: Knowledge about each of the components

» System knowledge: How the components are linked together

HENDERSON & CLARK'S MATRIX

	Components	
	Reinforced	Overturned
System Unchanged	**Incremental innovation**	**Modular innovation**
Changed	**Architectual innovation**	**Radical innovation**

AU CENTRE FOR
ENTREPRENEURSHIP AND INNOVATION

ERHVERVSSTYRELSEN

DEN EUROPÆISKE UNION
Den Europæiske Socialfond
Vi investerer i din fremtid

RADICAL INNOVATION

AU CENTRE FOR
ENTREPRENEURSHIP AND INNOVATION

ERHVERVSSTYRELSEN

DEN EUROPÆISKE UNION
Den Europæiske Socialfond
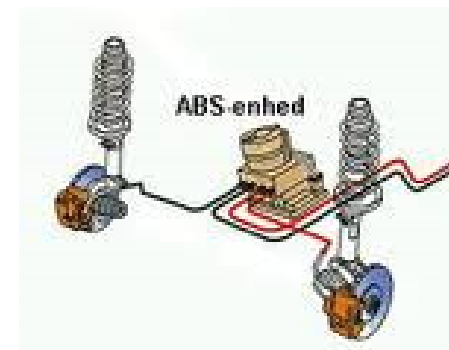Vi investerer i din fremtid
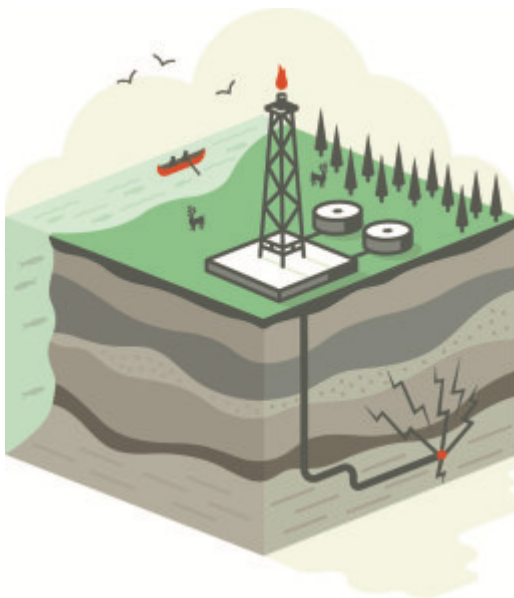
8

