A multidiscipline case

-Gambro’s future Management Challenges

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Preface

This master's thesis was the concluding part of our Master of Science degree in Biotechnology and Engineering with completion in Industrial Management and Engineering (Johanna Herrlander) and Industrial Management and Engineering (Ann-Sofie Lundberg) at the Faculty of Technology, Lund University. The project has been performed during spring 2007 at the department of Industrial Management and Logistic in cooperation with Gambro.

This master's thesis is distinguished from the standard study, which is usually performed at Universities. In our master's thesis we have developed an educational case with a multidiscipline character. We have through the project attended valuable experience and the ability to find creative solutions to challenges appearing along the way. Knowledge about how to communicate ideas in a way, which makes it clear to others.

We want to thank Kristan Enkvist who has been our contact at Gambro for his enthusiasm towards our idea and for his valuable knowledge contribution. We want to thank Annmarie Gardshol and Ingrid Ledebo at Gambro for their contribution to the case data.. We want to thank Ola Alexandersson, Mona Becker and Lars Bengtsson at Lund University for their expertise on case and economic theory. Finally we want to thank the participants during the case test run for there criticism.

We also want to acknowledge our supervisor Carl-Johan Asplund for his guidance, his engagement and his constant positive attitude. We thank him for sharing his idea, which developed into this master's thesis.

Lund. 31 May 2007

Johanna Herrlander   Ann-Sofie Lundberg

Sammanfattning

Idén till den här uppsatsen kom från det faktum att författarna kände att de saknade förståelse för hur olika kunskaper från utbildningen i Industriell ekonomi kunde användas tillsammans i en yrkessituation. Författarna fann ett sett att kunna visa framtida studenter detta genom att låta de lösa ett multidiscipline case och simulera en situation där olika discipliner tvingar studenter att samla sina kunskaper för att kunna lösa en uppgift. Syftet med detta examensarbete är att testa en idé och applikationen av den samma. Ett annat syfte är att vidare undervisa målgruppen inom case teori. Dock är det huvudsakliga målet för uppsatsen är att skapa ett multidiscipline case för utbildningssyfte. En instruktions manual är också utvecklad att användas med caset för att kommunicera casets läromål. Delmål för detta skapade examensarbete är att följande faktorer för caselärandet ska vara uppfyllda; Autentiskt, Objektivt, Realistiskt, Engagerande och Dynamiskt.

Caset är skrivet om Gambro, vilket är ett medicintekniskt företag. Caset utspelar sig under år 2002. Gambro är ett företag som tillverkar dialysatorer, dialysprodukter, tillhandahåller dialys kliniker och har forskning världen över. Företaget är en av de tre världsledarna på marknaden. I caset kommer deltagarna, dvs. caselösarna att lära känna Gambro med fokus på dialysatorer.

Det multidisciplina caset som är skapat i denna uppsatts innehåller ett grundcase med allmän information om Gambro och fem delcase med avdelningsspecifik information. Caset kommer att köras under två case seminarier och caset kommer att ligga till grund för diskussioner på dessa seminarier. Deltagarna kommer att anta olika roller under diskussionerna och ett ledningsgruppsmöte kommer att simuleras. Detta är för att öka dynamiken i caset och diskussionerna. Den huvudsakliga uppgiften för deltagarna är att finna de strategiska utmatningar som Gambro står inför. De ska gemensamt komma fram till vilka utmaningar som bör prioriteras samtidigt som var och en är skyldig att ta hänsyn till den egna avdelningens preferenser.

För att testa de uppsatta delmålen för caselärandet gjordes en testkörning av caset med fyra deltagare. Informationen i casen baseras på extern fakta och endast en liten del intern information fanns tillgänglig under skrivprocessen. Detta göra att caset inte är helt autentiskt. På grund av att caset har en fiktiv karaktär är inte caset helt objektivt med de många källor som ligger till grund för informationen i caset ökar objektiviteten. Diskussionerna som frambringas under simuleringen är realistiska. De fiktiva inslagen i caset gör caseläsningen engagerande. Genom att tvinga deltagarna att förbereda sig för caseseminarierna och anta speciella roller har övningen stora möjligheter att även den.

Abstract

The thesis idea originated from that the authors experienced that they would have liked to have more opportunities to apply their educational and personal skills before attending the business world. The authors found a way to accomplish this by the application of a multidiscipline case simulation. The purpose of this master's thesis is to test an idea and the application of the same. Another purpose with the thesis is to further educate the target group within case theory. The main objective of the thesis is to create a multidiscipline case for an educational purpose. An instruction's manual is to be used with the case in order to achieve the educational purpose. The sub objectives are that the case learning experience should fulfil following requirements; Authentic, Objective, Realistic, Engaging and Dynamic.

This case is written about Gambro, which is a medical technology and healthcare company. The case is set in 2001. Gambro makes dialysis products, operates dialysis clinics and supplies blood bank technology worldwide. Gambro is one of the three world leaders. In this case the participants will get to know the company with focus on Renal Care.

The multidiscipline case contains one main case containing general information about Gambro and five sub cases. The case will run for two seminars. The main case will be the foundation of the discussion during the first case seminar, were the students will take on different roles from an executive group. The main issue of the case is; which are the future management challenges facing Gambro? After the first case seminar the students will receive additional information from their departments, sub cases for the different roles. These will be solved and add more information to the original issue. Finally the students are to make a decision as the executive group concerning the main issue.

To test the sub objectives for the case learning experience the case was tested during a test run with four participants. The foundation of case information is mainly based on external information, which makes the case not completely authentic. Because of the case's fictitious nature the case is not entirely objective but the many references used as basis for information increases the objectivity. The case seminar discussions based on case information could be occurring in a real business environment. The way the case is used with the different characters is not as realistic but it is fulfilling its purpose. By making the participants prepare themselves for case seminars and taking on specific roles the case learning experience possess every possibility to be engaging.

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Chapter 1 - Introduction

During the introduction chapter the background for this thesis as well as the goal and purpose will be described. The outline will be reviled. The authors hope that after reading this chapter the readers knows what to expect from this master's thesis.

Background

The authors of this master's thesis are master of engineering students at the Faculty of Technology at the University of Lund in Sweden. Miss Herrlander is studying Biotechnology with completion in Industrial Management and Engineering and Miss Lundberg is studying Industrial Management and Engineering. Their common specialisation is "Business and Innovations". "Business and Innovation" provides knowledge on how companies market and purchase products and services, as well as how technology strategies are developed.

The authors of this master's thesis have through their education been using cases during several courses. In Technology Strategies one of their last courses the examination was to design a case for the industry. All cases solved as well as the one designed by the authors have been single discipline cases.

At the final semester their finishing course where Industrial Management. The purpose of this course was to give the students insight in a business environment as well as being able to apply prior knowledge. The objective of the course was to develop an understanding for leadership and management, how different departments work together to accomplish increased profit for the company and how certain departments work within themselves towards individual and company goals.

The thesis idea originated from that the authors experienced that they would have liked to have more opportunities to apply their educational and personal skills before attending the business world. Read more about this in the section "Problem to be solved". The authors found a way to accomplish this by a simulation. This simulation could be done using the case method. As J. Erskine and M. Leander (1997) write in the book Learning with cases; cases can show how work is planned and organised, how systems operate, and how organisations compete. With the intention of being able to use a verity of skills different disciplines became interesting to work with when designing a case. A multidiscipline case could achieve this. A multidiscipline case is designed in a way that several disciplines are included in the one case.

To get the most out of this case exercise in an educational context the authors suggest the use of the case should be at the end of the education. For the students to learn not only from the case but from each other the authors wanted to see case being used in groups where students have different technical backgrounds. By applying mixed groups different knowledge's will complement one another, which will increase the learning outcome. The Industrial Management course within the specialisation "Business and Innovation" became the obvious choice for us to target.

To make the case authentic the authors was determent to write a multidiscipline case in cooperation with a company. To make continues communication possible the authors searched for a company near the campus area. By the author's own interest and by connections at the institution they had the benefit of coming in contact with Gambro, a Swedish company. An initial meeting was held where we presented the case together with the faculty members Carl-Johan Asplund and Lars Bengtsson. Gambro choose to cooperate. Gambro even suggested the authors of the thesis possible would look at a specific issue that could be applied in a simulation.

The thesis started of with the authors attending a case seminar where they were evaluating cases developed by students taking the course Technology Strategies. During the development of the final multidiscipline case and the instructor's manual the written case and the teaching idea was tested in a simulation test run.

Problem to be solved

To be able to lead and finance competitive companies and industrial enterprises in a global economy requires a high level of knowledge of both management and technology, and an ability to integrate these. In a complex real-world situation, mathematical modelling constitutes a powerful tool of analysis in decision making, and the assessment of risks and potential. Good qualities of leadership are decisive in the development of industrial competitiveness. The programme in Industrial Management aims to meet the needs of industrial management engineers who

- In an innovative manner, work with the commercial realisation of technologies.
- Analyse and develop competitive industrial enterprises from a sustainable perspective.

The programme is distinguished by an integration of mathematics, business administration, and engineering, and is linked to the research carried out at the Faculty of technology at Lund University (LTH) in Sweden in these fields. LTH uses a lot of cases during their education in Industrial Management and Engineering and it is one thing that LTH like to be known for. "Business and innovation" are one economic completion within the Industrial Management and Engineering programs at the Faculty of Technology at Lund University. This economic completion creates a good foundation of knowledge and competence concerning the company and its business ideas. The right competence and the ability to apply that competence are essential when making strategic and tactic decisions within a business environment. Decisions that parallel is taking technological and economic perspectives into consideration become necessary.

Purpose and goal

The purpose of this master's thesis is to test an idea and the application of the same. Another purpose with the thesis is to further educate the target group within case theory. The main objective of the thesis is to create a multidiscipline case for the educational purpose described above.

The sub objectives are that the case learning experience should fulfil following requirements, the case learning experience should be:

- ***Authentic*** – the context of the case should consist of material that is both relevant and irrelevant for the problem to be solved. The case writer should strive to create an environment that is not far from the real world at the company to engage the readers.
- ***Objective*** – it is important that the reader have the possibility to create its own point of view. This means that the material presented in the case should not take a certain perspective of the problem. It is up to the reader to decide what the problem (-s) within the company is (/are).
- ***Realistic*** – the case presented should be constructive and consist, when possible, of data (e.g. figures, numbers) that can state the written context. This is to make the case more truthful to the reader.
- ***Engaging*** – to motivate student or other solvers of the case, the case needs to be written in a way that catches the readers' attention, as well as makes them curios. This can be done for example by creating a story that bonds together the data and facts.
- ***Dynamic*** – the case can be more dynamic if for example different characters are added to the story. This creates a complexity to the case story.

If all these five points are fulfilled the case will be more motivating, challenging and amusing for the reader to solve.

Delimitations

The authors have chosen a variety of disciplines in the multidiscipline case. They have chosen not to look at other disciplines that could have been taken into consideration concerning the main issue of the case. The disciplines chosen are; marketing and sales, strategic development, research and development and human recourses. The authors have chosen to discuss the case on a strategic level. The case is set from the point of an executive group and operational issues have not been considered. The case and the instructor's manual will be written using a selection of the literature available. There are many schools when writing and teaching with cases and the authors want to point out that not all have been considered.

A unique disposition of the master thesis Disposition

The disposition of this masters' thesis will be described and outlined here. It is important for the reader of this thesis to know that a multidiscipline case for educational purpose together with an instruction's manual has been designed. The authors have chosen a disposition suited for the presentation of this specific master's thesis, which is a case learning experience. This thesis is not a study, which usually are made when writing a master's thesis. The disposition contains of five major chapters. These five chapters have been carefully chosen to suite the master thesis purpose and goal therefore it does not contain the generally chapters as e.g. method and analysis. The general chapters often chosen are not suited for this thesis because this thesis have not examined e.g. how a case affects students learning, what it is that makes a case better than another case or how case can be used when teaching. To examine one of these problems you need to use a method to have reliability in your data. A problem has not in this thesis been examined and therefore the authors have chosen that it is not relevant to have a chapter, which contains a method. The authors have though written a log over how they have proceeded during the process of structuring and writing the multidiscipline case and the instruction's manual. This part of the thesis can be seen as their method. There is not either relevant to have an analysis chapter or a chapter which contains conclusions of the study instead the authors have chosen to write down their own reflections from the process. The results or outcomes of this thesis are the two chapters called the Multidiscipline case and the Instruction's manual. These two chapters have been produced after studying case literature and other relevant literature.

The authors have, as explained, chosen another structure then the general to reflect the essence of the thesis, a case learning experience. The first chapter introduces the reader to this case learning experience as well as the creation of the multidiscipline case. This chapter gives the reader an idea of what to expect from the thesis. The second chapter is giving the reader a brief insight on case theory and practice. In the third chapter the case itself is presented. The fourth chapter consists of the instruction's manual, which is to be used together with the case. The instruction's manual will highlight the main issue to be solved for the different disciplines as well the idea on how to teach and run the case in order to achieve the learning goals. The fifth chapter is a reflection on the outcome of this case learning experience that this thesis is presenting. After these chapters an Appendix will follow. The method chapter will be found as appendix 1 and as a log over the case development process. This part of the thesis is placed here due to that is not really can be seen as a method chapter.

Chapter 1	Introduction	*During the introduction chapter the background for this thesis as well as the goal and purpose will be described. The outline will be reviled. The authors hope that after reading this chapter the readers knows what to expect from this master's thesis.*
Chapter 2	Case Theory	*During the theory chapter relevant case literature applied during the case development will be highlighted. This chapter will also further educate the reader in case theory. The theories chosen is discussing; case learning, case writing and case teaching.*
Chapter 3	Multidiscipline Case: - Main case - Sub case for CEO - Sub case for CHRO - Sub case for CTO - Sub case for CSO - Sub case for CMO	*Here the multidiscipline case is presented. This case is to be used together with the manual presented in chapter four. The case consists of six parts. The reader will be acquainted with the world of Gambro and Gambro Renal Care as well as the different fictitious characters presented in the case. In the main case general information will be presented and in the sub cases more department specific information will be presented.*
Chapter 4	Instruction's manual	*The instructor's manual will give the reader an insight on how the multidiscipline case can be used in an educational simulation. The manual will describe; the target group for the case, the learning goals for the case learning experience and also define the case difficulty level. Characters and assignments are carefully described here.*
Chapter 5	Reflection	*In the final chapter of this master's thesis a reflection on the outcome is made. The writing process will be described and commented on, the objectives will be evaluated, recommendations for future work, and case writers will be made.*
Appendix	Log	*A description of the author's work processes during the creation of the case, the manual and the rest of the thesis.*

Target group

The target group of this thesis is the students and the faculty at the department Industrial Management and Logistics at the Faculty of Technology at the University of Lund. The authors believe that this thesis will be of interest for others with the intention to increase their knowledge concerning the case method and case theory. The personnel at Gambro is another group this thesis targets as well as other companies that show interest in cases and case learning.

