Innovativeness with groups?
A solution

InnoStudio
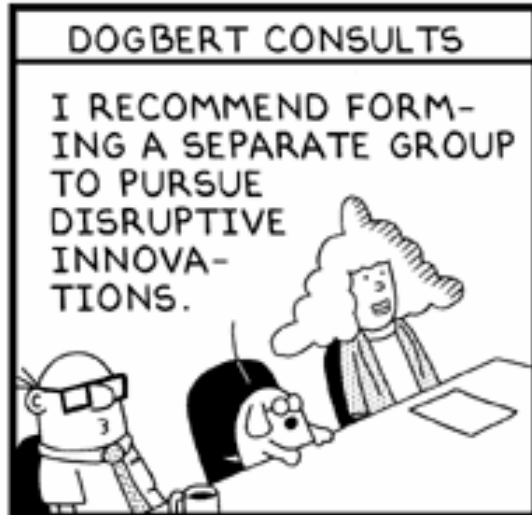
Agenda

- A brief history of the InnoStudio

- Reasoning innovativeness and space

- How it works?

- What is included in the service package?

- Case – what is absolutely the best car available?

The Dilbert Principle on Innovations

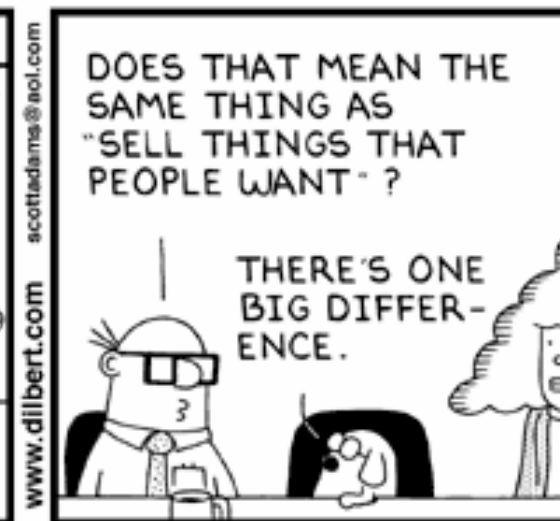# A model for InnoStudio

The GDSS laboratory at Lappeenranta
University of Technology

Partners of InnoStudio

- concept planning and DM processes with IT support based from research

- industrial desing on space and outfit

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- co-ordination and project management

- financial support

- IT sponsor

What innovativeness really is?

- Innovation vs. invention
- Combination of things in a new way
- Commercial aspects

What is decision-making?

- selection (Simon)

- Simon: Intelligence, Design, Choice, Implementation

- Decision-making process:
  - Goals, means/process, selection
  - Need to make selection

Decision-making factors

Factor	Trend	Results
Technology	Increasing ➔	More alternatives to choose from
Information/computers	Increasing ➔	
Structural complexity	Increasing ➔	Larger costs of making errors
Competition	Increasing ➔	
International markets	Increasing ➔	More uncertainty regarding the future
Political stability	Decreasing ➔	
Consumerism	Increasing ➔	
Government intervention	Increasing ➔	

Source: adapted from Turban and Meredith, 1994

Motivation for this

- People spend more and more time in meetings that are mostly ineffective (Jessup and Valacich, 1999)

- Human capital and knowledge have an important role in innovations and selection decisions (Nonaka and Takeuchi, 1995)

- Importance of knowledge utilization e.g. in the form of group work

Definition of GDSS

- GDSS: Group Decision Support System
    - "...interactive computer-based system which facilitates solution of unstructured problems by a set of decision makers working together as a group. Components of a GDSS include hardware, software, people, and procedures."
        - DeSanctis & Gallupe, 1985

Other definitions

- GSS - Group Support Systems
- CSCW - Computer Supported Co-operative Work
- EMS - Electronic Meeting Systems
- etc.

- Depending on research goal and focus
- InnoStudio focus on decision-making in SMEs in general, and is build for commercial use

Definition of InnoStudio

A group decision support room is a collection of hardware and software tools, physical facilities, and procedures designed to work in harmony to provide organizational and structure to group decision making. Ideally, a GDSS provides information management capabilities, an efficient means of communication among participants, and an effective, equitable environment for sharing ideas