ARCHITECTUAL INNOVATION

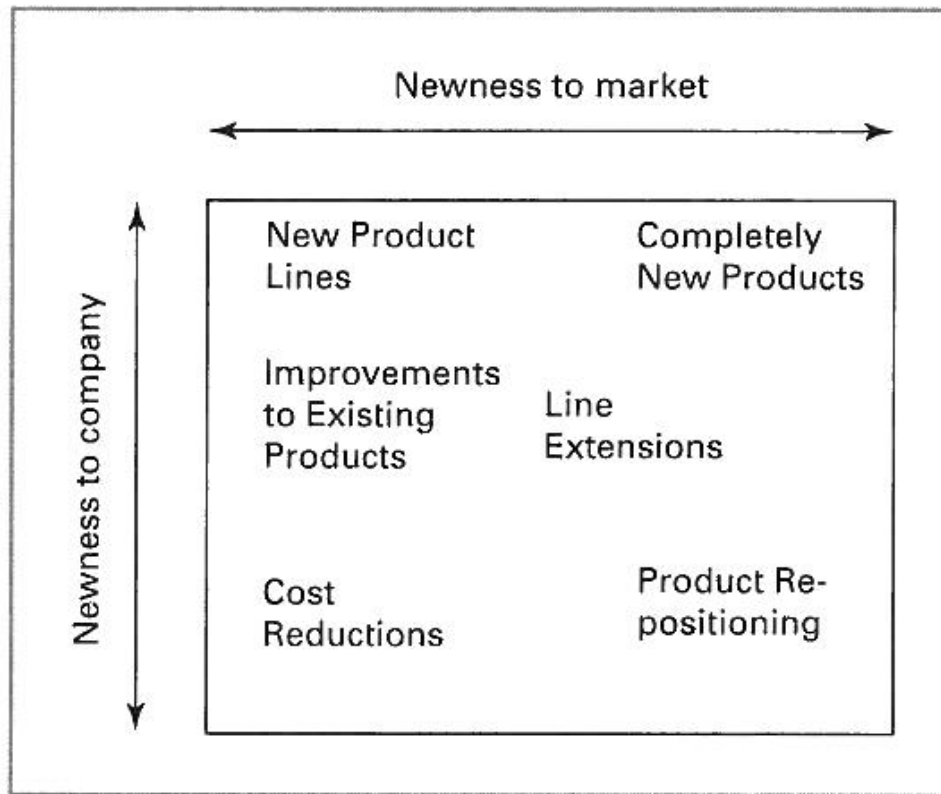ERHVERVSSTYRELSEN

MODULAR INNOVATION

Waterless Fracking

ABS·enhed

INCREMENTAL INNOVATION

NEW TO THE MARKET OR THE COMPAN

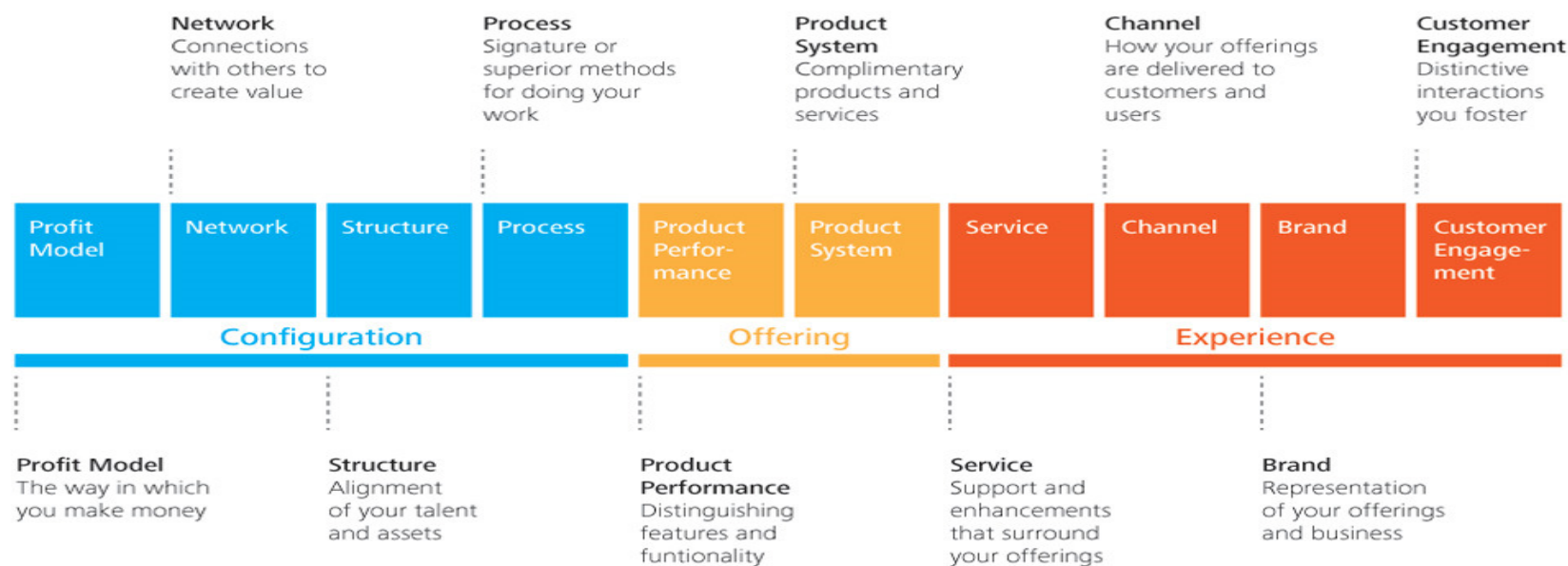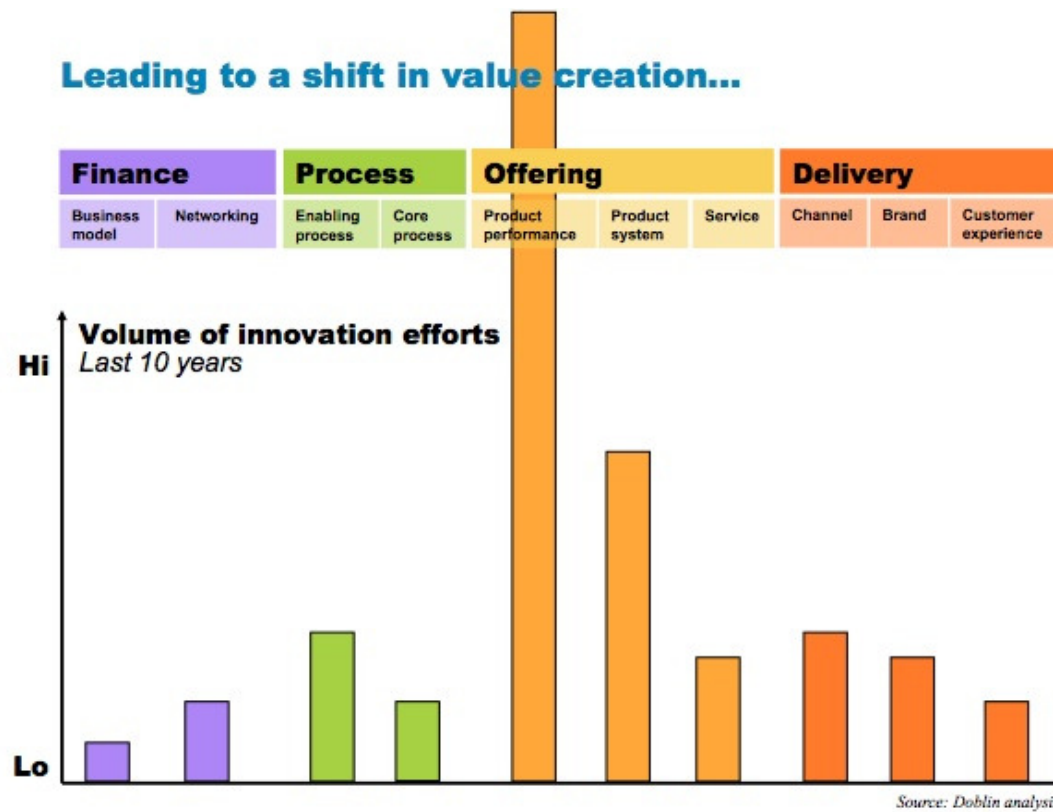**FIGURE 1.2** Degrees of innovation