Expectations

The authors hope that the outcomes of this thesis will contribution to the education in Industrial Management and Engineering as well as the completion in the same. The hope is for this thesis to encourage other students in being creative and act out of the box. The authors are also wish to see that this will be complementary to other research material and literature about cases.

Disposition for the manual

The purpose of the instruction's manual is for the writers to communicate their thought on how to use the case in an educational situation. In order to make sure that the outcome of the case learning experience is fulfilling and achieving its goals and objectives the manual is written.

The manual will start off by a summary were the reader is introduced to the context and the objective of the manual, the case and the case design. An introduction will follow were the target group, learning goals and the level of difficulty are specified. The main issue of the case is presented in the introduction. During the following part the different learning situations will be described.

Disposition for the multidiscipline case

The case design consists of one main case with general information about the company and five sub cases. To be able to identify the management challenges and to make relevant decision the authors decided that all of the case solvers should have knowledge concerning e.g. Gambro's history, competitors and markets. Therefore the main case consists of general information. To make the multidiscipline case more dynamic, the five sub cases contain information from different departments of the company. The sub cases consist of information that "only" the people at the different departments should have knowledge within and be aware of. These sub cases have been chosen based on the facts and data that the authors could obtain, as well as from what disciplines that were most relevant for the problem to be solved.

The assignment facing the students is to identify the management challenges facing the company. The strategic issues concerning the company drawn from the main case could be discussed and prioritised without solving the sub cases, but ones the sub cases are solved it will become clearer which the most important management challenges facing the company are. There is not one solution to the case. Different disciplines will be used to address and solve the sub cases. All cases are discussed at a strategic level due to the fact that it is on this level these kinds of problems can arise and are explored. Another reason for chosen strategic level is due to the main target group of the master's thesis, the students participating in the course, Industrial management (explained above in previous section). They are to gain management knowledge during this course and therefore the authors have chosen to write it on strategic level.

Reading instructions

This thesis can be read in different ways depending on the reader's desired reading outcome. Chapters one and two are the learning foundation of this thesis, which means that these chapters will give the reader an understanding of how the authors have constructed the thesis (chapter one) as well as give the reader some background information concerning case writing and learning (chapter two). The first chapter, the introduction, is preferably read in order to fully understand the purpose of the rest of the thesis. After the first chapter is read the reader can chose to go in different directions. The second chapter is preferably read by one how is interested in case theory, case learning, writing or reading. The fourth and fifth chapter is an example of a multidiscipline case and the manual. Someone wanting to use the case or by someone wanting to get an idea on how a finished case could look like preferably reads this. People further interested in Gambro can also read this. The final chapter is a reflection on the work made when creating the case and the manual. This could preferably be read by someone how is interesting in how to write a multidiscipline case and what to think about when writing a case. (See figure 1 below)

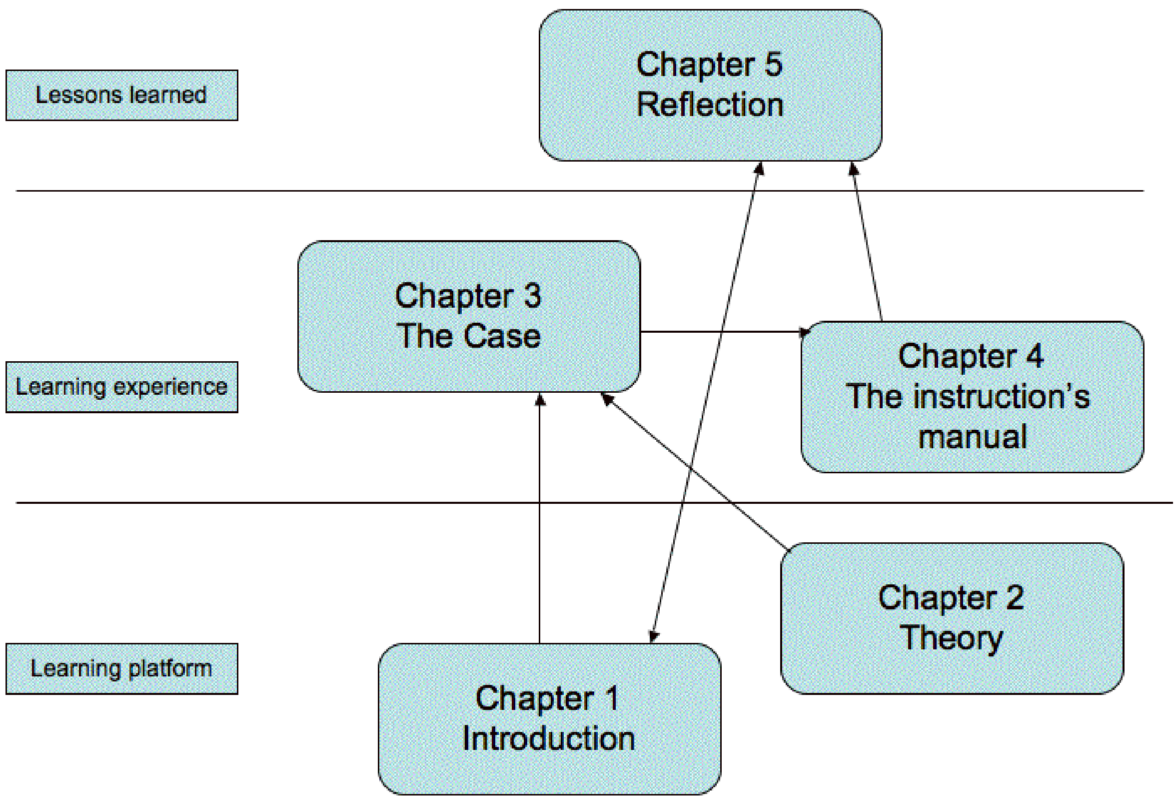

Figure 1, Reading instructions

Key definitions

Case method

A method of instruction in which students and instructors participate in direct discussion of business cases or problems. These cases, usually prepared in written form and derived from actual experience of business executives, are read, studied and discussed by students among themselves, and they constitute the basis for class discussion under the direction of the instructor. The case method, therefore, includes both a special type of instructional material and the special techniques of using material on the instructional process – Harvard Business School.[1]

A multidiscipline case

The multidiscipline case can serve as a more advanced communication and serving tool in the process of developing alternatives than a single discipline case. New interpretations and understandings of the business situation can be achieved. Examples where this kind of case can be used are when student experience the concept of strategy from the marketing view and then enrich his/her understanding by adding strategy from the perspective of economics. By bridging facts, knowledge, and issues from other related disciplines could the instructor(s) intervene in the case learning processes? The purpose is to provide the students with deeper understanding of the current business situation. A generic case is designed to bridge the different disciplines involved in the multidiscipline. When writing a multidiscipline case the challenge lay in the goals of the course is addressed in its content and its format. Ultimately would also be that the objectives of program are addressed in the case – Carl-Johan Asplund and Paula Jordan.[2]

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[1] Case research: The case writing process
[2] Designing multidiscipline cases

Chapter 2- Case Theory

During the Theory chapter relevant case literature applied during the case development will be highlighted. These theories are mainly taken from the authors and case gurus James.A Erskin., Michael.R Leenders and Louise.A Mauffette-Leenders, This chapter will also further educate the reader in case theory, that is theories on how cases can be used in learning situations to achieve higher level of problem solving skills and understanding of complex decision making. The theories chosen is discussing; case learning, case writing and case teaching. The authors of this master's thesis will comment the theories and the use of them in chapter 5 and the" method chapter" the log.

Introduction

This chapter will start of with a summery on different case literature resulting in the six dimensions to consider when designing a case. The authors of this master's thesis have used these six dimensions as a foundation when creating the multidiscipline case and its instruction's manual. Our reflections on theses theories are found in chapter 5 and the "Method chapter", the log. The authors will further in this chapter present to you the aspects of learning in order to understand the possible contribution that cases can have to an education. The theories behind the writing process of a case are discussed further and followed by a description on the importance of the Instruction's manual. Finally the use of different levels of difficulty and the outcome of the different choices are presented. The authors hope that you after reading this chapter will be intrigued to both write and use cases for educational purposes.

The six dimensions to consider when designing a case

A multidiscipline case designed in a systematic way bridges together the different disciplines to achieve a learning goal. It is an important challenge when designing a more generic case to make sure that the content and format, addresses the purpose and goals of the course and eventually should also the objectives of the program as a whole be provided for. The article "*Designing multidiscipline cases*" 2004 by C-J Asplund and Paula Jordan describes six dimensions to follow when designing a multidiscipline case. The six dimensions are stated below.

1) ***The purpose and the learning goals of the course and/or the academic program are decided for and stated.***

The first dimension has to do with the purpose of the case from the student's perspective. Cases are supposed to contribute to the learning process of the students in developing the knowledge and skills provided by the course.

2) ***The overall case structure is designed by using the case difficulty cube. The model helps organising the case so that it collects and communicates the case logic to the students, the faculty and the company members.***

Here the case should be classified, with consideration to the learning goals and purpose, in all three dimensions in the case difficulty cube, described above. A case written for a course in the end of an academic education the case is classified on a higher degree of the difficulty than one written for a first year student. A case normally classifies on different degrees on the different dimension depending on the objective of the case. A case classified as 1,1,1 is usually to easy that it becomes boring as well as a case classified as 3,3,3 usually is to complex to solve and requires to much time for a student. In this dimension it is also important to develop good relations between the company, the faculty and the case writer.

3) ***Select an appropriate company or organisation for the discipline/disciplines under study.***

The third dimension should put the case in a context that best serves the learning goals for the case. The choice of organisation depends on what discipline the students aught to gain knowledge of using the case. It is important to communicate with the company and involving the organisation during the writing of the case. By involving the organisation hopefully the key issue becomes more authentic and in the end makes the case more realistic. The organisation is the key source in collecting data to use in the case.

4) ***Collect all information that could be useful when writing the case. Store the information in a database. Check all information with the company to make the case authentic.***

All of the data is often used in the written case but there can be additional information that can be used for later or is stored in the database. All information collected from industry should be checked and confirmed by different stakeholders.

5) ***Make a prototype of the case and test the case on both the faculty and the students. Discuss the case and collect feedback.***

The test session of the case can be done using a voluntary group of students and/or participants from the faculty or the involved company. During the test session both the technical and pedagogical qualities are evaluated. An individual participant’s evaluation should also be done, both before and after using the case. Both are to be used in an evaluation of the written case.

6) ***Write the final version of the case.***

The case should be evaluated one more time, quality certified, before it can be released.

The aspects of learning

When designing the case, the case writer must start with an understanding of three aspects, the student (the participant), the faculty and the subject of the case.[3]

The first aspect is to get an understanding of *the student(s) knowledge levels of different disciplines*.[4] Even the educational background of the students is of relevant and also the students' qualitative and quantitative skills should be an important factor when designing the case for a particular course. Sometimes it is also relevant to look at the maturity and working experience of the students and this is important particular with respect to the subject. It can be useful to identify the profile of the class, the education and experiential background of those who will participate.[5]

The second aspect to consider is *the faculty*, i.e. the learning goals, which the faculty would like to achieve, must be expressed. During a new course the students are expected to expand and sometimes even change their knowledge of a subject or a discipline. To create a more lasting and deeper level of knowledge and competence of the subjects under study the case writer should have in mind Saljo's five categories, especially category four and five. The five categories concern different understandings of what learning consists of among adults. The five categories are following:

1. *Learning as a quantitative increase in knowledge.* Learning is acquiring information or "knowing a lot".
2. *Learning is memorizing.* Learning is storing information that can be reproduced.
3. Learning is acquiring facts, skills and methods that can be retained and used as necessary.
4. *Learning is making sense or abstracting meaning.* Learning involves relating parts of the subject matter to each other and to the real world.
5. *Learning is interpreting and understanding* reality in a different way. Learning involves comprehending the world by reinterpreting knowledge.

The categories can be divided into two groups: external and internal. The external group is presented by the three first categories and those are of less complex view comparing to those in the internal

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[3] Designing multidiscipline cases (2006)
[4] ibid
[5] Case research: The case writing process (1989)

group. The two last categories are presented in the internal group and learning here is viewed as a more personal aspect of learning.[6]

The last aspect to be considered is *the subject of the case*. The subject of the case can be divided into the content and the format. The content are concerned with which issues should be dealt with and the format tells which pedagogical framework should be used. The objective(s) of the course or the program should be found in both the content and the format.[7] The best learning will be achieved if these three aspects are intertwined together.

The writing process

Content

When writing a case some decisions concerning the content in the case are taken. Questions to be asked:

- What information should a case contain?
- How much information should be included?
- What information should be excluded?
- How and where should the case end?

Some case writers like to add useless information to the case. This forces the students to determine what information relevant in the case is. To present a more real situation where the decisions makers do not have all information needed to take a decision. Useful information may be excluded.[8]

For most of the time it is the purpose of the case, which decides how the case is written. For elementary courses the case are often of simpler sort. More basic cases that have only one issue can be handled relatively easily and without too much elaboration. In other situations the cases have to be more complex, for example in courses that handles more advanced and complex theory. The issues handle here can be numerous or not so obvious for the students.[9]

The case should be so long that it covers all the relevant information needed to solve the issues and to describe the situation in real life. But at the same time, the case writer has to be selective. All information selected during the data collection can not be added to the case. Information that students should find in the case is some background information concerning the problem, the people involved

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6 Designing multidiscipline cases (2006)
7 Designing multidiscipline cases (2006)
8 Case research: The case writing process (1989)
9 ibid

and the company. The background material is most useful if it gives the students ideas how the participant(s) are thinking concerning the issue(s). A good idea to let students know about this is to add what people do and say and think concerning the situation. When adding background material to the case the writer has to be selective and should not write about background data that is irrelevant. It is up to the case writer to decide how much background information that is needed to give setting and context. To add realism and life to the situation quotes, exhibits and pictures can be included in the case.[10]

Factors that have influence on the length of a case and can be justified are:[11]

- Extra material that is needed for discussion of issues, e.g. documentaries or factual background information.
- Problems and descriptions of more complex sort.
- The reader's ability to separate significant facts from irrelevant material.
- In certain situations more complicated procedures can be involved and have to be described more specifically.
- In some cases the writer wants to train the student in diagnosis of business situations.
- Another factor that can have an impact is how the writer chooses to present problems of business.

