

# Awareness session at Laerdal Medicals



## ***Company's profile***

Laerdal Medical AS started as a small publishing house in 1940, specializing in greetings cards and children's books. The company soon expanded into the manufacturing of wooden toys. Pioneering in soft plastics in the early 50s, Laerdal made millions of realistic play dolls and "furniture friendly" toy cars.

The know-how gained from producing toys, opened new doors into making realistic wound simulations. First aid and emergency medicine with an emphasis on training became our main field of activity. The turning of business focus is symbolized with a girl who died in the late 1890s.

## **The girl from the River Seine**

At the turn of the 19th century, the body of a young girl was pulled from the River Seine in Paris. There was no evidence of violence and it was assumed she had taken her own life. Because her identity could not be established, a death mask was made; this was customary in such cases. The young girl's delicate beauty and ethereal smile added to the enigma of her death.

Romantic stories that speculated on this mystery were published. According to one, her death was the result of an unrequited romance. This story became popular throughout Europe, as did reproductions of her death mask.

## **From the mask of tragedy to the kiss of life**

Generations later, the girl from the River Seine was brought back to life when Åsmund S. Lærdal began the development of a realistic and effective training aid to teach mouth-to-mouth resuscitation.

Moved by the story of the girl so tragically taken by early death, he adopted her mask for the face of his new resuscitation-training manikin, Resusci Anne. Because he was convinced that if such a manikin was life-sized and life-like, students would be better motivated to learn this lifesaving procedure.



**The Good Samaritan**

With the introduction of the Resusci Anne manikin the company dedicated itself to advancing the cause of resuscitation and emergency care. The toy production was deemphasized, and consequently a new logo was needed to reflect our mission.

The image to be our emblem is an ancient one – the Good Samaritan. Our logo depicts the tale of the traveler whose selfless compassion and care saved the life of a total stranger. His attitude, empathy and actions are our inspiration for everything we do and develop.

**Decades of development**

In the 60s pre-hospital emergency medicine began to be seen as an extension of advanced hospital treatment. To increase the practical usefulness of these ideas Laerdal Medical developed easily portable equipment for ventilation and airway control, and began a tradition of offering equipment along with complementary training aids.

In 1980 the Laerdal Foundation for Acute Medicine was founded. Over the years it has been able to support a considerable number of research, education and publication projects.

In the 80s early defibrillation was shown to decisively increase the survival rate of pre-hospital cardiac arrest. This triggered the development of our Heartstart semi-automatic defibrillator, enabling ambulance personnel without long medical training to provide this life saving treatment.

In the 90's our Stiffneck collars provided new possibilities for preventing needless injury and disablement from cervical spine injuries.

In January of 2000 Laerdal expanded its collaboration with Texas-based Medical Plastics Laboratories Inc. (MPL), by acquiring this innovative and exciting company. The company is now called Laerdal Texas and the flagship product produced there to date is SimMan. By acquiring MPL, new channels for sales and distribution opened up, and close cooperation with Laerdal's organization in New York strengthened the company's already strong position in the US market.

Laerdal is continuously developing and has been able to drive the market with innovative product development. In 2002 Laerdal started its collaboration with Danish-based Sophus Medical when looking into interactive medical training products. By 2003 the company was fully acquired and is now called Laerdal Sophus. The company leads the field of micro simulation training, and extensive product launches covering educational micro simulation programs for pre-hospital, in-hospital and military segments took place in the first half of 2004.

As a natural extension of micro simulation, virtual reality now became interesting for Laerdal Medical to complete the product portfolio. Later in 2004 Laerdal purchased intellectual property and transfer of people called SimQuest. This group is now called Laerdal DC and will produce a cutting edge range of virtual reality products. The first product – IV arm – was launched in the summer of 2004.

Laerdal celebrated the official opening of a new factory in China. The new factory will enable the company to be better prepared for the future by providing not only a quality new factory facility in the Far East, but also access to the rapidly growing China market.

**Dedicated diversity**

Today, Laerdal Medical is dedicated to helping save lives with products for CPR training, Airway Management, Advanced Life Support Training, Spinal Motion restriction, Trauma Training,

Monitoring, Defibrillation, Patient Simulation made for using traditional basic, intermediate and advanced training techniques combined with micro simulation and virtual reality.

**Place and date(s) of the awareness sessions**

Stavanger (Rogaland - Norway), 14<sup>th</sup>-March 2005

**Application fields**

Product Development and Service Development

**Creative Phases involved**

Predisposition, Idea Generation, Evaluation

**Description of the participants**

The participants represented some important functions from the company organisation such as: Product Development, Production, Sales and Marketing.

The composition of the group attending this awareness session was made of 16 employees in charge of the following roles:

- “Representatives from the Middle Management”
- “Product developers”;
- “Production Managers and specialists”
- “Sales Managers”.