Torkkeli, 2006

Decision support framework

Type of decision	Type of control			Technology support needed
	Operational control	**Managerial control**	**Strategic planning**	
Structured	Accounts receivable, order entry	Budget analysis, short-term forecasting, personnel reports, make-or-buy	Financial management (investment), warehouse location, distribution systems	*Management information system, operations research models, transaction processing*
Semistructured	Production scheduling, inventory control	Credit evaluation, budget preparation, plant layout, project scheduling, reward system design	Building new plant, mergers and acquisitions, new product planning, compensation planning, quality assurance planning	*DSS*
Unstructured	Selecting a cover for a magazine, buying software, approving loans	Negotiating, recruiting an executive, buying hardware, lobbying	R&D planning, new technology development, social responsibility planning	*DSS, ES, neural networks*
Technology support needed	*Management information system, management science*	*Management science, DSS, ES, EIS*	*EIS, ES, neural networks*	

Source: Gorry and Scott Morton (1971)

Time-place communication framework

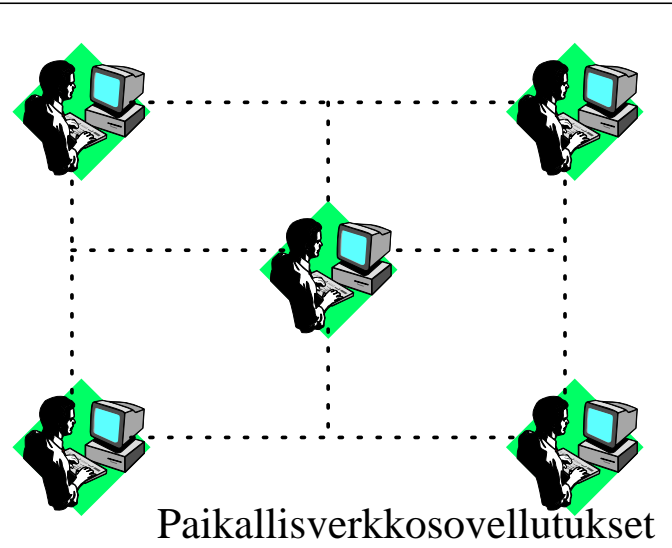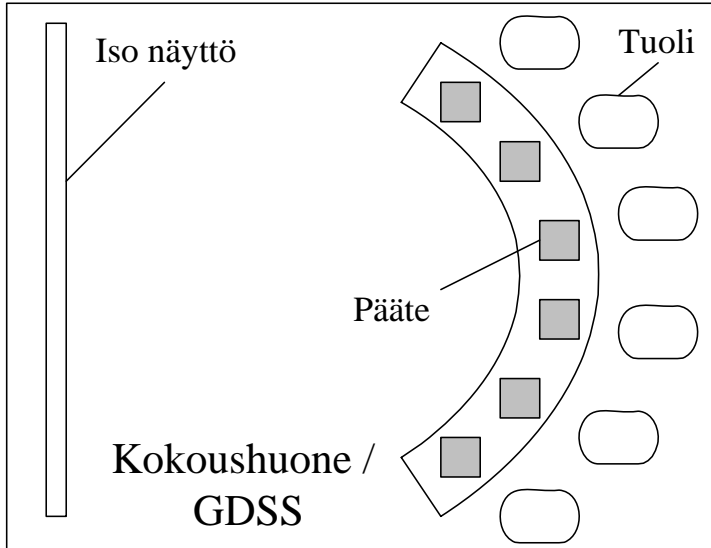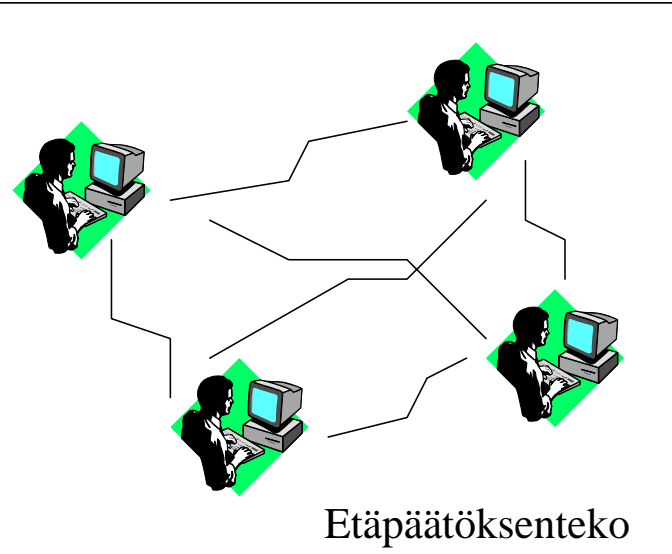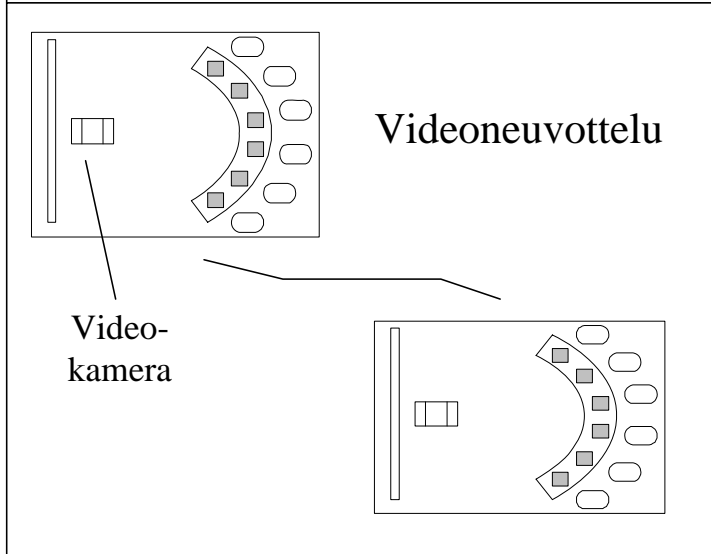|	Same time	Different time
Same place	• GSS in a decision room • Web-based GSS • Multimedia presentation systems • Whiteboard • Document sharing	• GSS in a decision room • Web-based GSS • Workflow management systems • Document sharing • E-mail, V-mail
Different place	• Web-based GSS • Whiteboard • Document sharing • Audio conferencing • Video conferencing • E-mail, V-mail	• Web-based GSS • Whiteboard • E-mail, V-mail • Workflow management systems • Document sharing • Computer conferencing with memory