Norms to have in mind when writing the case

In J. Erskine and M. Leenders book: "Case research: The case writing process" 1989 the following norms can be found that describes what to have in mind when putting together the material and data to the case.

- Use of the past tense. The information gathered from the company can be protected if writing in past tense.
- All data that can be presented in table form should be tabulated.
- Exhibits in the case can be tables, charts, balance sheets, forms and maps. The exhibits should be consequently numbered in the case and at the bottom of each exhibit specific references to the source of the material should be given.
- All figures used in the case must be checked and should have complete source references.
- If material in the written case is published material, e.g. annual reports and press release, a footnote in the text should be used.

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[10] Case research: The case writing process (1989)
[11] ibid

Presentation of the collected material

Different structures can be possible to use in a case, the anatomy of the case.

Time structure

The business situation in the case takes place in time. Therefore there must be a clear time sequence of the events taking place in the case. It is a good idea to organize the case material around it. It makes it easier for the student to read and evaluate the information. Sometimes it can be necessary to break the time sequence in order to bring into the case some other considerations, for example how the problem did arise at the company. A flashback can be used to show early origins of the situations and build this up. The reader's interest can then be heightening.[12]

Narrative structure

In the case there is not only the time sequence of events that should be presented. It is also a sequence of what happened, why it happened and where it begun and what it led to, that has to be presented to the reader.[13]

Expository structure(s)

The case writer must make the situation itself clear to the students. When writing the case the writer should have in mind that the student does not have the perception that the professor has or the group of business executives have. Therefore some situations may have to be more specifically written for the students to grasp. Another thing concerning the expository structure is that something has to be said about the company context, in which the situation occurs. The student needs to get a good picture of the company to easier "solve" the issue(s) concerning the case.[14]

These three structures need to be interweaving in order to get the best result.

Objectivity

It is important to write cases in an objective manner in order to keep the case's authenticity. In J. Erskine and M. Leenders book: "Case research: The case writing process" some techniques are presented for preserving the objectivity and to clarify the situation.

- It is useful to add direct quotes from interviews or documents.
- Identify from whom the source of data comes.
- As much factual information used as possible in the written case.
- Chronological order is preferred.

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[12] Case research: The case writing process (1989)
[13] ibid
[14] ibid

Instructor's manual

The instructor's manual, also called teaching notes or instructor's notes is a communication tool between users of the case.[15] The case writer(s) intention with the manual is to provide the user of the case with helpful information. It can for example be a helpful tool for the teacher when preparing for the class.[16,17] The information in the case can tell the user wish particular case can be used to which specific audience. From this given information the user can choose which types of courses or topics where the case can be used.[18]

The document can be very different in both its content and length. It can range from short and informal notes to a more formal document, which may well exceed the case length.[19] Topics that can be found in the instruction are identification of the case issues, the educational objectives, a suggested student assignment, suggested questions for the class discussion, time plan and comments regarding the analysis and the solution.[20] Tips for extra material that is necessary for the students to read can also be found in the manual and a proposal on how to allocate time during the lecture. Suggested teaching approach can also be found in the notes. The intention with this is to give hints about how the class might conduct with the particular case. It could be suggested that role-play works very well with the case.[21]

The case issue(s) can be divided into immediate and basic. The immediate issue(s) concerns the key problems in the case itself. Basic issue(s) are the broader, generalized areas which in the overall course design might call for the theoretical reading or technique application.[22]

The student assignment suggested in the notes can range from one or none to an extensive list of questions. The questions are to be used when student preparing for the class. The thought with the questions are that the student should step into the decision maker's shoes and from that point of view decide or come up with ideas concerning the issue(s). If there are none questions it should be obvious for the student what to do with the case. Different student assignment can trigger a totally different preparation and class discussion therefore the suggested assignment should be seen as an integral part of the case. The suggested "answers" to the questions should be found under "Analysis" in the notes.[23]

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15 Case research: The case writing process (1989)
16 ibid
17 Teaching with cases (1998)
18 Case research: The case writing process (1989)
19 ibid
20 Teaching with cases (1998)
21 Case research: The case writing process (1989)
22 ibid
23 ibid

Possible discussion questions are questions that can be used to stimulate discussion when the class needs some pushing or to highlight specific areas of the case. These questions can be used if the case teacher wishes.[24]

The pros and cons

Writing teaching notes are time consuming (to prepare) and they are those who says that notes are not worth the effort. They serve no useful purpose and can also be dysfunctional for the user, i.e. the user of the case does not do any creative thinking by his/her own.[25] The manual of the case can also be helpful. A certain instructor's manual has been written for a particular course so if somebody else would like to use the case in another course, the teacher then has to take under consideration if the same conditions pertain in his/here course. So the user can in the notes find out the purpose of the case and then decide if it is possible to use it in his/her course.[26]

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[24] Case research: The case writing process (1989)
[25] ibid
[26] Teaching with cases (1998)

The Case Difficulty Cube

The case difficulty cube is a model in witch the educational challenge of the case can be classified in different dimensions on an increasing difficulty scale. The difficulty scale of each dimension has three degrees. The further out a dimension is classified the more of an educational challenge that dimension contains. See exhibit.2. The higher the degree of a dimension the more time does that dimension require.[27]

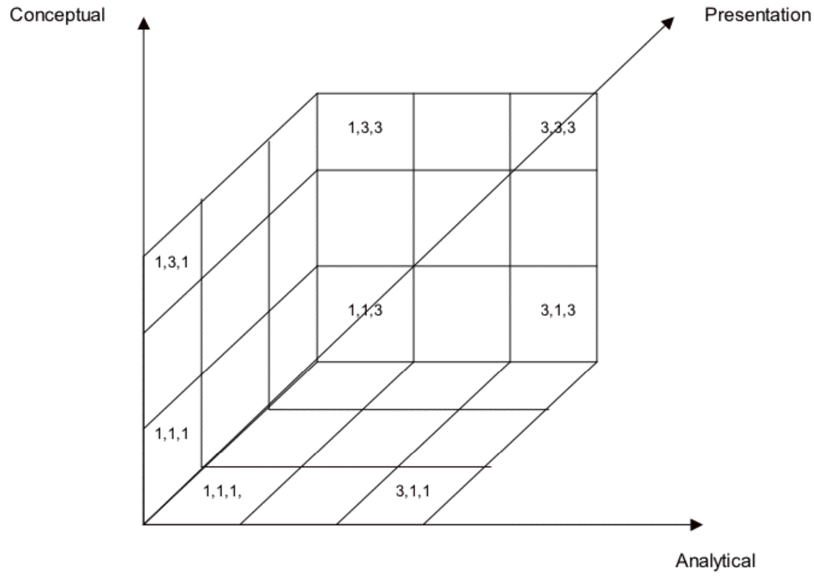

Exhibit 2, the case difficulty cube

Analytical Dimension[28]

The analytical dimension establishes the nature of the case reader's decision-making task. By choosing a more different dimension students are forced to reason more clearly and logically when searching through the case data. With these both quantitative and qualitative frameworks to analyse different business situations are developed.

In a case in the first degree of difficulty of the analytical dimension is the issue stated, the alternatives considered, the decision criteria used and the final decision taken. The case reader's task is to consider whether the decision taken was the appropriate one and if the process followed were correct.

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[27] Learning with cases (1997)
[28] ibid

In a case in the second degree the issue with or without alternatives provided. The final decision taken is excluded in the second degree. The case reader's task is to analyse the situation, generate additional alternatives, decide a decision criteria and evaluate the alternatives against the decided criteria, make a decision and develop an implementation plan.

On the last level the decision that needs to be made is unspecified and only the situation is described. The case readers task now is to analyse the situation and figure out weather a decision (or more) needs to be taken, what alternatives to be considering, what decision criteria to use, evaluate alternatives, decide witch alternative is preferably, how it might be implemented and what outcomes that might follow. When solving a case especially on the third degree of difficulty the student's decision-making skills will be approved.

The Conceptual Dimension[29]

The conceptual dimension has three degrees of difficulty in two different aspects. The first one has to do with how difficult the concept or theory is it self. The second aspect relates to the number of concepts that need to be used simultaneously. To increase the conceptual difficulty ether one concept becomes many or a more difficult concept is employed. Through applying theories and techniques learned in order to make a correct and useful analysis the student's application skills are improved.

- On ***the first level*** of difficulty of the conceptual dimension the concept or theory is that simple that someone new to it will be able to understand and apply it only by reading about thoroughly it in a textbook.
- On ***the second level*** more complex concepts that require explanation in class or many more simple concepts are applied in order to make the correct analysis.
- On ***the third level*** many complex concepts are used.

The Presentation Dimension[30]

This dimension also has three levels of difficulty and it has to do with how the information is presented in the case. A case can be presented in many different ways on paper or on other media. Other media could for example be a short movie, an oral interview on a tape played to the participants or a PowerPoint presentation etc.

[29] Learning with cases (1997)
[30] ibid

To go from the first degree of difficulty of the presentation dimension to the third degree the case is (first degree becomes the third degree):

1) Short becomes long.
2) Well organised becomes disorganised.
3) Available relevant information becomes missing relevant information.
4) Little irrelevant information becomes a lot of irrelevant information.
5) A single format becomes multiple forma.

Learning By Reading, Analysing and Solving Cases

It is essential that students are committed to the task and that they take an active role in their learning process. The output depends on the effort they put in. The three stages learning process should be applied with the intention of maximising the learning outcome and uphold the advantages when using cases for educational purposes. The three stages are individual preparation, small group discussion and large group or class discussion. See exhibit 3. All the three stages are equally important to assure maximum educational outcome.[31]

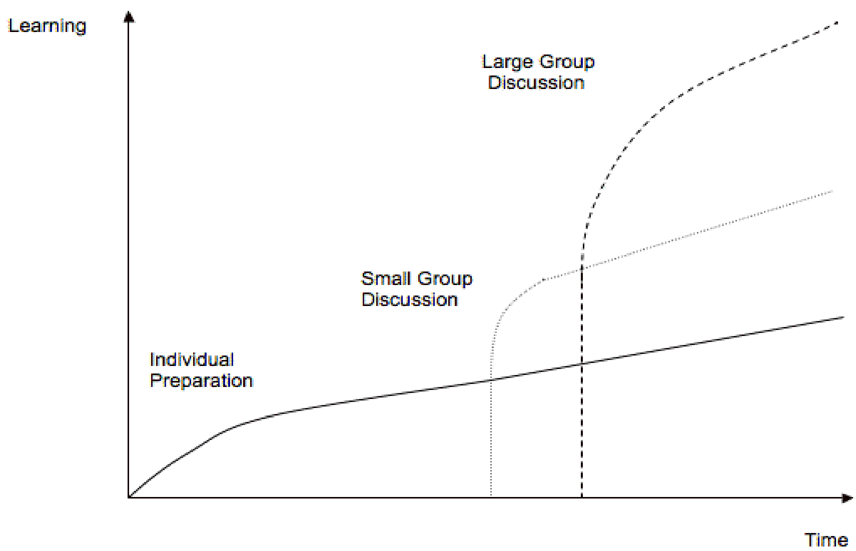

Exhibit 3, the learning process

[31] Learning with case (1997)

Individual preparation[32]

To assure an effective individual preparation an accurate approach to the case is required. Applying *the short cycle process* and *the long cycle process* does this. By assigning time for the individual preparation and making it effective the students approve their time management skills. When the student are reading, analyzing and solving a case he/she should put him-/herself in the position of the decision maker.

The Short Cycle Process[33]

The purpose of the short cycle process is to get familiar with the case. It involves following steps.

1) Read the first one to three paragraphs and the last one to three paragraphs
2) Ask your self the following questions
    a. How is the decision maker (how am I) and what my position?
    b. What seem to be my problem, what is significant to my organisation?
    c. In what way is this a problem, how did it became a problem now and why am I involved?
    d. When does the problem need to be solved, the decision made? How much time do I have to make the decision?
    e. How can I estimate the case on the case difficulty cube on the analytical and the conceptual dimension?
3) Lock at the pictures, diagrams and figures
4) Read headlines and opening paragraphs
5) Read the first and the last bit of each paragraph
6) Answer the assignment questions

Now the student should take a break and let the case sink in. After a while the student will go on by following the steps of the long cycle process.

The Long Cycle Process

The long cycle process is divided in to two parts.

1) A detailed reading of the case
2) Applying the case solution process

Part two involves the following steps

1) Define the problem

[32] Learning with cases (1997)
[33] ibid

2) Analyse the case data with focus on cause and effects, obstacles and opportunities.
3) Create alternatives
4) Decide an appropriate decision criteria based on the nature of the case, the situation and the organisation.
5) Analyse and evaluate the alternatives against the chosen criteria.
6) Chose the greatest alternative
7) Develop an implementation plan

It is important that the student understands the pictures, figures and diagrams and what they contribute and why they are in the case. Usually in more complex cases there is information missing. Then the student as the decision maker needs to make assumptions. When making assumptions the student uses her/his common knowledge, past experiences and other learned knowledge. It is important to justify all assumptions made. When using the information and making the assumptions the student need to be able to think out of the box and being creative, because two business situations will not be the same. This is improving her/his creative ability.

Small Group Discussion[34]

It is important for students to learn trough teaching and listening, through sharing their casework with others. If a student can explain their thoughts to other students it shows him that he has understood his work with the case. In a small group every one needs to come prepared because everyone gets to share their ides. This makes it difficult for a student to slip away from the individual preparation and rely on others to solve the case. The small group is a place to identify good ides as well as comparing them. The small group discussion is an excellent exercise. Those who commit to regular exchange of ideas in study groups will distinguish themselves from others in superior learning, team management skills and increased self-confidence. It is important to mention that the small group is not suppose to prepare the case together, that should be done individually.

Large Group Discussion

In the large group discussion the students are given the opportunity to a more public learning by teaching. In order to make the most of the large group discussion the students ought to be active in contributing, listening, questioning and responding. Students active in the classroom discussion prepare themselves for the future organizational task standing ahead by improving their oral communication skills.

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[34] Learning with cases (1997)

In the large group discussion a complete understanding of the case is developed. If the case isn't truly solved before this session here should be the place. The case instructor is leading the large group discussion.

Reflection after a large group discussion is important and after the large group discussion all students should ask them selves:

Do I understand fully what this situation was all about?

1) If they find them selves in a position were they still does not understand it all a teacher or a class mate are to be asked in order to develop an understanding.
2) If they do understand they should ask them selves
    a. What insights have I gained?
    b. How can I use these insights to prepare better next time?
    c. What can I/my small group do different in order to create better small group discussions?

All should reflect on the good and bad things they did through all stages of the three stages learning process.

