Business Innovation in Optics and Photonics

Course Section 10

Group Work

Dr. Marc Tremont
Dr. Markus Weber
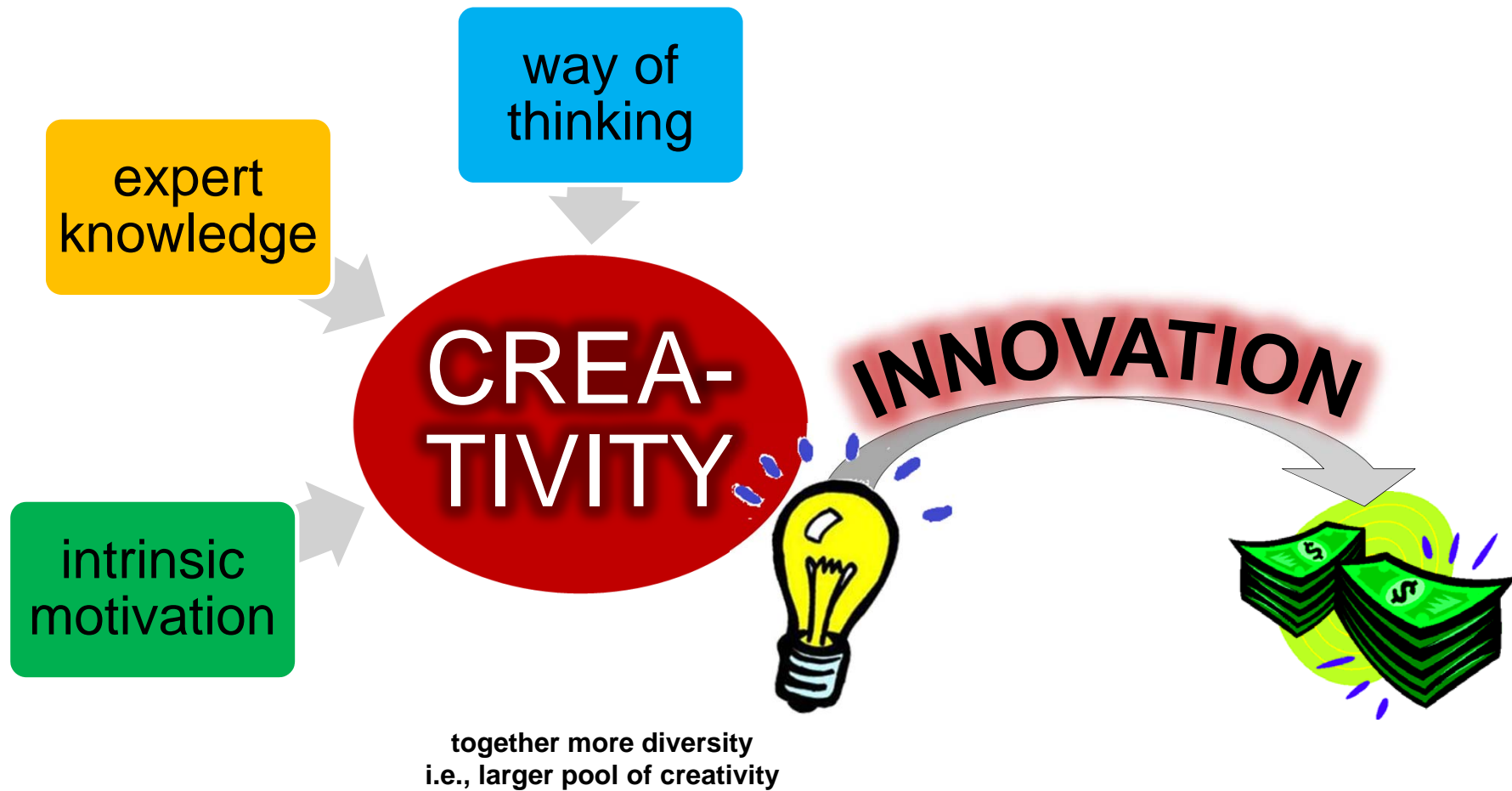
Carl Zeiss AG