Source: DeSanctis and Gallupe, 1985

Sama aika   **Eri aika**

Sama paikka

Iso näyttö

Tuoli

Pääte

Kokoushuone / GDSS

Paikallisverkkosovellutukset

Eri paikka

Video-kamera

Videoneuvottelu

Etäpäätöksenteko

Pros and cons of group work

Benefits of group work	**Disadvantages** of group work
• Groups are better than individuals at understanding problems • People are accountable for decisions in which they participate • Groups are better than individuals at catching errors • A group has more information (knowledge) than any one member. Groups can combine that knowledge and create new knowledge. As a result, there are more alternatives for problem solving, and better solutions can be reached • Synergy during problem solving may be produced • Working in a group may stimulate the participants and the process • Group members will have their egos embedded in the decision, so they will be committed to the solution • Risk propensity is balanced. Groups moderate high-risk takers and encourage conservatives	• Social pressures of conformity that may result in "groupthink" (where people begin to think alike, and where new ideas are not tolerated) • Time-consuming, slow process (only one group member can speak at a time) • Lack of coordination of the work done by the group and poor planning of meetings • Inappropriate influence (e.g., domination of time, topic, or opinion by one or few individuals; fear of speaking) • Tendency of group members to rely on others to do most of the work • Tendency toward compromised solutions of poor quality • Incomplete task analysis • Nonproductive time (socializing, getting ready, waiting for people) • Tendency to repeat what was already said • Large cost of making decisions (many hours of participation, travel expenses, etc.) • Tendency of groups to make riskier decisions than they should • Incomplete or inappropriate use of information • Inappropriate representation in the group
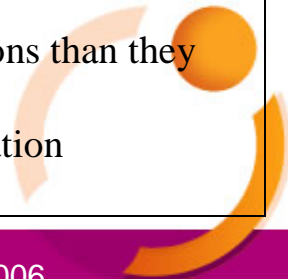
The best attributes of InnoStudio