Chapter 3 - Multidiscipline case

Here the multidiscipline case is presented. The case consists of the tree parts; the main case, the sub case for the CEO, the sub case for the CHRO, the sub case for the CTO, the sub case for the CSO, and the sub case for the CMO. The reader will be acquainted with the world of Gambro and Gambro Renal Care as well as the different fictitious characters presented in the case.

Management Challenges for the future! Example: Gambro/Sweden

Part 1

This is a Multidiscipline case containing one main case and five sub cases:

Part 1; General information about Gambro

Part 2a CEO; Additional information for the Executive Management
Part 2b CHRO; Additional information about Human recourses
Part 2c CMO; Additional information about Marketing and Sales
Part 2d CTO; Additional information about Research and Development
Part 2e CSO; Additional information about Strategy Development

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This in an Educational case written by Johanna Herrlander and Ann-Sofie Lundberg as one part of our master's thesis, which is the conclusion of our Master of Science degrees in Biotechnology and Engineering with completion in Industrial Management and Engineering (Johanna Herrlander) and Industrial Management and Engineering (Ann-Sofie Lundberg) at the Faculty of Technology, Lund University. This multidiscipline case is a semi-functional case which means that is contains parts that are added by the authors. The case has been quality certified by Gambro's head of Research, Kristian Enkvist. Academic tutor was Carl-Johan Asplund, Lecturer at the department Of industriel management and logistics

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APPENDIX 40

Wednesday the 15th of February 12.45 am, Gerald Blomqvist is balancing on his ladder while changing the old-fashioned light bulb to a new energy low light bulb. As he is struggling to place it he begins to wonder what was wrong with the traditional ladies' and gentleman's bathrooms. He is wondering why everything is changing. Might it be because of that handsome gentleman who have been strolling the corridors for a couple of months now? He steps down to the bright and shiny clinker floor happy to finally get the bulb in place. He moves on to changing the garbage bags as head of employee at HR Kristin von Prisma (HR) and marketing manager (MM) Olivier Danel comes in giggling. No one is noticing Mr Blomqvist who keeps on with his work in silence while his ears focuses to the laud conversation between the two. I did never thought he would listen to our suggestions and here we are in Gambro's new visionary modern unisex toilette says Mr Danel (MM) with his aristocrat French accent. I know I looove (speaking) it but I would have liked the pink handles with golden flowers on but hey Mr Drapkin (CEO) always get his way says Miss von Prisma (HR) with a smile. But you got your pink on the front page of the new Gambro folder says Mr Danel (MM) as he is handling the folder over to Miss von Prisma (HR). Miss von Prisma (HR) opens the folder and starts to read.

Gambro is a medical technology and healthcare company, which makes dialysis products, operates dialysis clinics and supplies blood bank technology worldwide.[35] These fields are divided in three major business areas[36];

- Gambro Renal Products - carries out the development, manufacturing and sale of dialysis equipment.
- Gambro BCT - develops, manufactures and sells equipment for collecting, purifying and storing blood components.
- Gambro Healthcare - provides dialysis care and is in charge of Gambro's dialysis clinics.

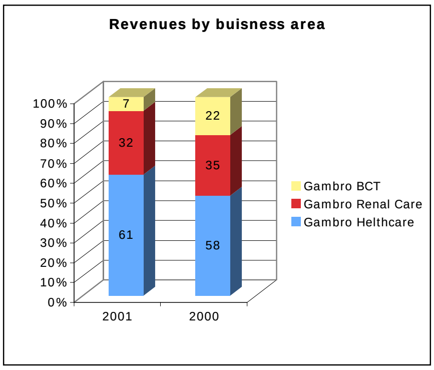

Figure 1, Revenues by business area

Gambro's vision is "To be the globally preferred partner among patients and healthcare providers by delivering world class blood-and cell-based solutions and services." [37]

Gambro's core purpose is "To save lives and improve the quality of life for the people we serve."[38]

[35] *Gambro in brief*, Gambro Annual Report 2002
[36] *Gambro overview 2002*, Gambro Annual Report 2002
[37] *The year in brief*, Gambro Annual Report 2001

The Gambro mission; “ We design and deliver complete solutions- including products therapies and services- to improve the treatment of renal and intensive care patients”. [39]

Miss von Prisma (HR) is flipping pages to the part of her interest - Gambro Renal Products and continues to read while Mr Danel (MM) is looking over her shoulder.

Gambro is one of the market leaders when it comes to renal care development. For many decades has Gambro been the first to market many innovations. By designing and delivering entire solutions including products services and therapies Gambro is improving the treatment quality and efficiency of chronic and intensive care renal patients every day.[40] Gambro is selling their products under the brand names Gambro and Hospal.

Gambro is known as the company with strong traditions in terms of innovation. Gambro has developed following products, which are now found dialysis clinics through out the world; the disposable dialyzer, the synthetic high-flow membrane, volumetric control of dialysis fluid, the electronically controlled dialysis machine, convective forms of treatment, online infusion fluid production, concentrate in powder form and biosensors for dialysis treatment.

New products to be developed are influenced by a number of basic principles. The increasingly demanding customer expectations are one principle. Another is to steer costs in a positive direction already at the innovation phase. Gambro’s dialyzer development work has followed two main guidelines: to provide the company with a complete range of synthetic membranes and to develop a common product platform for all of the group’s dialyzers.[41]

In 1999 the new dialyzer, Polyflex was introduced for single use in the U.S. and a reusable version of Polyflex is expected to be launched in the American market during 2000. Also in 1999, Gambro and Baxter entered a joint venture for the production of semi synthetic single use dialyzers. Gambro’s strategy for the field of dialysis concentrates is focused on expanding the system with new products to supplement the successful bicarbonate cartridge, BiCart. Advantages of the new products are logistics including minimal volume, simplified storage requirements, improved hygienic qualities and low weight.[42]

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[38] *The year in brief*, Gambro Annual Report 2001
[39] About Gambro – *mission*, www.gambro.com, 16-04-07
[40] About Gambro, www.gambro.com, 16-04-07
[41] Renal Care – *breadth and quality are concepts*, Gambro Annual Report 1998
[42] *Gambro Renal Products*, Gambro Annual Report 1999

Mr Blomqvist is leaving the room to get more new fresh towels while the two are still reading. Ok, stop reading you're late for your meeting with the trainees says Mr Danel (MM). Oh my god, you're right, I'll better run, wish me luck, talk to you later says Miss von Prisma (HR) and walks out the door with the pink folder left on the washbasin.

Mr Danel (MM) in his golden years

Mr Danel (MM) is looking in the mirror as he admires his slim body and his dark hair with a slight touch of silver grey. He is good looking for his age and in a few days he will become 54 years old. Mr Felix (M) from marketing comes through the door as Mr Danel (MM) is putting one of his curls back to its place. I knew I'd find you here in front of the big antique mirror, says Mr Felix (M) with a laugh. Yes I did try to hide says Mr Danel (MM) with a grin, what was it that you wanted to ask me? Mr Felix (M) goes; I've spoken to a lot of people but everyone here knows a lot about Gambro but seem to know nothing about Hospal before the acquisition, can you tell me? I'd love to, it's a wonderful story, we will sit down here in front of the mirror said Mr Danel (MM) and started telling the story.

The company Hospal[43] was founded trough a merge of two European chemical and pharmaceutical companies Rhône-Poulenc and Sandoz in 1977. Both companies had been extremely active in the quick development of the industry. Through this merge Hospal got the new famous high–flux AN96 membrane, which was the first highly permeable membrane introduced in 1971. Hospal also acquired the highly important patented technology that made it possible to control volumetric ultra filtration. The technique was introduced together with the first dialysis machine using this technique in 1972. Hospal was successful and grew continually for the ten following years.

Hospal products are largely developed and the production is in European units. The Hospal products are distributed over the world with main target in Europe especially in Italy. Hospal are exclusively dedicated to hemodialysis and are profiled within high quality renal products and therapies. They are constantly developing new inventions with the aim to make increased quality patient care.[44]

The speech with the silent audience

As Mr Danel (MM) finishes his story Mr Drapkin (CEO) comes in and greets the two. Bonjour says Mr Felix (M) and Mr Danel (MM) as they start walking towards the door. Thank you so much, I really enjoyed your story says Mr Felix (M). But now I need to continue with my preparation for my oral presentation in Lyon next week. Lyon, how nice

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[43] www.hospal.com
[44] *Hospal worldwide- who we are?*, www.hospal.com, 16-05-07

I use to work there when it still was Hospal, I miss that time, that production facility has always been the heart of Hospal, says Mr Danel (MM). I wish you the best of luck. As Fredric Drapkin who is the new CEO at Gambro Renal Care is alone in the bathroom he takes place in front of the mirror and starts to practice his speech for the board meeting to come.

The last year has been a very successful year for Gambro. All three business areas achieved a more rapid growth than the market as a whole. The consolidated sales increased with 20 percent during 2001. Gambro has a stable organisation characterised by a strong leadership structure.

The action plans from the restructuring has during the year resulted in real activities, which has contributed to the great results. [45] A shift has been made from a high complex product range that was left from the acquisitions with COBE and Hospal to a more consolidated product range. This is achieved through the using of one common platform as a base for new models and products. This strategy has been 60-70 percent implemented.[46] Gambro's market strategy is to consolidate a strong position within Europe and at the same time expand in markets outside Europe.

He flips through his papers and finds some slides from the year to study

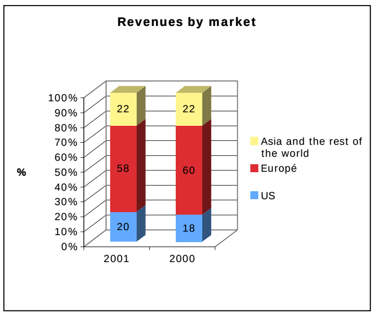

Figure 2, Revenues by market

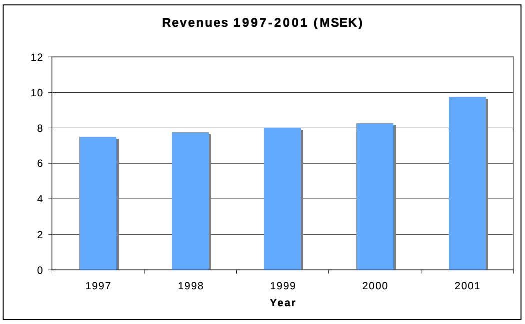

Figure 3, Revenues 1997-2001

Key Data	**2001**	**2000**
Revenues (MSEK)	9,663	8,481
No. Of employees	5,617	6,307
Production sites	11	10
EBTDA	2,296	1,878
EBDTA margin	20,00 %	18,70 %

Figure 3, Gambro, Key data

[45] *President's message*, Time to look forward, Gambro Annual Report 2001
[46] *Business improvements*, New products and new capacity, Gambro Renal Products, Gambro Annual Report 2001

After studying the slide he continues to practice his speech.

The customers are constantly demanding lower prices as they are becoming increasingly aware of the hard competition. Innovations aiming for improved dialyses and delivery processes are extremely exposed as the market becomes gradually more competitive and patient centred. The objective is to deliver complete solutions rather than single products. The company's aim is to optimise the whole renal care system as well as the single products. It is important though The customers are involved in the development process and doctors and other users have an important role to play when developing new products and new solutions for renal care.

The market sector of intensive care products is growing fast and the technology is extremely specialised. The intensive care systems are used for numerous applications for acute kidney failure. The market for dialysis used when the patient suffers from acute liver failure is still new. Gambro is the market leader and prime mover on this market. This market will probably continue to grow fast mainly because of the increasingly amount of people catching the hepatitis C virus, which are causing liver failure.[47]

"Finally our overall objectives are to the year are to leverage the improved platform for growth and profitability. The fanatical objective for 2002 is to deliver revenue of growth of 8-10 percent, improve the operating margin and further improve cash flow from operations."[48]

The fairytale begins

As Mr Drapkin (CEO) is practicing his speech Mr Blomqvist comes in. He is standing silent in the other end of the room until Mr Drapkin (CEO) finally says, thank you all for listening. Mr Blomqvist starts to applaud and says I've heard many speeches before yours but this certainly was something special. Thank you Mr Blomqvist that was nice of you, do you have a minute, asks Mr Drapkin (CEO). Yes of course, what did you have in mind? Would you be so kind to tell me about the fairytale of Gambro? I would like that, can we sit here, says Mr Blomqvist. Mr Drapkin (CEO) is nodding and they take place at one stool each. Mr Blomqvist starts;

It all started with Professor Nils Alwall invented the first artificial kidney in 1961. Three years after this invention Mr Alwall had the opportunity to capture Holger Crafoord interest for the invention. Mr Crafoord was an industrialist who listened carefully to Mr Alwall and where extremely impressed. Mr

[47] About Gambro – Market Details – *Renal and IC products market*, www.gambro.com, 16-04-07
[48] *Organization and objectives*, Gambro Annual Report 2001

Crafoord wanted to make business of this life saving invention. Mr Alwall liked the idea so Gambro was founded and development began in Lund, Sweden.[49] The name Gambro is an abbreviation for "Gamla Brogatans Sjukvårdsaffär Aktiebolag". [50]

In 1967 the first manufacturing plant was ready to open and mass production of single used artificial kidneys and machines began. Gambro opened their first plant outside of Sweden in 1973 in Germany. The first computerised dialyse machine (AK-10) was out on the market in 1977. Business prospered and in 1988 was Gambro listed on the Stockholm stock exchange market.