Timeline

Day 1 (2 h) Oct 15, 2012	Introduction - Introduction - Background of Cinemizer Department at CZ? - Status today - Brainstorming for ideas	M. Kaschke/ M. Weber
Day 2 (2 h) Oct 22, 2012	Technology Introduction - Display technology (LCD, OLED) - Colour Management - HMD - Optical Designs - Diffractive optics	M. Weber
Day 3 (2 h) Oct 29, 2012	Group Work Technology	M. Weber
Day 4 (2 h) Nov 05, 2012	Group Presentations Technology	M. Weber/ J. Peter
Day 5 (2 h) Nov 12, 2012	Business Case Development/ Bus. Plan - Market segmentation - Market research - Essentials of finance - How to write a business plan?	J. Peter
Day 6 (2 h) Nov 19, 2012	IP-Management - The role of IP management - Patent research - Patent claims - Licencing - Patent infringement - Patent litigation	K. Gnatzig

Day 7 (2 h) Nov 26, 2012	Project Design and Design for Manufacturing - How to run a R&D Project? - Target costing - Networked product development	M. Weber
Day 8 (4 h!) Dec 03, 2012	Project start – Group Work - Simulation game for running - Project development - Project selection and introduction into group work for groups 1 – 3	M. Kaschke/ J. Peter
Day 9 (4 h!) Dec 10, 2012	as day 8 for groups 4 – 6	M. Kaschke/ M. Weber
Day 10 (2h) Dec 17, 2012	Group Work: Idea generation	M. Weber
Day 11 (2h) Jan 07, 2013	Group Work: Business Plan	J. Peter
Day 12 (2h) Jan 21, 2013	Group Work: Preparation Presentation	J. Peter
Day 13 Feb 4, 2013	Presentation of group work Excursion to Carl Zeiss AG in Oberkochen (full day)	M. Kaschke, M. Weber, J. Peter

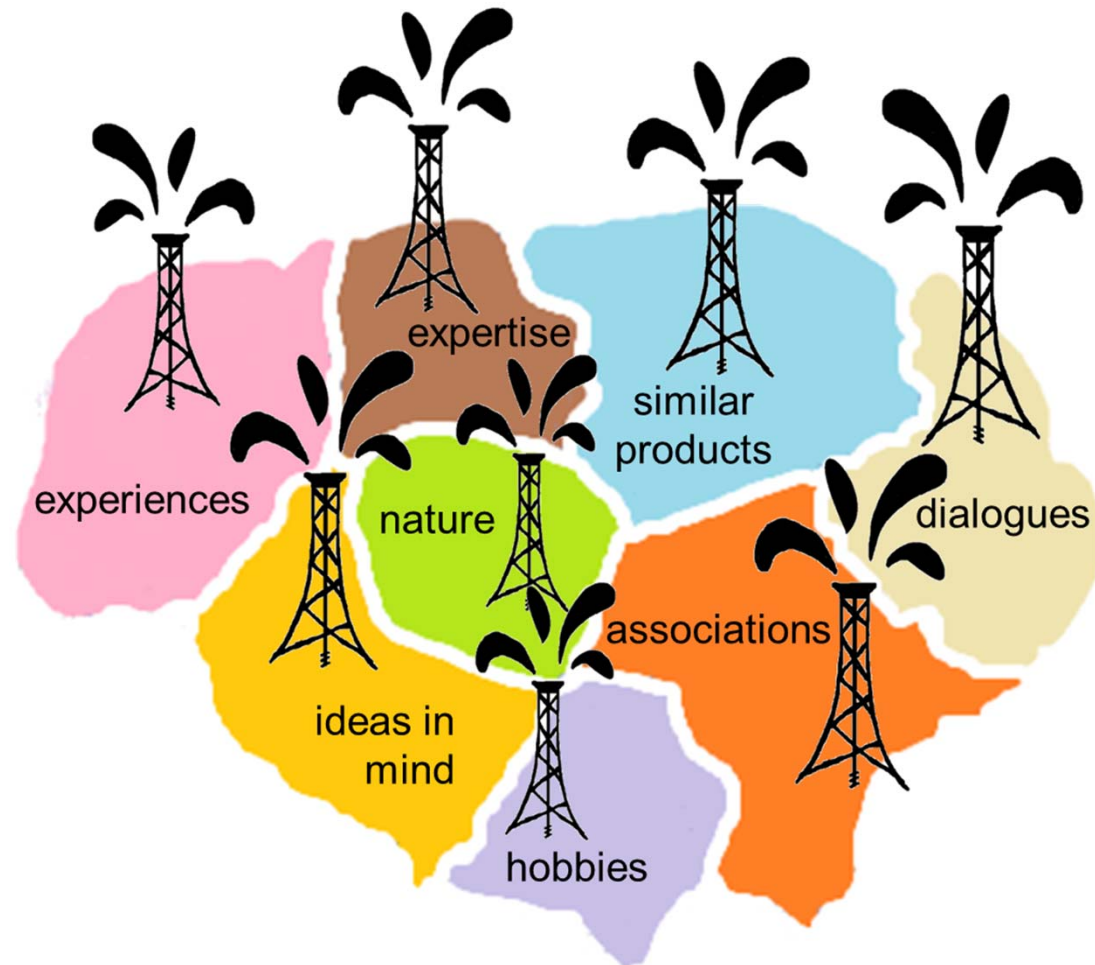**Group work is a key part of this course - Let's define 6 groups of 5 persons each**