**Agenda of the awareness session**

Starts on	Ends on	Item
<b>MONDAY</b>		
09.00	09.15	Introduction and CREATE project presentation
09.15	09.45	About creativity and creative techniques
09.45	10.15	Presentation Provocation & Movement
10.15	10.30	Coffee break
10.30	11.30	Exercise: Provocation & Movement
11.00	11.30	Lunch
12.00	12.30	Presentation: Morphological analysis
12.30	13.00	Exercise: Morphological analysis
13.00	13.15	Open discussion
13.15	13.45	Presentation: ” Six Thinking Hats”
13.45	14.30	Exercise: ” Six Thinking Hats”
14.30	15.00	Presentation: ” Creativity template”
15.00	15.30	Exercise: ” Creativity template”
15.30	16.00	Final discussion and conclusions

## Description of the session

### PREDISPOSITION PHASE

The first two presentations (“Introduction and CREATE project presentation” “About creativity and creative techniques”) had the purpose of raising the awareness of the participants about the importance and usefulness of creativity and of predisposing them to the use of creative techniques for the following phases. The presentations were meant to clarify “how do we define Creativity”, and “how to address creative thinking in a structured way”. Another important issue raised during the predisposition phase was “how can our company introduce creative techniques as a part of the tools we normally use in our daily work”. “Very much can be said and presented about creativity, but how we leverage the potential of these techniques in an easy and very concrete way?”

The phase was very important to set focus on a kind of “return on investment”, that motivated both the managers and the other participants.

### IDEA GENERATION PHASE (1)

The awareness session then continued according to the agenda presenting the techniques, carrying out the exercises, opening for questions and comments about the methods and the use of the techniques. It was also very important to let the audience get a feeling of the potential benefits they could have using the techniques. The explicit goal was to show the techniques and to understand if and how that could be used within the company.

The following chapters give an overview of what was produced during the exercises. Please note that an awareness session is **not** a training session, so the focus was on presenting the techniques and the way they work, rather than on enhancing the competences of the participants.

## ***Provocation and movement***

1- Provocation and movement was the very first technique to be presented. The reason for this choice is that this technique is easy to present and understand; it normally interests most people and is considered quite amusing. In other words, it is a good “starter”.

2- After the presentation the participants were asked to choose a focus area and a focus purpose. Defining the focus for the work sessions is actually the first step in every creativity exercise.

The focus at Laerdal was: New facilities for the R&D department – physical organization of people. The purpose was: Creative and effective product development

3- Then the group was asked to state what they considered as given and acknowledge truth and facts for the issue they were focusing on.

4- Then the provocations were made and the movement techniques were used to generate ideas. For the selected provocation, people were set free to choose any of the Movement methods (according to their natural inclinations). This step and the following discussion were carried out openly with all people participating, but the facilitators were needed to remind the participants about the Movement methods.

This is what was produced:

- ***Given truth and given facts***
  - R&D are expanding into bigger areas

- 60 people
- 3<sup>rd</sup> floor
- Everyone should have their own office
- Have to have meeting facilities and equipment
- Short distances improves communication
- PU should be within a “closed” area.
- Kitchen and toilets
- HSE (Health Safety Environment) issues regulated by law
  
- ***Provocations***
  - We have too few meetings
  - Nobody has a designated location
  - R&D is to decrease in size
  - R&D is to work outside – not inside.
  - R&D should move to the other side of the street
  - R&D should be on all floors
  - You’re not allowed to bring equipment into R&D
  - Maximum distance between any 2 persons should be 2 meters
  - There are free offices on Bryne (a small village outside Stavanger city)
  - **Shut down the R&D department**
  - Integrate R&D with other departments
  - The R&D manager Per Reidar does all the work himself
  - The 3<sup>rd</sup> floor should be inside R&D (as opposed to R&D on the 3<sup>rd</sup> floor)
  
- ***Selected provocation***
  - Shut down R&D
  
- ***Movement (several methods for movement)***
  - We save money
  - More time for production
  - No “strange” people (less...)
  - No more complaints on bad coffee machines
  - Shorter time to market (TTM)
  - Get rid of annoying development problems
  - Product Management department takes over
  - No product launch/risk/verification problem
  - There will be a lot of room for R&D (hahaha...)
  
- ***Connecting ideas to focus***

Focus: Creative and effective product development

  - Get rid of sections/groups within R&D
  - Gather project teams
  - Grouping by interests
  - One set day for meetings
  - ONE super nice coffee central for the entire R&D

- Outsourcing of services
- Mix R&D with product management

- **Comments**

Follow the method step by step in the beginning. Possibility to improvise when more experienced.

### EVALUATION PHASE (1)

#### **Six Thinking hats**

Focus: How can we cooperate better between the departments.

Goal: Shorter Time To Market and improved quality.

- **Order of hats chosen for this specific exercise**

1. Blue
2. White
3. Green
4. Yellow
5. Black
6. Red
7. Green
8. Blue

- **White**

- Production department is involved too late in the process
- Failing to meet project plan
- Documentation department receives the papers too late in the process
- Launch date is set before Functional Requirement Document (FRD) and Product Specification Document (PSD) is finished
- The projects are set before the resources are allocated
- There is no common overview if the strategic and future plans.