Source: Adapted from Cooper (2001)

AU CENTRE FOR
ENTREPRENEURSHIP AND INNOVATION

ERHVERVSSTYRELSEN

DEN EUROPÆISKE UNION
Den Europæiske Socialfond
Vi investerer i din fremtid

12

KEELEY (2013)'S 10 TYPES OF INNOVATION

Figure 1. The Ten Types of Innovation®

Network Connections with others to create value		**Process** Signature or superior methods for doing your work		**Product System** Complimentary products and services		**Channel** How your offerings are delivered to customers and users		**Customer Engagement** Distinctive interactions you foster

Profit Model	Network	Structure	Process	Product Perfor-mance	Product System	Service	Channel	Brand	Customer Engage-ment

| Configuration | | | | Offering | | Experience | | | |

Profit Model The way in which you make money	**Structure** Alignment of your talent and assets	**Product Performance** Distinguishing features and funtionality	**Service** Support and enhancements that surround your offerings	**Brand** Representation of your offerings and business

Source: *The Ten Types of Innovation* [Doblin]
Graphic: Deloitte University Press | DUPress.com

AU CENTRE FOR
ENTREPRENEURSHIP AND INNOVATION

ERHVERVSSTYRELSEN

DEN EUROPÆISKE UNION
Den Europæiske Socialfond
Vi investerer i din fremtid

THIS IS WHERE THE RESOURCES ARE SPENT

AU CENTRE FOR
ENTREPRENEURSHIP AND INNOVATION

ERHVERVSSTYRELSEN

DEN EUROPÆISKE UNION
Den Europæiske Socialfond
Vi investerer i din fremtid

THIS IS WHERE THE VALUE IS CREATED

A shift in value creation...