Group Work – What's the scope?

- ➢ In past modules you have discussed photonic **technologies**, **business case creation** and **project management** in the context of head mounted devices

- ➢ You are familiar with the **basic concepts** and **current applications** of head mounted devices (HMD), in particular the *Cinemizer*

- ➢ Today, you will take **the role of an innovator** and figure out potential **new applications** of HMD's and/or Data Glasses

- ➢ You may consider dimensions such as e.g. **new application fields, unmet customer needs**, **increased customer value, ease of use…**

Creativity is the Seed for Innovation

expert knowledge

way of thinking

intrinsic motivation

CREA-TIVITY

INNOVATION

**together more diversity
i.e., larger pool of creativity**
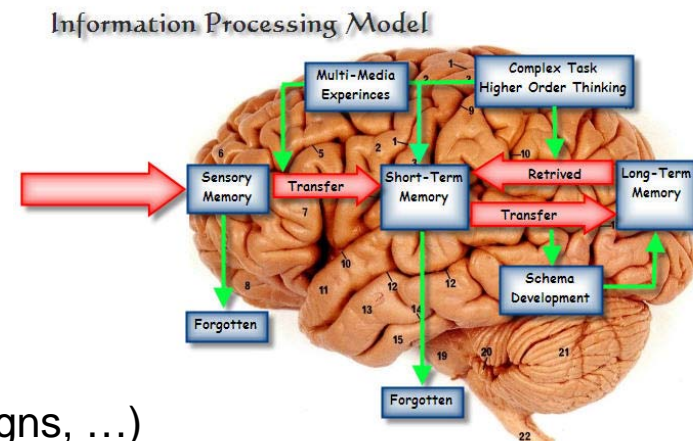
Where to dig for New Ideas?