- Parallel working method

- Anonymity

- Automatic meeting minutes and records

- Structure and agenda support

Process Gains

Synergy

Learning

Stimulation

More information

More precise communication

More objective evaluation

Effects depend upon specific technique used

GSS

Process support

• Group memory

• Anonymity

• Parallel communication

• Media effects
Media speed
Depersonalization
Media richness
View size

Task support

Task structure

Process structure
• Global
• Local

Process Losses

Attention blocking
Failure to remember

Conformance pressure
Evaluation apprehension

Free riding

Air time fragmentation
Attenuation blocking
Concentration blocking

Socializing

Domination

Information overload

Flaming

Slower feedback
Fewer information cues

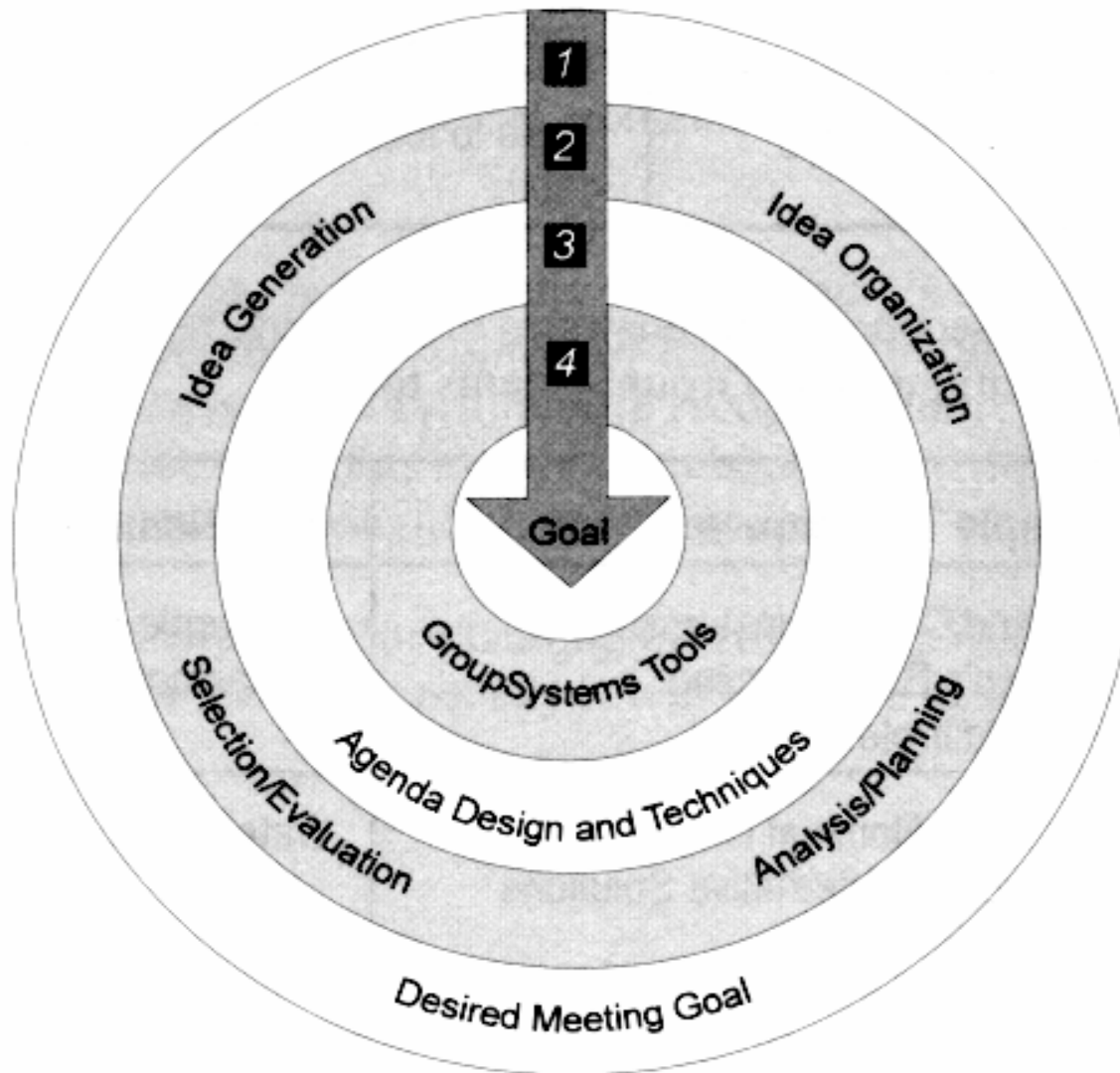Incomplete use of information

Incomplete task analysis

Coordination problems
Effects depend upon specific technique used

Increases: ⟶   *Decreases:* ⟹

Plannig a meeting

General process

1. Idea generation / knowledge cathering
2. Idea processing (commenting, categorization, voting)
3. Selection (voting)
4. Consensus building

Applications

- Focus Groups – customer need assessment
- Strategy generation and analysis, SWOT
- Technogy selection
- R&D project selection
- Conflicts – HRM
- Change management
- Scenario planning

Softwares

- GroupSystems
  - General support for meetings
- Expert Choice
  - AHP for multi-criteria evaluations
- InnoEnterprizer
  - Corporate innovations

Future

- financially independent service for SMEs in Kouvola region

- evidence-based management concepts – research by LUT

- network of rooms: Kouvola, Lappeenranta and Kuopio… (and Vysocina region?)

Some references

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