Finance		Process		Offering			Delivery		
Business model	Networking	Enabling process	Core process	Product performance	Product system	Service	Channel	Brand	Customer experience

Cumulative value creation—
Last 10 years

Pareto revisited:
Less than 2% of *projects* produce
More than 90% of *value...*

Source: Doblin analysis

SS - 17

ERHVERVSSTYRELSEN

DEN EUROPÆISKE UNION
Den Europæiske Socialfond
Vi investerer i din fremtid
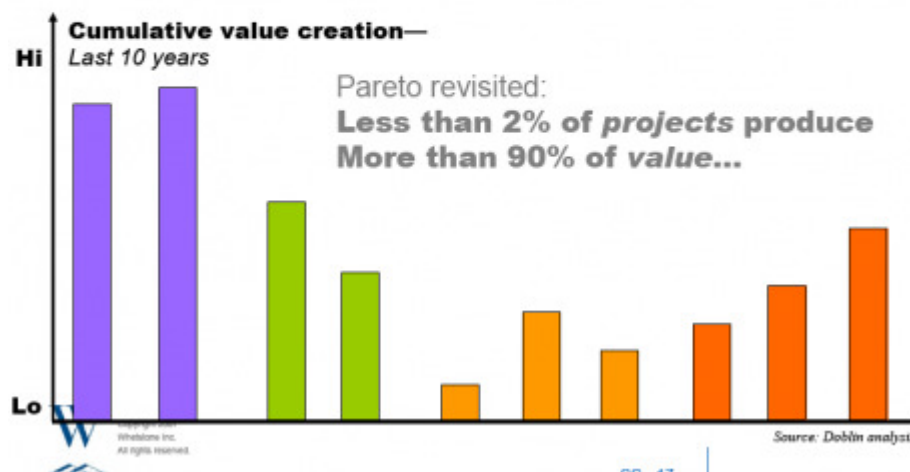
DIVERGENT AND CONVERGENT THINKING

AU CENTRE FOR
ENTREPRENEURSHIP AND INNOVATION

ERHVERVSSTYRELSEN

DEN EUROPÆISKE UNION
Den Europæiske Socialfond
Vi investerer i din fremtid

CONVERGENT AND DIVERGENT THINKING

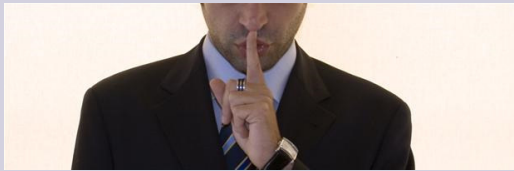|	Convergent	Divergent
Typical processes	Being logical Recognizing the familiar Combining what "belongs" together Homing in on the single best answer Reapplying set techniques Preserving the already known Achieving accuracy and correctness Playing it safe Sticking to a narrow range of obviously relevant information Making associations from adjacent fields only	Being unconventional Seeing the known in a new lighting Combining the disparate Producing multiple answers Shifting perspective Transforming the known Seeing new possibilities Taking risks Retrieving a broad range of existing knowledge Associating ideas from remote fields

CONVERGENT AND DIVERGENT THINKING

	Convergent	Divergent
Typical results for the individual	Greater familiarity with what already exists Better grasp of the facts A quick, "correct" answer Development of a high level of skill Closure on an issue A feeling of security and safety	Alternative or multiple solutions Deviation from the usual A surprising answer New lines of attack or ways of doing things Exciting or risky possibilities A feeling of uncertainty or excitement