Understanding information processing in the human brain helps in choosing the right creativity tools…
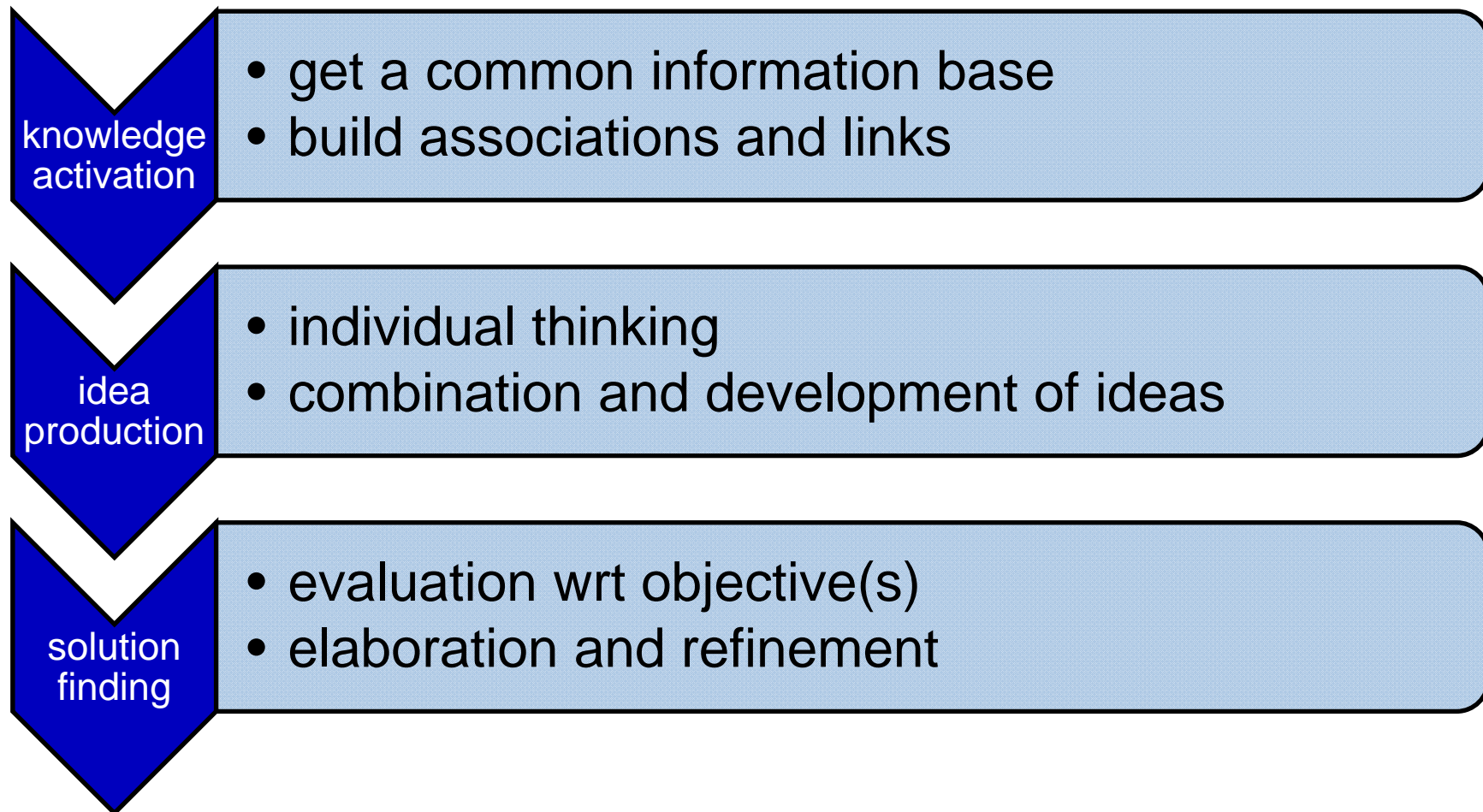
short-term memory (working memory)

- limited capacity: no more than 5…7 items for 20…30 seconds
    - time can be extended by repeating item to yourself, e.g., telephone number

    - time can also be extended by a sketch in front of you

long-term memory

- unlimited capacity
- 3 areas
    - procedural (skills)
    - semantic (meaning, significance of words, signs, …)
   - episodic (events, personal experiences)

Information Processing Model

Speed Concepting – Group Work

knowledge activation
- get a common information base
- build associations and links

idea production
- individual thinking
- combination and development of ideas

solution finding
- evaluation wrt objective(s)
- elaboration and refinement

Time Schedule
9.45 – 11.15 am

Monday, Dec 17, 2012	
Time	**Topic / Agenda**
0:15	**Intro to the Workshop** - What's the scope of the group work? - How can one create ideas in short time? - How does Speed-Concepting work?
0:20	**Ideation by Speed Concepting**
0:10	**Preselection of Ideas**
0:20	**Elaboration** - Focus on TOP3 promising ideas in group
0:25	**Presentation** - Present and discuss all TOP ideas