- **Green**

- More social activities (2 Christmas dinners per year...)
- More information about upcoming projects
- Get to know each other better
- Project manager independent of function
- Kick off with a full project team ( as opposed to involving new resources as the project moves along)
- Front end loading
- Structure the launch process
- **Move the project starting point forward** (shorter TTM and more time to “get to know the project before it starts)

- **Yellow**
  - It's like going on vacation – better satisfaction for everyone involved if planned properly, opposed to just leave and see what happens....
  - Use time to get the required input
  - Increase the information on which to base decisions
  
- **Black**
  - Need to deliver
  - Meet launch time
  - No measurable progress
  - Just do it!
  - “we’ll go on vacation next year...”
  - You don’t reduce the total time by starting later
  - Everyone has an opinion – no one does anything
  
- **Red**
  - Develop the optimal product
  - Have fun!
  - Use more time on preparations
  - Almost everyone would feel better
  
- **Green**
  - Idea bank
  - Better structure to take care of ideas as they come
  - What is the “real” need – know the customer
  - Make the procedure ourselves
  - If the administration of resources is done from one place – it is easier to get everyone to move in the same direction
  - Pure project focus
  - Make field trips together with people from other departments
  
- **Blue (actions)**
  - Make the FRD together
  - Agree on the need that should to be satisfied
  - Project ownership of the FRD
  - Change in procedure culture
  - Move FRD responsibility from Marketing to the project

- **Reduce focus**

Current Focus:           How can we cooperate better between the departments

Current Goal:           Shorter TTM and improved quality

What is it that we really want?

- ***Redefine progress within the 6 thinking hats***

Start over with blue...

- ***Comments from this exercise***

- It is possible to suggest changes to the order of hats as the process moves along.
- We are too many to do this effectively. Ideally we should be 5-7.
- Suggestion of visual hat clue:
  - Colored paper on the table or on the screen (projected)
  - Explanation of the hats on a poster on the wall
- Normally the hats are placed on individuals – the method forces us to think together
- It should be quite easy to implement this method in the company
- You need exercise and experience to “feel” when a “hat” is emptied and it is time to move on
- If someone comes in and is not familiar with the method – this needs to be addressed

### IDEA GENERATION PHASE (2)

<b><i>Morphological analysis</i></b>
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Focus: Mobile packaging

Goal: General improvement of the packaging solution

- ***List of parameters (to gain understanding of the features and functions in focus)***

- Production cost
- Esthetics
- User focus
- Functionality

Other elements considered, but not included as main parameters

- Size
- Weight
- Shape
- Robust
- Usability
- Branding
- Material
- Color
- Extra equipment added to content
- Mobility



• **Table for the morphological analysis**

Production cost	Esthetics	Physical parameters	User focus	Functionality
Very high	Shape	Robust	Usability	Multi use
High	Color	Big	"trailability"	Protection
Medium	Direction	Medium	Branding	Presentation
Low	Smell	Small	Inside	Collapsible
Very low	ID of content	Weight	Ergonomics	Storage
Free		Surface	Intuitive use	

• **Very low/Direction/Big/Branding/Storage**

- Designated space for certain things
- Big plastic bag wit label
- Pocket on front with branding information
- Cardboard box

• **Free/Smell/Medium/Branding/Protection**

- The smell is part of the branding
- Protect the user from odors
- Recycling of rest material
- Smaller manikins (products)

• **Free connections**

- Surface that supports mobility
- "trail ability" in different directions to support different needs
- Back frame solution
- Working/presentation table that becomes the packaging when folded.
- Battery loading of the product direct into the outside of the packaging
- "umbrella carriage"

• **Discussion**

- How do you move toward the solution?
  - All ideas need to be processed/evaluated to see if they are useful, this is an idea generating process.
  - Use the method – let it provoke you – use the generated ideas, evaluate them and see if they are useful
  - The need for time to use creativity in the development process has to be acknowledged.
  - Awareness of knowledge, timing and quantity of creative methods in the development process is important.
  - The methods should be used to trigger the ability to generate new ideas – focus is everything (not to get lost)
  - The effectiveness of a creative process is often measured in the quantity of the ideas produced. (Not necessarily all ideas are applicable – but the more ideas, the higher possibility to find more that are suitable for the goal).

○ **Comments**

Morphological Analysis is a technique that requires the company to structure the knowledge it has about the chosen focus area. The result is the table with parameters and variables. This table (structured information) can be developed continuously and can become a knowledge resource in itself for planners and developers.

**General issues and comments for the Company**

Laerdal Medicas is a company with strong tradition for innovativeness and lateral thinking. The real contribution from CREATE is to be seen under the company's need for introduce a newer and more structured way. An innovation project is to be implemented in order to introduce the presented techniques into the company's standard work processes.

Laerdal Medical will use the techniques! CREATE gave a major contribution to this process.



Six Thinking Hats session at Laerdal Medicals, Stavanger, Norway, 14<sup>th</sup> of March 2005