AU CENTRE FOR
ENTREPRENEURSHIP AND INNOVATION

DEN EUROPÆISKE UNION
Den Europæiske Socialfond
Vi investerer i din fremtid

ERHVERVSSTYRELSEN

NOT EITHER OR

» Both thinking processes generate ideas, but

  » Divergent thinking generates **variability**

  » Convergent thinking generates **orthodoxy**

» Novelty doesn't necessarily lead to creativity

» Need for "effective surprise", not mere surprise
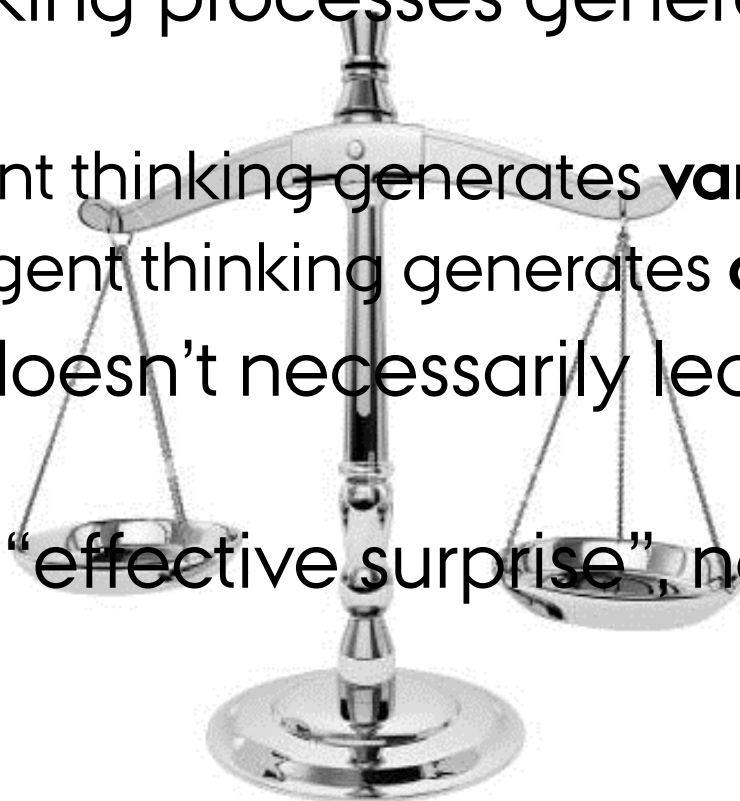
BRAINSTORMING (OSBORNE, 1953)

Quantity	Hold back criticism
Encourage wild ideas	Build upon the ideas of others
	$1+1=3$

AU CENTRE FOR
ENTREPRENEURSHIP AND INNOVATION

ERHVERVSSTYRELSEN

DEN EUROPÆISKE UNION
Den Europæiske Socialfond
Vi investerer i din fremtid

BARRIERS

» Fear

» Blindness to possibility – how we perceive things (Shoes in Africa)

» Criticism & skepticism (the automatic "no", training in critical thinking)

» Collective monologue

» "No" and it's ugly cousin "Yes...but"

» Rash conclusions (premature convergence, J-preference?)

» [Striim, 2006, Sejer Jakobsen 2003, Hansen & Byrge 2008, Jacob Vind]

AU CENTRE FOR
ENTREPRENEURSHIP AND INNOVATION

ERHVERVSSTYRELSEN

DEN EUROPÆISKE UNION
Den Europæiske Socialfond
Vi investerer i din fremtid

OTHER DIVERGENT TECHNIQUES

» Reverse brainstorming
» Stakeholder role play
» Visual technique
» Change the perspective
» The Kipling method
» Why why why
» 60 ideas in 10 minutes (Chaos pilots)
» Go and observe and/or observe some stakeholders
» Mind-mapping
» Walk-and-talk

REVERSE BRAINSTORMING

» Try to formulate your need in a negative/reverse way in order to see things from the upside down.

» If you for instance are working with customer service then try to make a list of all the ways that you can deteriorate the customer service in.

» This can provide you with new perspectives and insights about customer service.

AU CENTRE FOR
ENTREPRENEURSHIP AND INNOVATION

ERHVERVSSTYRELSEN

DEN EUROPÆISKE UNION
Den Europæiske Socialfond
Vi investerer i din fremtid

STAKEHOLDER ROLE PLAY

» Use the overview of stakeholders that you made lade last Tuesday.

» Each group member chooses a key stakeholder that he/she will represent

» Discuss needs and possible solutions

VISUAL TECHNIQUE

1. Take a random picture from a selection, which has nothing to do with your challenge

2. One group member describes what he/she sees on the picture.

3. The other groups members generate ideas based on what they see and hear.

4. Remember to record the ideas

AU CENTRE FOR
ENTREPRENEURSHIP AND INNOVATION

ERHVERVSSTYRELSEN

DEN EUROPÆISKE UNION
Den Europæiske Socialfond
Vi investerer i din fremtid

25

SEE PROBLEMS FROM NEW PERSPECTIVES

1. Choose a number of roles e.g. a profession like a police officer or a famous person (known by most people)

2. How would x solve this problem?

3. Which ideas are useful?

AU CENTRE FOR
ENTREPRENEURSHIP AND INNOVATION

ERHVERVSSTYRELSEN

DEN EUROPÆISKE UNION
Den Europæiske Socialfond
Vi investerer i din fremtid

26

THE KIPLING METHOD

» *"I have six honest serving men*
» *They taught me all I knew*
» *I call them What and Where and When*
» *And How and Why and Who"*
  » Rudyard Kipling poem