> *Mr Blomqvist says; 1983 was a great year for Gambro. High results were presented, but after that the company was struggling with several problems. Mr Drapkin (CEO) is listening intensively and asks Mr Blomqvist to continue.*

The introduction to the market with the new product, Lundia 10, brought problems to the organisation, for example problems within the production chain and the product was receiving complains from customers. The problems cost Gambro huge amount of money, more than the 20 MSEK that was suppose to be the total cost for the project. [51] Another problem Gambro was facing was that they were not as diversified in their product range as their competitors. Gambro was at this time depended on a certain area of renal products care. This was not the case at the competitors who were in several different areas of healthcare. At the same time the U.S. market collapsed which had effects on Gambro's market share and result there. This forced Gambro to make decisions concerning the future. Gambro had to decide on how to extend their product portfolio and how to gain better access to the U.S. market.[52] In ability to grow even more and to achieve more stability in their growth Gambro acquired two companies, Hospal and COBE. With these two acquired Gambro obtained new technology and knowledge.[53]

> *Now I'm up to the time were Gambro acquired Hospal, do you have the time for me to continue or shall we take a break. I look forward to our next session but your right we should take a break. I've got to present my speech soon, says Mr Drapkin (CEO). I haven't completed my duties for today so I better continue says Mr Blomqvist. Mr Blomqvist we will finish this story soon, I'll see you at the bar tonight, says Mr Drapkin (CEO) as he is leavening the room.*

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[49] *About Gambro* – The Gambro story, www.gambro.com, 16-04-07
[50] *Overview*, http://company.monster.com/cobe/, 05-05-07
[51] *Nu är Gambro störst men inte bäst,* Veckans affärer, affärsdata 04-05-07
[52] *Bra företagsköp lyfter Gambro*, Veckans affärer, affärsdata 04-05-07
[53] About Gambro – *The Gambro story*, www.gambro.com, 16-04-07

The folder is finding D. Orbmag (R&D)

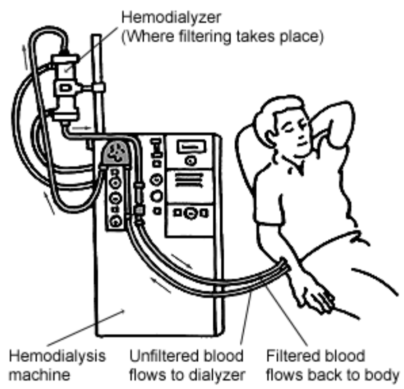
> *Mr Blomqvist continues with his prestige's work. He starts to sweep the floors with his new outstanding polyflex mop. Mr Blomqvist is humming to himself as Doctor Orbmag comes in and finds the pink folder on the washbasin. The folder lies wide open showing the page written by D. Orbmag (R&D) himself. He sees himself as the great scientist of Gambro and as he is noticing the pink colour his face turns red. Everyone knows that Gambro's colour is blue; it has to be those Hospal people he says out loud. He looks around to see if he is alone and he starts to read thus he can not bare the golden letters.*

Gambro products provide

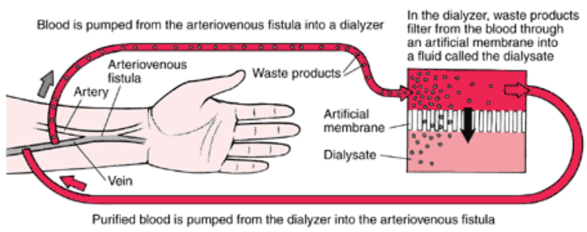
Gambro provides products within hemodialysis, peritoneal dialysis and intensive care.

Hemodialysis

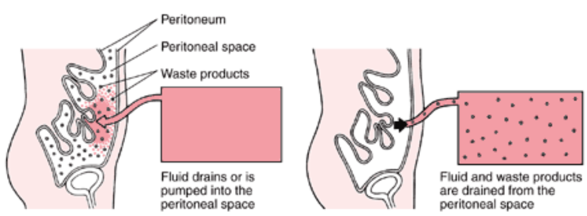
Hemodialysis is needed when a patient's kidney is incapable of functioning and the patient is in need of treatment to survive. Through hemodialysis patients obtain the ability to clean their blood through an artificial kidney. During dialysis blood is transferred out of the body through external tubes and in to the dialyzer, where the blood is run through a thin membrane together with dialysate. The dialysate transfers waste products and excessive water away and the clean blood is pumped back in to the patient blood system. [54]



Hemodialysis is eventually needed for all patients suffering from chronic renal failure. Hemodialysis can be carried out at home or at a dialyse clinic. Usually home-treatment starts with peritoneal dialysis, which is described below. When the patient's kidney function is completely expired external treatment, hemodialysis, needs to be used. The equipment used for home treatment is AK95S with an ultra filter and WRO 300, which makes a complete home dialyse system. [55]



Hemodialysis



Peritoneal Dialysis

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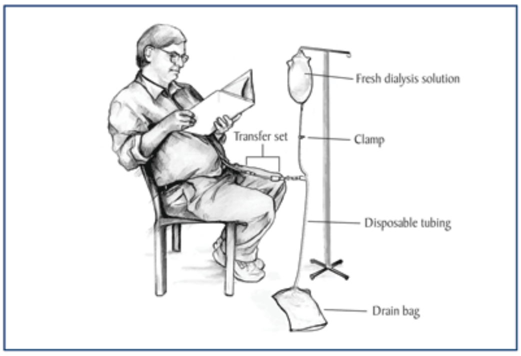
[54] *Customer offerings,* www.gambro.com, 16-04-07
[55] ibid

In dialysis clinics patients are offered hemodialysis treatments. Gambro's in-center offerings are including; "ULTRA Therapies, The Phoenix system and high and low flux therapies, in addition with a wide range of services, including water treatment services, IT services and Education Services aimed at improving treatment outcomes and clinic efficiency."[56]

Peritoneal dialysis

Peritoneal dialysis is used for chronic renal failure when the patient's kidney has a minor function left. Peritoneal dialysis is a home-based treatment. The blood is cleaned while it is still in the body by removing toxic substances, acids, other waste substances and access fluid. Dialyse liquid is transferred in to the body through the abdominal cavity and there the body's own peritoneum is functioning as the dialyse membrane. Extra fluid and waster ravels across the peritoneal membrane into the dialysis fluid, which is then drained from the abdomen. The treatments are APD or CAPD:



1. Continuous ambulatory peritoneal dialysis (CAPD) is a form of PD that is performed by a patient, which works somewhat like a healthy kidney, because it is a continuous dialysis process-24 hours a day, seven days a week. Since people are ambulatory and is not attached to a machine, they can walk around during therapy, as well as use it at home or work.

2. Automated peritoneal dialysis (APD) is performed at home with the help of a PD cycle machine that performs exchanges automatically, usually while a patient sleeps. Most people must leave dialysate in the peritoneum during the day to remove extra waste and fluid. APD is good for people who want more freedom during the day.[57]

Intensive care

Acute kidney and liver failure are two conditions, which are closely linked and both can be treated with extracorporeal blood purification. This is usually taken care of by the intensive care units

[56] *Customer offerings,* www.gambro.com, 16-04-07
[57] *News releases 2001*, www.baxter .com, 23-05-07

at hospitals. Gambro is a pioneer and market leader when it comes to treatment for acute liver failure. Prisma flex and MRAS systems are used.[58]

Miss von Prisma's (HR) enthusiasm

> *If possible D. Orbmag (R&D) finishes the folder with an even brighter red coloured face. He throws the folder in the bin and enters one of the toilettes. Mr Blomqvist has moved on to cleaning the mirrors as Miss von Prisma (HR) and Mr Danel (MM) comes back. I just heard that the Gambro and Hospal scientists are in conflict again, I don't get it, why can't they just cooperate and help each other, says Miss von Prisma (HR). Because their both to stubborn and only believes in their own technology answers Mr Danel (MM). Let me tell you the truth, it is all because of the Hospal people who refuses to take advantage of our great knowledge shouts D. Orbmag (R&D) as he storms out of the toilette and then out of the bathroom. Mr Danel (MM) and Miss von Prisma (HR) look at each other while giggling. Ok, tell me now what have you teached our first trainees so far?, asks Mr Danel (MM). Miss von Prisma (HR) starts to tell with all her enthusiasm.*

The Organisation of Gambro

Gambro has a functional organisation with eight large functions, Sales, Operations, Research and development (R&D), Strategic Marketing, Finance, Quality and Regulatory (Q&R), Legal and last Medical. The four major functions are Sales, Operations, R&D and Strategic Marketing. The Sales function has the largest number of staff, which is resulting in a large salary cost. Manufacturing a sub function under Operation is the one function that is requiring the most financial resources. Gambro is continually also investing a considerable amount of money on R&D. The marketing of Gambro and Hospal products is done through medical conferences and scientific meetings, where products or research results are displayed on posters or presented orally to an audience. Gambro is also sponsoring doctor students both internally and externally, which results in publications were Gambro brands are displayed. The organisation is integrated for the two brands, Gambro and Hospal with exception of the sales function. Gambro and Hospal have their separate sales forces in all countries where they operate.

Customers

The main customers for dialyzers are renal clinics at public hospitals; a market which is very politically regulated. Other important customers are large international dialyse chains, private local dialyse clinics and private hospitals. The customers for the intensive care products are usually intensive care units and emergency rooms at hospitals private or public.[59]

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[58] *Customers offerings,* www.gambro.com, 16-04-07
[59] Interview, Kristian Enkvist

In the United States and northern Europe there are low educated staffs handling the dialyzers and here is Gambro the only brand permitted (? Avses att Gambro är det enda tillåtna?). In northern Europe and the United States effectiveness is the core feature (man kan inte tala om kompetens när det gäller utrustning) of the equipment. These markets demand a simpler interface than the southern European market. In southern Europe the doctors are handling the dialysers and they demand more advanced equipment. The main brand on this market is Hospal. Usually the Hospal products are more expensive than the Gambro products because of the complexity of the products, which leads to that only one or two company can produce after these demands. Therefore the company can take a higher price.

And finally I spoke about our major competitors, continues Miss von Prisma (HR).

Competitors

For renal dialysers are the long-term trend globalisation and consolidation. There are three major players on the market, which together have 70 percent of the global market share. They are apart from Gambro, Fresenius Medical Care of Germany[60] and Baxter of the United States[61]. 1/3 of the market consists of a number of other companies[62], e.g. Terumo Corporation[63] and Nipro Corporation[64], two Japanese companies and B. Braun Melsungen AG, a German company.

The fairytales continues at the bar

As every Wednesday at seven thirty pm a joyful crowd had gathered in the bar COBE. Mr Drapkin (CEO) walks in and sees Mr Blomqvist at the end of the bar standing by himself. He walks up to him and says hello. What are you drinking? That looks nice. I'm drinking old-fashioned milk says Mr Blomqvist. Oh I'll join you and can we please continue with the fairytale. Of course says Mr Blomqvist and Mr Drapkin (CEO) sits down as Mr Blomqvist continues the story.(tänk på att hålla samma tempus)

The first acquisition was with Hospal in 1987 and the consolidation gave Gambro access to the patented synthetic renal membrane, which today stands for 25 percent of the European market. Competence within synthetic membrane is vital to be the leader of dialyze equipment. Gambro had before the acquisition developed traditional membrane based on cellulose. It may sometimes cause discomfort for patience because it is not suited for the human body.[65] Hospal's main product was their development of synthetic membrane, which was the most important component in single use renal

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60 www.fmg-ag.com
61 www.baxter.com
62 About Gambro – Market Details – *Renal and IC products market*, www.gambro.com, 16-04-07
63 www.terumo.co.jp/English/
64 www.nipro.co.jp
65 *Bra företagsköp lyfter Gambro*, Veckans affärer, affärsdata 04-05-07

product. Hospal also manufactured single use renal products, blood tube and machines for renal care. A consolidation between these two companies was stated to strengthen their positions on the market and in long term give profits within R&D and productions.[66]

One reason why the acquisition of Hospal was done, was to increase the range of products. The renal care is a segmented market with many and small niches. Before the consolidation, Gambro and Hospal had been presented in different parts of the market apart from the standardized dialyzer. Gambro gained superior volume and at the same time the range of products for more complex care was increased. It also did Gambro superior on the world market, but not the best company in renal care. [67] Gambro chose to not consolidate the two organisations in to one, which is normally done at acquisitions. When choosing not to do so they miss out on synergy effects that can be achieved between those two. Instead Gambro told the Hospal's management that they could keep their own sales forces and that they could run the company in the same way as before. One reason this was done was to keep key personnel at Hospal. Synergy effects were instead achieved in R&D, which is an important area within the Gambro organisation. It accounts for 5-6 percent of a yearly turnover.[68] The acquisition was a great success for Gambro and in 1988 the result went up with 40 percent. [69]

The next acquisition was done with the American company COBE in 1990 to improve the market position and conditions on the U.S. market. Until now Gambro had not had a big success on the U.S. market. The consolidation with COBE made Gambro stronger on the American market. It also made Gambro less depended on how the dialyzer market progressed.[70] Hospal was carried on as a parallel organisation next to Gambro on the American market. The fusion with COBE was more thoroughly. The American enterprise was divided into three subsidiaries, COBE directories for renal care managed by the American Gambro, for blood component technology and for heart surgery, these two managed COBE.[71]

Gambro was opening their first own dialysis clinic in 1991. To grow further Gambro became a wholly owned subsidiary of Incentive in 1996. Incentive is an international technology industry based industrial group. In 1998 Incentive change its name to Gambro, this was the start of a new era for Gambro. [72]

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[66] *Gambro köper njurjätte för 1,2 miljarder*, Dagens industri, affärsdata 04-05-07
[67] *Nu är Gambro störst men inte bäst*, Veckans affärer, affärsdata 04-05-07
[68] *Våghalsig förvärvsfilosofi bakom utveckling*, Svenska dagbladet, affärsdata 04-05-07
[69] *Hospal bättre än väntat*, Dagens industri, affärsdata 04-05-07
[70] *Nu är Gambro störst men inte bäst*, Veckans affärer, affärsdata 04-05-07
[71] *Bra företagsköp lyfter Gambro*, Veckans affärer, affärsdata 04-05-07
[72]About Gambro – *The Gambro Story*, www.gambro.com 16-04-07

In 1998-99 a restructuring program, a more than two year long program, started as a result of the decade-long growth drive that had left the company in debt. The former organisation structure had made it difficult for Gambro to exploit the world market and to become more successful. Gambro was forced to restructure its operations, at a cost of more than 1 billion SEK. The program also included the elimination of the company's multiple brands into two brands, Gambro and Hospal. For renal care products the brand name COBE was discontinued. The company was reinforced into three primary business units, Gambro Healthcare, Gambro Renal Products and Gambro BCT. Gambro Healthcare took over the company's more than 600 dialysis clinics. By doing so Gambro wanted to do a further expansion of their strong global market position by levering on successful brands. [73] Gambro also wanted to strengthen and focus their sales, service and market organisation. To improve the efficiency and flexibility in production, a reduction of the product lines was done to eliminate duplications, modular and platform-based product families. The restructuring intention was also to improve the efficiency structure of manufacture and the logistics. Manufacture facilities had to be close down and productions had to move. Reduction of warehouses lead to a concentration on a few logistics centers. As a result Gambro went from the three separate companies to a corporation[74,75,76]. The purpose with the restructuring program was to increase profitability. Also to achieve long-term affects such as joint platforms for product development, better logistics and joint marketing.[77]

Thank you so much, this has been extremely interesting. I'm impressed by your extraordinary knowledge. It is certainly fascinating that two companies that are so different work so close together, you have enlighten me in many interesting issues, which I have to consider. Now I'll have to be excused. I have to brief the executive group ,on an important matter. Mr. Drapkin (CEO) spots his closet colleagues at the table next to the stage.