Input/ Information

quantity

quality
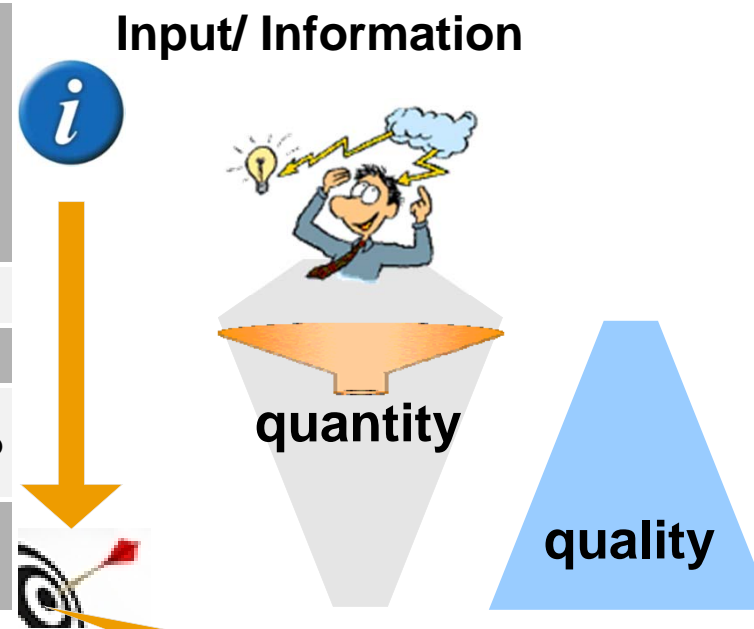
Final target:
new application fields for the cinemizer

Speed concepting
3 minutes per round!

Procedure

- **take your role as a seed for discussion**

  (you may use the role cards for this purpose)
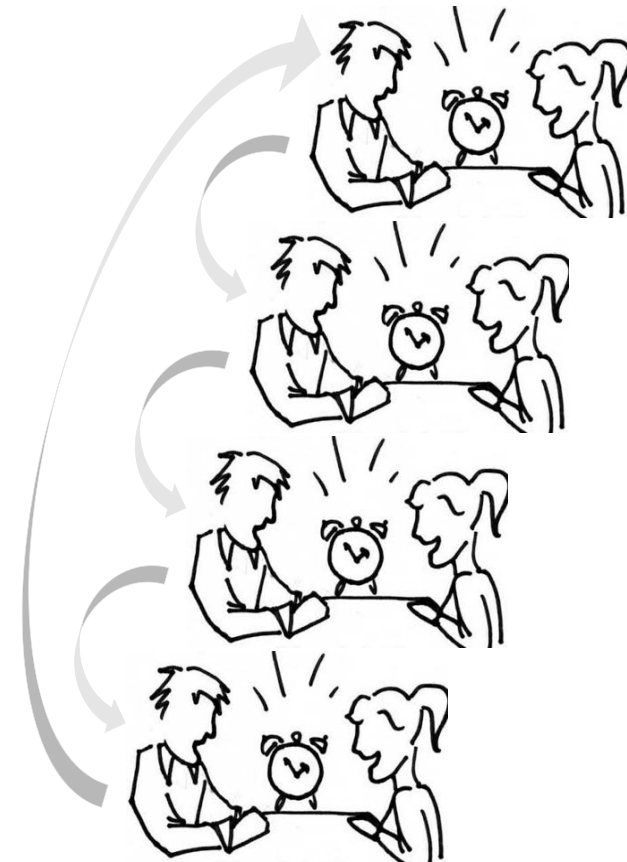
- **meet in pairs**

- **start ideation rounds**

  - Dialogue, create ideas
  - take notes **3 min**
  - move to next partner **1 min**

  5 x

⇒ **write down your ideas for each round**

Pre-selection of ideas

Which ideas are the most promising ones?

Why should they be attractive?

1.) for your own:
- **select 1 or 2 of your favourites (out of your notes)**

2 min

2.) in your working groups (1 – 6):
- **agree on the TOP 3 most attractive ideas in your group**

5 min

Elaboration

Take your TOP3 preselected ideas in the group.

- **Discuss and note for each preselected idea:**
  1. Which information/ data should be displayed?
     (what is *the job-to-be-done* at the customer)   **15 min**
  2. What is the added value to the customer?
  3. What could be the market size?

- **Select and prepare 1 or 2 ideas for presentation**   **5 min**

Presentation

Each group will have a slot of <u>4 minutes </u>to present their results

And last but not least:

Have fun and enjoy the group work !

Speed concepting
3 min