» What is the challenge?
» Where is it happening
» When is it happening?
» Why is it a challenge?
» Who is it affecting?
» How can you solve this challenge?
  » http://creatingminds.org og Jacob Vind

AU CENTRE FOR
ENTREPRENEURSHIP AND INNOVATION

ERHVERVSSTYRELSEN

DEN EUROPÆISKE UNION
Den Europæiske Socialfond
Vi investerer i din fremtid

27

WHY WHY WHY → ROOT CAUSE

» Example:

  » Why do we need to solve this problem = loosing market shares

  » Why are we losing markets shares = expensive spare parts

  » Why do we use expensive spare parts = only one supplier

» Taiichi Ohno, Toyota

AU CENTRE FOR
ENTREPRENEURSHIP AND INNOVATION

ERHVERVSSTYRELSEN

DEN EUROPÆISKE UNION
Den Europæiske Socialfond
Vi investerer i din fremtid

28

ASSESSING OPPORTUNITY DOABILITY (READ ET.AL. (2010)

	Feasabilility	Value
Market	**Is it doable?** Technolgical feasibility Market feasibility Economic feasibility	**Is it worth doing?** Financial feasibility
Personal	**Can I do it?** What will it take to do it? Who else do I need?	**Do I want to do it?** What turns me on about it? Why do I want to do it? Exit strategies

AU CENTRE FOR
ENTREPRENEURSHIP AND INNOVATION

ERHVERVSSTYRELSEN

DEN EUROPÆISKE UNION
Den Europæiske Socialfond
Vi investerer i din fremtid

29

PUGH-MATRIX

Concept Selection Matrix											
1. Date: 10/10/06											
2. Objective:											
Design a transportation system to get to class											
3. Target Customer:											
Average MTU student											
4. Customer Requirements	**5. Importance Weighting Factor (1-3-5 scale)**	Walk	Drive	Bike	Snowmobile	Take the bus	Telecommute	Fly out of CMX	Segway Transporter		
low cost	5	5	1	5	1	5	5	1	1		
reliable, year-round	5	5	5	1	1	5	9	1	5		
flexible to class schedule	3	5	5	5	5	1	9	1	5		
short commute time	1	5	9	9	5	5	9	9	9		
comfortable	3	5	9	5	5	9	9	5	5		
safe	5	5	9	5	5	9	9	9	5		
marketing - fashionable, status symbol	1	5	9	9	9	1	1	9	9		
can socialize on the way	3	5	5	1	1	5	1	5	1		
environmentally friendly	5	5	1	5	1	1	5	1	5		
Totals		45	53	45	33	41	57	41	45	0	0
9. Weighted Totals		155	155	131	87	151	207	111	131	0	0

AU CENTRE FOR
ENTREPRENEURSHIP AND INNOVATION

ERHVERVSSTYRELSEN

DEN EUROPÆISKE UNION
Den Europæiske Socialfond
Vi investerer i din fremtid

30

DOT VOTING

» Give each person the same amount of stickers or other items to vote with

» You could use (prioritized) criteria

» If you like you can give the ideas that weren't given enough votes in the first round a second chance

IDEA SELECTION MATRIX

HARD

Ease of implentati on

	WAIT	INVESTIGATE
	PLAN (NICE TO HAVE)	GO (QUICK WINS)

EASY   **LOW**   Effect on buttom line figures   **HIGH**

AU CENTRE FOR
ENTREPRENEURSHIP AND INNOVATION

ERHVERVSSTYRELSEN

DEN EUROPÆISKE UNION
Den Europæiske Socialfond
Vi investerer i din fremtid

32

GUIDELINE 1 IDEATION WORKSHOP

» Start with a nearly traditional brainstorm: write down all your initial ideas on post-its individually, put the post-its on the table and start adding to those through traditional brainstorming

» Try out 2-3 other ideation techniques

» Sort all the generated ideas – some of them can probably be merged

» Make a rough sorting: get rid of the ideas which are too boring, too impossible …

AU CENTRE FOR
ENTREPRENEURSHIP AND INNOVATION

ERHVERVSSTYRELSEN

DEN EUROPÆISKE UNION
Den Europæiske Socialfond
Vi investerer i din fremtid

GUIDELINE 2 IDEA SELECTION PHASE

» Use at least one of the techniques to select the ide(as) you would like to continue to work with during the rest of the course.

» It can be a number of ideas that are interconnected you can use to create a concept around