(For more information see Appendix)

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[73] *Gambro AB*, www.answers.com, 05-05-07
[74] *Lång väntan på Gambro*, Finanstidningen, affärsdata 04-05-07
[75] *Kursras och kulturkollision,* Finanstidningen, affärsdata 04-05-07
[76] *Gambro launches restructuring of Renal Care Products business*, press release January 18, 1999, www.gambro.com
[77] *Gambro minskar antalet produkter*, Dagens medicin, affärsdata 04-05-07

Appendix

Income statements

Note 33

MSEK	Note	Group 2001	Group 2000	Parent Company 2001	Parent Company 2000
Revenues	1	**26,720**	22,245	**77**	69
Cost of sales		**-20,147**	-16,669		
Gross earnings		**6,573**	5,576	**77**	69
Selling expenses		**-1,887**	-1,674		
Administration expenses		**-2,633**	-1,818	**-191**	-182
Research and development expenses		**-423**	-533		
Result from participation in associated companies	4	**-12**	-26		
Nonrecurring items	5	**-1,190**	-1,365		
Other operating income	6	**20**	132		
Other operating expenses	7	**-167**	-88		
Earnings before interest and taxes	1, 2, 3 ,8, 9 and 10	**281**	204	**-114**	-113
Result from financial investments					
Result from participation in group companies	11			**2,527**	12,294
Result from participation in associated companies	4	**-10**	-152		-5
Result from other securities and receivables accounted for as fixed assets	12	**295**	-18	**1**	369
Other interest income and similar profit/loss items	13	**60**	61	**1,350**	599
Interest expenses and similar profit/loss items	14	**-819**	-622	**-878**	-61
Earnings before taxes and appropriations	15	**-193**	-527	**2,886**	13,083
Appropriations	26			**-158**	-190
Minority interest	16	**-59**	-64		
Taxes	17	**-170**	1,573	**-16**	-507
Net income		**-422**	982	**2,712**	12,386
Earnings per share before and after dilution (SEK)		**-1.22**	2.85		

Total number of shares outstanding 344,653,288 (of which, Series A: 250,574,090, Series B: 94,079,198).

Balance sheets

Note 33		Group		Parent Company	
MSEK December 31	Note	2001	2000	2001	2000
ASSETS					
Fixed assets					
Intangible assets	18	18,107	16,540		
Tangible assets	19	7,865	6,548	6	3
Financial fixed assets					
Participations in group and associated companies	20	192	162	18,018	25,032
Other securities held as fixed assets	21	44	40		
Other long-term receivables	21	744	630	8,004	8,194
Deferred tax receivables	17	1,530	223		
Total financial fixed assets		2,510	1,055	26,022	33,226
Total fixed assets		28,482	24,143	26,028	33,229
Current assets					
Inventories, etc	22	2,743	2,369		
Current receivables					
Accounts receivable	23	6,335	6,446		
Other receivables	24	1,692	3,106	13,723	934
Total current receivables		8,027	9,552	13,723	934
Cash and bank	34	899	600	381	13
Total current assets		11,669	12,521	14,104	947
Total assets		40,151	36,664	40,132	34,176
SHAREHOLDERS' EQUITY AND LIABILITIES					
Shareholders' equity	25				
Restricted equity					
Share capital (344.6 million shares at par value SEK 2 each)		689	689	689	689
Other restricted reserves		2,648	2,368	145	145
Nonrestricted equity					
Retained earnings		19,656	17,858	20,298	12,353
Net income		-422	982	2,712	12,366
Total shareholders' equity		22,571	21,897	23,844	25,573
Minority interest		182	189		
Untaxed reserves	26			905	744
Provisions					
Provisions for pensions and similar commitments	27	658	621	225	242
Provisions for taxes	17	1,433	1,508	696	
Other provisions	28	399	394	8	3
Total provisions		2,490	2,523	929	245
Long-term liabilities	29	8,650	5,842	8,534	308
Current liabilities	30	6,258	6,213	5,920	7,306
Total shareholders' equity and liabilities		40,151	36,664	40,132	34,176
Memorandum items					
Pledged assets	31	117	197	8	
Contingent liabilities	32	360	446	2,952	14,466

Cash flow statements

Note 33 and 34	Group		Parent Company	
MSEK	**2001**	2000	**2001**	2000
OPERATING ACTIVITIES				
Earnings after financial items	**-193**	-527	**2,886**	13,083
Adjustment for non-cash items, etc.				
Depreciation and write-downs	**3,024**	3,808	**4,568**	2
Provisions	**30**	-985	**-18**	-355
Unrealized interests and exchange gains/losses	**113**	-788	**-110**	-117
Capital gains/losses	**-308**	-722		-180
Undistributed earnings participations in associated companies	**22**	178		
Paid income tax	**-25**	-1,435	**38**	-125
Cash flow from current operations before changes in operating capital	**2,663**	-471	**7,364**	12,308
CASH FLOW FROM CHANGES IN OPERATING CAPITAL				
Increase (-)/decrease (+) in inventories	**-198**	-152		
Increase (-)/decrease (+) in accounts receivable and other operating receivables	**253**	-548	**-250**	2,818
Increase (+)/decrease (-) in accounts payable and other operating liabilities	**-281**	811	**-6,897**	-14,098
Cash flow from operating activities	**2,437**	-360	**217**	1,028
INVESTING ACTIVITIES				
Investments in financial fixed assets	**-222**	-267	**-1,587**	
Disposals of financial fixed assets	**334**	812	**16**	-251
Investments in intangible assets	**-1,654**	-874		
Disposals in intangible assets	**31**	59		
Investments in tangible assets	**-2,181**	-1,828	**-6**	-1
Disposals of tangible assets	**96**	87		
Merger effects in liquid assets			**38**	
Cash flow from investing activities	**-3,596**	-2,011	**-1,539**	-252
FINANCING ACTIVITIES				
Change in loans	**1,813**	2,769	**1,919**	-504
Group contributions			**150**	120
Dividend paid	**-379**	-379	**-379**	-379
Cash flow from financing activities	**1,434**	2,390	**1,690**	-763
Cash flow this period	**275**	10	**368**	13
Liquid assets opening balance	**600**	606	**13**	0
Currency effect in liquid assets	**24**	-25		
Liquid assets at closing balance	**899**	600	**381**	13

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Ten-year summary

Group

MSEK	**2001**	2000	1999	1998	1997	1996	1995	1994	1993	1992
Income statement										
Revenues	**26,720**	22,245	19,743	18,734	19,490	20,220	24,324	18,389	12,271	11,771
Earnings before interest and taxes	**281**	204	2,304	5,374	14,135	4,050	3,239	2,677	417	557
Earnings before taxes	**-193**	-527	1,893	4,991	13,890	5,228	4,653	3,832	966	1,216
Net income	**-422**	982	1,605	2,308	11,520	2,884	2,431	2,186	462	388
Balance sheet										
Total assets	**40,151**	36,664	33,920	33,406	49,881	34,696	32,035	35,703	18,909	19,010
Net debt	**9,434**	7,275	4,632	2,242	7,786	11,163	7,823	11,429	2,213	2,318
Shareholders' equity	**22,571**	21,897	19,655	17,850	25,385	14,581	12,246	10,976	9,922	9,500
Cash flow analysis										
Operating cash flow	**-11**[7]	1,103	2,048	4,213	13,485	2,862	1,374	3,048	256	963
Investments in fixed assets	**-2,465**	-1,741	-1,529	-1,587	-1,258	-1,258	-1,550	-1,029	-533	-597
Change in net debt	**-2,159**	-2,643	-2,390	5,544	3,377	-3,340	3,606	-9,216	105	1,745
Key figures										
Earnings per share, SEK[4][5]	**-1.22**	2.85	4.66	6.70	33.70	8.44	7.11	6.40	1.35	1.13
Shareholders' equity per share, SEK[4][5]	**65**	64	57	52	74	43	36	32	29	28
Net asset value per share, SEK[2][5]	**65**	64	57	52	101	70	58	51	51	28
Dividend per share, SEK[5]	**1.10**[1]	1.10	1.10	1.00[6]	2.00	2.00	1.80	1.60	1.40[3]	1.20
Gambro share, total return, %	**-0.5**	-10.7	-11.0	-29.3	46.9	73.8	24.7	-5.2	50.0	
Return on shareholders' equity, %[4]	**-1.9**	4.7	8.6	10.7	57.6	21.5	20.8	21.0	4.8	4.2
Return on total capital, %	**1.6**	0.9	7.4	14.6	35.3	19.1	18.1	18.7	7.5	8.7
Return on capital employed, %	**2.0**	1.2	10.8	19.7	44.5	24.8	21.4	21.8	9.7	22.6
Interest coverage ratio	**0.8**	0.4	4.1	5.5	14.7	4.6	4.0	3.9	2.2	2.2
Solidity (equity/asset ratio), %	**57**	60	59	54	52	44	52	43	61	57
Statistical data										
Average number of employees	**19,534**	17,999	17,354	17,332	16,108	17,145	18,573	19,106	12,086	13,024
Wages, salaries and remuneration, incl. social costs	**9,122**	7,191	6,265	5,783	5,364	5,423	6,145	5,982	3,662	3,583

1) Proposed

2) Shareholders' equity/share adjusted for surplus value in associated companies

3) In addition, SEK 0.27/share in Orrefors subscription rights

4) After full tax

5) All figures per share are proforma after split (June 1996)

6) In addition, value transferred on sale of ABB shares

7) Exclusive capital gain on sale of Thoratec shares

The operations in the Group have significantly changed during the 10 years shown in the summary. All business activities within the Group before 1992 have been divested and all existing business have been acquired.

Management Challenges for the future! Example: Gambro/Sweden

Part 2a CEO

This is a Multidiscipline case containing one main case and five sub cases:

Part 1; General information about Gambro

Part 2a CEO; Additional information for the Executive Management
Part 2b CHRO; Additional information about Human recourses
Part 2c CMO; Additional information about Marketing and Sales
Part 2d CTO; Additional information about Research and Development
Part 2e CSO; Additional information about Strategy Development

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This in an Educational case written by Johanna Herrlander and Ann-Sofie Lundberg as one part of our master's thesis, which is the conclusion of our Master of Science degrees in Biotechnology and Engineering with completion in Industrial Management and Engineering (Johanna Herrlander) and Industrial Management and Engineering (Ann-Sofie Lundberg) at the Faculty of Technology, Lund University. This multidiscipline case is a semi-functional case which means that is contains parts that are added by the authors. The case has been quality certified by Gambro's head of Research, Kristian Enkvist. Academic tutor was Carl-Johan Asplund, Lecturer at the department Of industriel management and logistics

Fredric Drapkin the CEO finds himself still in the conference room after the meeting. Mr Drapkin is enjoying one of Mr Häggkvist's crazy stories and the discussion from the meeting earlier is since long gone. They leave the room together and says goodbye when walking in different directions outside the unisex toilet.

Back at his office his sees some reports laying on his desk and he picks up one of the reports – Gambro Research and Development.

Gambro Research and Development

Since the restructuring in 1999 Gambro has streamlined its research. It has resulted in a more efficient research organisation, with a more clear division of responsibilities between different parts of the company. The central Corporate Research department is concentrated with long-term research as the business areas have direct responsibility for product development. There is also a strong focus on system-oriented work methods involving close cooperation between clinical, marketing and research operations.

In 2001 research activities at Gambro were focused on supporting the company's strategic development work. The aim was to find cost-efficient forms of cooperation and new business opportunities at the interfaces between the company's different product and business areas.

During 2000 Gambro invested MSEK 533 in research and development and in 2001 it increased, to a total of MSEK 618. About 70 people work in the central research department and one-third of who hold doctoral degrees. [78]

Gambro's patent department works to protect the results of the company's investments in research and development. Innovations that possess strategic value to the company should be identified and protected by obtaining a patent, Therefore Gambro works (they syftar på patentavdelningen, men de skulle kunna vara fler inom Gambro som försöker identifiera patent, inte minst R&D) continuously with identifying these areas.[79]

Research to develop and improve Gambro's products has always been a prerequisite for Gambro to achieve its core purpose: to save lives and improve the quality of life for the people served by the company. Gambro's core expertises are in the following areas:

- Dialysis fluids,
- Quality assurance of dialysis care,

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[78] *Research*, Gambro Annual Report 2001
[79] *Patent-related issues* - Research, Annual report 2001

- Biocompatible materials and fluids,
- Sensor and information technology,
- Separation technology,
- Blood- and cell-based solutions and
- Treatment systems

Gambro has during 2001 invested in increased production capacity of renal products with five million units per year. The plan is to further increase this capacity with eight million per year during the following year. There will be new facilities and expansions in Germany and France. The products made here will reach the market in 2003.[80]

During 2001 Gambro lounged product updates in all three product categories, hemodialysis (HD), peritoneal dialysis (PD) and intensive care (IV). The production capacity increased for many products. Polyflux, a synthetic membrane has made big progress during the year and new production capacity for this machine was made during the year in Germany. They will increase the capacity even more by 2003 by a facility in France. A new dialyser Phoenix hemodialysis machine, AN69ST is an update from the AN69. This machine was delayed in a couple of markets which had a bad influence on the sales. [81]

He finishes the report and goes on with the next one – Human resources.

Human resources[82]

Human recourses work globally

Gambro continues to work globally with human recourses and this has been in focus during the year. Several programmes are carried out in order to provide support for enhancing employee skills.

Gambro is working globally in order to ensure efficient use of employees for different projects. Gambro is also working towards common values and goals among the entire workforce.

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[80] *The year in brief,* Gambro Annual Report 2001,
[81] Gambro Renal Products, New products and new capacity, *Products, product development and production,* Gambro Annual Report 2001
[82] *Human resources*, Gambro Annual Report 2001

Gambro's Values		
All programs and measures initiated and implemented at Gambro must be rooted and recognize the companies fundamental value		
Excellent business performance	**Cooperative spirit**	**High ethics**
Customer orientation	Patient commitment	Honesty and integrity
Quality	Open and active communication	Good citizenship
Leadership and initiative	Teamwork	Dedication to environment
Performance ethics	Respect and trust	Courage
Results orientation	People development	
Competency	One global company	

Figure 1, Gambro's values

One of the purpose global human resources is to create guidelines for joint projects that affect different parts of the company. The central human resources function is working towards:

- Creating capacity to adapt and develop management expertise.
- A common base for values, corporate culture and vision.
- Development of policies and systems that support these values
- Providing advice to group units
- Ensuring a consistent high quality of human reassures function

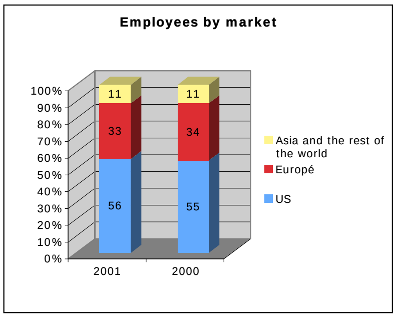

Figure 2, Employees by marks

Human resources locally

Gambro human resources are working locally for sustainable individual development. Most of the work is performed locally and this function involves about 150 people. A network has been established during the year of human resources managers. This has broadened and strengthened the human resources function geographically with new representatives in Oceania Japan and other sites in Asia.

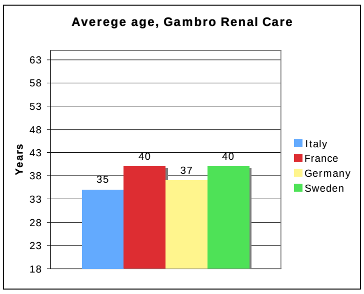

Figure 3, Average age

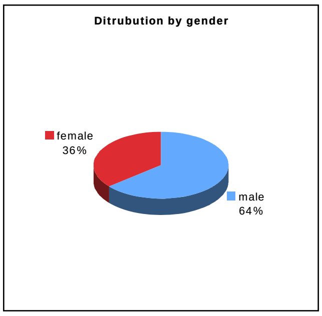

Figure 4, Distribution by gender

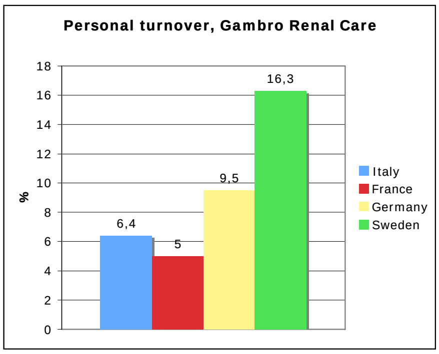

Figure 5, Personal turnover

When he has finished the report about Gambro's Human resources, he walks out of his room to go and get some coffee at the coffee machine. On his way he meets Mr Lange from Strategic Development and he hands over him a document, Gambro Strategic Development.

Gambro Strategic Development[83]

Gambro Strategic Development was established at the end of 2000 as part of the drive to strengthen the Group's business. It has two main roles:

- To support the business areas in their efforts to implement existing strategies,
- To develop foundations and recommendations for long-term strategic decisions made by Group management and the Board of Directors.

This means that the Strategic Development is involved in driving the strategic planning process and managing the portfolio of strategic investments.

The principles of Gambro Strategic Development are that all investments should be fully in line with Gambro's vision. Another principle is that a good balance should be maintained between short-, medium- and long-term investments and the last principle is that all development work should be based on existing know-how and assets such as technological platforms, scientific knowledge or production expertise.

Gambro Strategic Development can also assist the three business areas if asked, for example with competitor analyzes and business development. Each business area is thus responsible for developing and implementing its own strategies. A project where this is done is the cooperation between Gambro

[83] *Gambro strategic development*, Gambro Annual Report 2001

Strategic Development and Gambro Renal Products. The project is to identify prospective partner companies in Japan. The ambition is to extend the business area's geographic coverage. The Japanese market accounts for one-fourth of all dialysis worldwide and therefore represents an attractive prospect.

> *Back at his office again with a cup of coffee, he sees that someone from the Marketing and Sales have been there and laid a report on his disk, "A short review of Marketing and Sales".*

The sales organisation of Gambro

The Gambro organisation originates from the sales function. The sales function is divided in to three major areas, Asian and the Pacific (APAC), Europe, Middle East and Africa (EMEA) and Americas. Gambro is selling their products in over 100 countries and is having subsidiary companies in over 40 countries. There are distribution offices close to the customer, where the different parts of each order is put together and delivered. The distribution offices work as their own subsidiary companies having their own representatives from operations, strategic marketing and finance.[84]

The organisation is the same for the two brands, all functions work together apart from the sales function. Here Gambro and Hospal have their two one sales forces. The sales forces of Hospal are find in those countries in the southern Europe were Hospal is very active. The countries are Spain, Italy and France and these three countries have their owned separate sales forces. Other countries were Hospal can be find are Belgium, Germany and U.K. The brand Gambro is more global than Hospal and is find in the northern Europe, USA and parts of Asia, e.g. Japan.[85]

The sales forces of Gambro and Hospal have some differences. The first is that there are culture differences within the sales forces, which have effects on how the employees work and commit to the customers. The second is that the staffs at the sales forces of Hospal have much more scientific knowledge and the customers of Hospal are very bonded to a certain salesmen/woman. This is also true for the customers of Gambro.[86] Comparing to Gambro, Hospal is a very strong brand, especially in the intensive care.[87]

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[84] Interview Annemarie Gardshol, 10-05-07
[85] ibid
[86] ibid
[87] Interview Ingrid Ledebo, 03-05-07

The sales of renal care increased dramatically with 14 percent, six percent including the effect of currency. Gambro renal care also increased their market share with slightly more 15 percentages and received good profit margins. (vilket år avses?)The success is most likely a result of the restructuring initiated in 1999. Unfortunately the increased demand has not fully been satisfied due to limitations in the production. The sales trend has been especially good in France, Italy and Spain. There has also been a good development in Canada, Australia, Eastern Europe and South Korea. Hospal is not sold on the U.S. market today. In the new markets such as Latin America and South East Asia the sales trend is as well up-going. The sales increase in, the US, Germany and Japan has not been as good, which could partly caused by production delays.[88]

> *After finished all of the reports concerning Gambro's different departments he leaned back in his chair and start to plan the next executive group meeting. Mr Drapkin wrote down the next meeting's agenda and thought about what he was going to ask and take up with his executive group.*

[88] The year in brief, Gambro Renal Products, *New products and new capacity*, Gambro Annual Report 2001

Management Challenges for the future! Example: Gambro/Sweden

Part 2b CHRO

This is a Multidiscipline case containing one main case and five sub cases:

Part 1; General information about Gambro

Part 2a CEO; Additional information for the Executive Management
Part 2b CHRO; Additional information about Human recourses
Part 2c CMO; Additional information about Marketing and Sales
Part 2d CTO; Additional information about Research and Development
Part 2e CSO; Additional information about Strategy Development

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This in an Educational case written by Johanna Herrlander and Ann-Sofie Lundberg as one part of our master's thesis, which is the conclusion of our Master of Science degrees in Biotechnology and Engineering with completion in Industrial Management and Engineering (Johanna Herrlander) and Industrial Management and Engineering (Ann-Sofie Lundberg) at the Faculty of Technology, Lund University. This multidiscipline case is a semi-functional case which means that is contains parts that are added by the authors. The case has been quality certified by Gambro's head of Research, Kristian Enkvist. Academic tutor was Carl-Johan Asplund, Lecturer at the department Of industriel management and logistics

Monday, the 20th of February, 10.32 am. Per Malmén, chief of Human Recourses walks back to his office after the executive group meeting. He decides to meet with his staff members one by one in person. He writes an email to tell them about the executive group meeting and what the CEO expects them to contribute. He asks his staff members(han vill välinte ha alla sina anställda på besök?) to come to his office some time during the week to give him an update on their work. Then he continues with his work. After a couple of minutes Charlotte Wistam comes in and says, I just received your email and I have some time now, would that work for you? Yes, please sit down. Miss Wistam works with global human relations and begins to tell Mr Malmén about her work and observations.

Human recourses work globally

Gambro continues to work globally with human recourses and this has been in focus during the year. Several programmes are carried out in order to provide support for enhancing employee skills.

But this I hope those responsible for these programs will tell you more about later says Miss Wistam and continues.

Gambro is working globally in order to ensure efficient use of employees for different projects. Gambro is also working towards common values and goals among the entire workforce.

Gambro's Values		
All programs and measures initiated and implemented at Gambro must be rooted and recognize the companies fundamental value		
Excellent business performance	**Cooperative spirit**	**High ethics**
Customer orientation	Patient commitment	Honesty and integrity
Quality	Open and active communication	Good citizenship
Leadership and initiative	Teamwork	Dedication to environment
Performance ethics	Respect and trust	Courage
Results orientation	People development	
Competency	One global company	

Figure 1, Gambro's values[89]

[89] *Human resources*, Gambro Annual Report 2001

One of the purpose global human resources is to create guidelines for joint projects that affect different parts of the company. The central human resources function is working towards:

- Creating capacity to adapt and develop management expertise.
- A common base for values, corporate culture and vision.
- Development of policies and systems that support these values
- Providing advice to group units
- Ensuring a consistent high quality of human reassures function

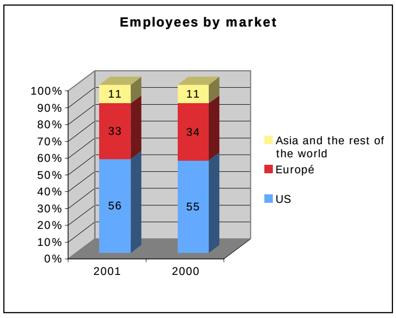


Figure 2, Employees by marks

Oh sorry Mr Malmén, but I need to run now; I'm late for my boxing class, says Miss Wistam. No problem thank you for this briefing. Mr Malmén finishes for the day. He grabs a brief description of the Human relations work locally to read on the bus home.

Human resources locally

Gambro human resources are working locally for sustainable individual development. Most of the work is performed locally and this function involves about 150 people. A network has been established during the year of human resources managers. This has broadened and strengthened the human resources function geographically with new representatives in Oceania Japan and other sites in Asia.

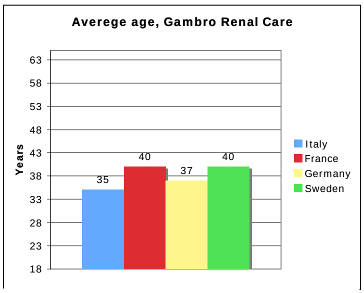
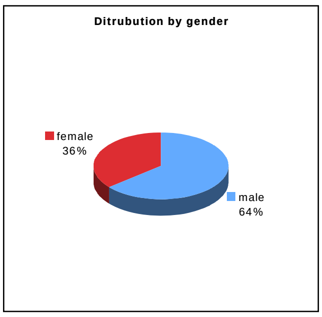


Figure 3, Average age



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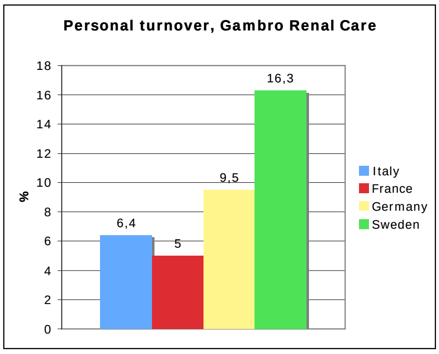

Figure 5, Personal turnover

On Tuesday, the 21st of February, 11.12 am, Adam Leep is knocking on Mr Malmén's door. Come in, says M Malmén. Mr Leep goes in; I heard about the executive group meeting and I would like to tell them about the leadership program, I secretly(vad avses med secretly?jag tycker det kan strykas) think that it can be taken one step further, but I would need to have the executive group on my side. It seems like you have a lot of ideas, but I would like to know what has been done so far? Mr Leep starts telling Mr Malmén.

Leadership development

More than 600 employees have participated in the Leadership Development Process (LDP), which started in 1998. The purpose of the LDP is to make sure that Gambro has a world-class leadership and to develop a broad and strong Gambro group through common goals and values. The process is renewed every year in order to keep the content of the program current and modern. LDP consists of three stages. During the first stage appraisal discussions between managers and employees are held. During the second stage managers on the same level meets to discuss the appraisal discussions. This step is a talent review where the results of the appraisal discussions are evaluated and individual action plans for employees are proposed. The third stage involves a follow up where managers give feedback to the staff members. The information about the employees participating in LDP is complied in a database. This database includes information about the ambition and potential of specific individuals. This is used when available resources quickly need to be identified for example when positions need to be filled.

Mr Leep finishes and leaves the office. Mr Malmén himself was in charge of another program, which he started before he became the chief of Human Resources in 2000. He is reading through his material to find out how the project is doing now.

International management training

The International Management Program (IMP) was launched in 1999 and continued in 2001. During 2001 two new groups were in the program, a total number of 50 participants. The three basic goals for this program are; to improve leadership skills, to increase company awareness of strategies, vision, corporate culture and values and to build networks of personal contacts within the company. IMP is a corporate program which is supplemented by local efforts within business areas. Gambro Renal Products initiated a program to support management within the different production units. This program is celled Operations International Leadership. This program progress over six days and during 2001 and 2002 all production units should be conducted. The participants work in heterogenic groups, which work between stages with individual projects assignments. The aim is to improve communication through an increased understanding of cultural differences. This is supposing to strengthened cooperation between different organisation parts.

Mr Malmén continues to look at his own work and is now up to the work he has done as the chief of Human Resources. This contains some of his beloved projects.

Policy on international assignments

To increase and facilitate the global movement of employees within the Gambro group a global expertise policy is available to all employees on the intranet. This policy contains guidelines and advices regarding arrangements for employees on international assignments.

Compensation system

Gambro has a compensation system for their key employees. The system includes basic salary, bonus payments and long-term remuneration systems. The system was expanded in 2001 to include 450 people.

Talent Pool Development

The Talent Pool Development is supposed to start in the mid of 2002. The programs aim is to support talented individuals during their first career stages. The goal is to identify candidates internally and invest in their development. The different business units are responsible for this identification. The program progresses over two years and work assignments and training programs at different areas are alternated.

Web based recruitment system

Gambro has since 2001 a web based recruitment system to handle both internal and external recruitment. Available positions internally are announced on the intranet and externally on the Internet. The goal is to increase the recruitment selection base and internal mobility.[90]

Mr Malmén has a lot of ideas on new projects that he would like to start. He is determined to integrate the people from the old Hospal and the old Gambro as well as people from countries. This has not been easy and he has to come up with special strategies as well as taking advantages of the improvements that already have been done. He is a thoughtful leader and he always puts his employees first. According to Mr Malmén everyone's personal development is important and he believes this is not only pleasing for the employees but the success of Gambro Renal Care relies on this. He

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[90] *Human resources*, Gambro Annual Report 2001

travels a lot and he has realised that there is noticeable culture difference between northern European countries and southern European countries.

Management Challenges for the future! Example: Gambro/Sweden

Part 2c CMO

This is a Multidiscipline case containing one main case and five sub cases:

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Louise Brännström, the chief of Marketing and Sales leaves the meeting with her large hand bag dangling from her right arm. She walks out of the company building towards her apartment some kilometres away. While enjoying the crisp and clear winter evening her mind is preoccupied by the former meeting. By the time she comes home she is decided to hold a staff workshop during the following week. A few days later she opens the workshop by informing her staff about the meeting with the management. She divides the staff members in groups and gives each group issues to discuss. Each group also has the opportunity to update Mrs Brännström on their specific situation. She spends some time with each group listening to their own ideas.

The first group out is the one with expertise on Gambro's sales organisation.

The sales organisation of Gambro

The Gambro organisation originates from the sales function. The sales function is divided into three major areas, Asian and the Pacific (APAC), Europe, Middle East and Africa (EMEA) and Americas. Gambro is selling their products in over 100 countries and is having subsidiary companies in over 40 countries. There are distribution offices close to the customer there the different parts of each order is put together and delivered from. The distribution offices work as there own subsidiary companies with have their own representatives from operations, strategic marketing and finance.

The organisation is the same for the two brands; all functions work together a part from the sales function. Here Gambro and Hospal have their two one sales forces. The sales forces of Hospal are find in those countries in the southern Europe were Hospal is very active. The countries are Spain, Italy and France and these three countries have their owned separate sales forces. Other countries were Hospal can be find are Belgium, Germany and U.K. The brand Gambro is more global than Hospal and is found in the northern Europe, USA and parts of Asia, e.g. Japan.

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[91] Interview Annemarie Gardshol, 10-05-07
[92] Interview Ingrid Ledebo, 03-05-07

The sales of renal care increased dramatically with 14 percent, six percent including the effect of currency. Gambro renal care also increased their market share with slightly more 15 percentages and received good profit margins (vilket år avses). The success is most likely a result of the restructuring initiated in 1999. Unfortunately the increased demand has not fully been satisfied due to limitations in the production. The sales trend has been especially good in France, Italy and Spain. There has also been a good development in Canada, Australia, Eastern Europe and South Korea. Hospal is not sold on the U.S. market today. In the new markets such as Latin America and South East Asia has the sales trend is as well up-going. The sales increase in, the US, Germany and Japan has not been as good, which could partly caused by production delays.[93]

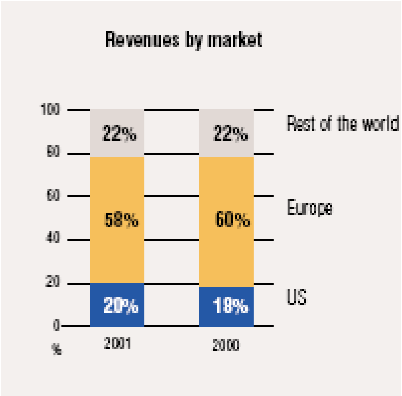

Figure 1, Revenues per market[94]

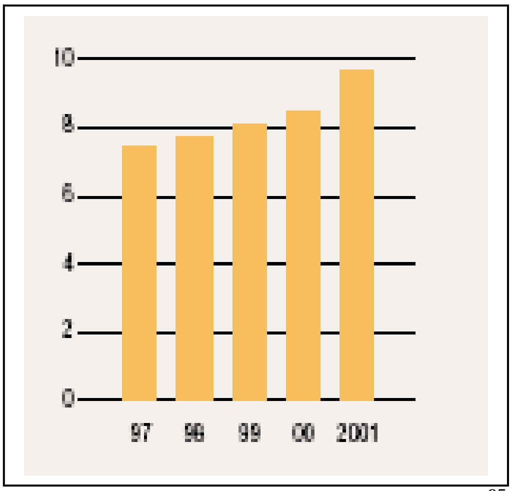

Figure 2, Revenues 1997-2001 (MSEK)[95]

The group also shows Mrs Brännström the revenue of Renal Care back to 1997. (See figure 1 and 2) After the presentation of the sales organisation a few persons has gathered to discuss the marketing and markets with Mrs Brännström.

How to gain new customers

Gambro and Hospal products are reaching the customer through medical conferences and scientific meetings, where products or research results are displayed on posters or presented orally. Gambro is also sponsoring doctor students both internally and externally.[96]

Market depending

Gambro is depending on the market and the customers. Gambro as a company is pushing the technology forward because of its complex nature. Gambro is dependent on health economics when it comes to which products will be sold in which countries. Europe and the United States has a good

[93] Gambro Renal Products - New products and new capacity - *The year in brief* , Gambro Annual Report 2001,
[94] *Renal Care*, Gambro Annual Report 2001
[95] ibid
[96] Interview, Kristian Enkvist

stable economy and will therefore be able to purchase more advanced and expensive dialyzers compare to the less developed countries. This will have en influence on Gambro and the development of new products.

> *The next issue that will be discussed between Mrs Brännström and her staff is the customers of Gambro.*

Customers

Customers to the ones in the industry – includes hospitals and clinics, research labs, kidney dialysis centers, rehabilitation centers, nursing homes, healthcare professionals and patients. Interactions with the customers can be done through training and education, participation in professional societies and advisory boards, customers' service and clinical trials and customer advisory councils.[97]

In those countries were Hospal is active the customers from, for example the hospital and private clinics, sends tenders to the sales force which are very specified and there is often just a company or a certain brand that can fulfil all of the demands. The tenders include a lot of details concerning the function of the machines and the interface. Therefore the market in those countries can be seen as a niche market and the relation and dialog between the company and the customers is very important.[98] The customers of Hospal are more willing to pay for the products functionality and therefore Gambro can charge a much higher price of Hospal products than the products under the brand Gambro.[99]

Those customers choosing Hospal are more interested in science. Hospal as a brand have therefore more scientific support and are investing more in research science concerning new innovations and better products. Hospal also sponsor scientific articles and training. The customers of Gambro also demand that they produce scientific articles and so on, but not to the same extent as Hospal customers. Within R&D Hospal is focusing more on the patient and on the scientific parts of the renal care. While Gambro is focusing on the healthcare of the patients, as a hole not just separates parts of the healthcare for renal care patients.[100]

For less developed countries peritoneal dialysis (PD) can be an alternative to the more expansive dialysis. A positive fact with the PD is that it does not require a capital-intensive infrastructure (clinics and personnel). It also presents a lifestyle advantages because it allows patients to work or be at home

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[97] *Baxter's global facilities*, www.sustainability.baxter.com, 05-05-07
[98] Interview, Annemarie Gardshol, 10-05-07
[99] Interview, Ingrid Ledebo, 03-07-05
[100] Interview, Annemarie Gardshol, 10-05-07

while administering their therapy.[101] The PD can be used particularly in developing countries, where many people with kidney disease currently are undiagnosed or untreated. One of competitor Baxter's strategies is to increase the use of PD in developing countries where people desperately need some form of dialysis treatment. The company also seeks to expand PD penetration in developed countries. The lifestyle advantages offered by the therapy make it an attractive alternative to in-center care.[102] Another way to provide cost-effective renal therapy the competitor Baxter has partnership with local physicians at dialysis clinics.[103]

Mrs Brännström finishes the workshop by saying, Thanks to all of you who has been participating today. She also thanks them for all information and great ideas they have shared with her and their colleagues. Now she has a good idea on what she will bring up at the next executive group meeting.

When walking back to her office she thinks through the day and she wonders how Gambro's next brand strategy or strategies should be…

[101] *Kidney Therapy*, Baxter annual report 2000
[102] *Global strategy*, Baxter annual report 1999
[103] *Kidney diseases*, Baxter annual report 1999

Management Challenges for the future! Example: Gambro/Sweden

Part 2d CTO

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Carl Häggquist, the chief of Research and Development stays for a minute in the conference room to chat with Mr Drapkin. Mr Drapkin is enjoying one of Carl's creasy stories and the discussion from the meeting earlier is long gone. They leave the room together and says goodbye when walking in different directions outside the unisex toilet. Carl is heading back to his office and on the way he stops and picks up a paper lying on the floor. It is the paper he wrote to the employees to inform them about what has happened so far after the restructuring program at Research and Development department.

The paper

Since the restructuring in 1999 Gambro has streamlined its research. It has resulted in a more efficient research organisation, with a more clear division of responsibilities between different parts of the company. The central Corporate Research department is concentrated with long-term research as the business areas have direct responsibility for product development. There is also a strong focus on system-oriented work methods involving close cooperation between clinical, marketing and research operations.

In 2001 research activities at Gambro were focused on supporting the company's strategic development work. The aim was to find cost-efficient forms of cooperation and new business opportunities at the interfaces between the company's different product and business areas.

During 2000 Gambro invested 533 MSEK in Research and Development and in 2001 it increased, to a total of 618 MSEK. About 70 people work in the central research department and one-third of who hold doctoral degrees. [104]

Gambro's patent department works to protect the results of the company's investments in Research and Development. Innovations that possess strategic value to the company should be identify and protected by obtaining a patent, therefore they work continuously with identifying these areas.[105]

He starts to read further down in the text, about the company's core expertise

For Gambro to achieve its core purpose: to save lives and improve the quality of life for the people served by the company, research always has been a prerequisite. Gambro's core expertise is in the following areas:

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[104] *Research*, Gambro Annual report 2001
[105] Research - *Patent-related issues,* Gambro Annual report 2001

- Dialysis fluids,
- Quality assurance of dialysis care,
- Biocompatible materials and fluids,
- Sensor and information technology,
- Separation technology,
- Blood- and cell-based solutions and
- Treatment systems

Mr Häggquist finishes the paper and starts to walk again in the corridor towards his office. On the way he hears his dear colleague and friend, Mr Hagert chattering with someone in the laboratory. So what are you two talking about, says Mr Häggquist when he walks throw the door. Oh I'm just telling the new laboratory assistant about the organisation of the Renal Care Research and our ongoing projects. So interesting, and I need to refresh my memory concerning the projects. Please do continue, says Mr Häggquist.

The renal care research

The research organisation is divided in three basic areas of expertise:

- Treatment Systems Research in Lund, Sweden and Lyons, France.
- Medical & Biological Research in Hechingen, Germany and in Lund
- Membrane & Device research in Hechingen.

The projects at Gambro always focus on customers and their needs and current ongoing project at Gambro are:

- **Mapping of the Dialysis process**, the process is complex as it involves a close interaction between people and technology. All the components (the medical aspects, products and work flows at the clinics.) involved in the treatment process are to be systematically mapped. Gambro's aim is to achieve a streamlined treatment process with as little variation in quality as possible.[106]
- **Handling of ancillary equipment,** to each dialysis session a number of blood lines, bags and other items of equipment must be prepared and connected up before the treatment can begin. The new systems have simplified handling and the result of this is that all the actual dialysis treatment has become smoother and less time-consuming for both personnel and patients.

[106] Research - *Current research at Renal care*, Annual report 2001

- **Sensors, biofeedback and decision-support systems,** the purpose of the research are to develop systems that automatically collect data from the treatment system and use this information during dialysis treatment. During the year focus was on examining how IT systems could be used to assist patients at home using peritoneal dialysis. With this Gambro wants to achieve an optimally individualized and cost-efficient treatment process regardless of where the patient is located.
- **Biocompatible materials and dialysis fluids,** Gambro wants to continuously improve the biocompatibility of products, which is the ability to subdue the body's reactions to foreign materials and fluids.
- **Alternative separation methods,** conventional methods for separating blood components are based on membranes and centrifuging. Several prototypes for this type of separation, i.e. new method at Gambro based on other properties of molecules and cells than size and weight, were evaluated during 2001.[107]

Oh now I don't have the time to listen anymore, thanks for letting me join your discussion. Mr Häggquist turns to the laboratory assistant and says, good look to you and I'll hope you will enjoy your time working at Gambro. Now I'll have to prepare myself for the next executive group meeting and I'll see you later Mr Hagert. He rushes throw the corridor and give a hello and smile to everyone he meets on his way. At the end of the corridor Mrs Lander grabs his arm and he stops. You wanted me to research on how the competitors are pursuing their R&D. So here is the report, says Mrs Lander and hands it over to him.

The two greatest competitors

- **Fresenius Medical Care**

At Fresenius Medical Care the R&D is focusing on the core competences of the respective business segments. These are[108]: dialysis and other extracorporeal therapies, nutrition and infusion therapies, transfusion technology, absorber technology and immune therapy, infusion technology

Innovations for Fresenius mean maintaining life. Innovations are the prerequisite to be able to help sick people effectively. The company develops products and therapies based on their knowledge about extracorporeal blood treatment and the immune system. According to Fresenius this results in optimum care of the patients, better treatment and an improved quality of life. For the company the innovations are the corner stone of their corporate strategy – *the foundations of economic success.*

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107 Research - *Current research at Renal care*, Gambro Annual report 2001
108 *Research and Development,* Fresenius Annual Report 2001

Fresenius do not only develop products, they also focus on optimizing or to develop new types of therapies, treatment methods and services. [109] The main research locations are in Europe and production-related development work also takes place in the U.S.

In 2001 Fresenius increased their expenditure on R&D to € 123 million, previous years figure of € 114 million. Exhibit 1 is showing how the expenditure was divided between the business segments. At Fresenius Medical Care the expenditure on R&D in dialysis amounted to € 40 million.

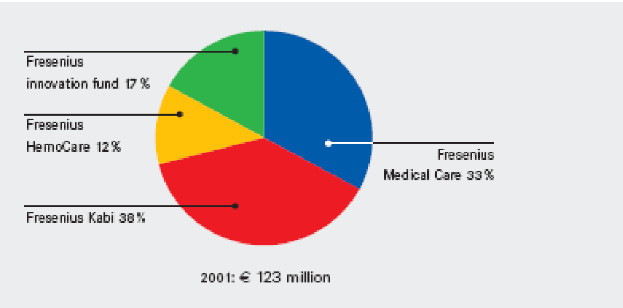

Figure 1, Expenditure on R&D by the business segments. [110]

Fresenius Medical Care continued its work on R&D projects in the fields of hemodialysis and peritoneal dialysis. A process was developed to determine the individual dry weight of dialysis patients. The most important aim of the dialysis treatment is to eliminate uraemic toxins as well as to achieve a physiological balance of the fluid status by determining the optimum target or dry weight of the patient. If the fluid balance is disturbed it can results in over-hydration which is one of the main causes of hypertension and serious cardiovascular diseases. The new process enables the intra and extra-cellular fluid volume to be determined precisely. The current fluid status is also determined and it supplies clinical data on the nutrition status of the patients. The development of products and system for acute dialysis was another focus of their development work. MultiFiltrate an acute therapy system offers all therapy modes for acute dialysis, which has been introduced in Germany. It is specially formed to adapt the condition in the intensive care. [111]

The R&D at Fresenius Medical care is aimed at offering individual, optimum therapeutic processes for the patient, based on the principles of reliability, efficiency and user-friendliness. [112]

- **Baxter International Inc.**

In 2001 Baxter invested $1.2 billion in R&D and capital expenditures and expects to increase its spending in this area by 20 percent to $1.4 billion in 2002. [113] Baxter collaborates with start-up

[109] *Research and Development,* Fresenius Annual Report 2001
[110] ibid
[111] ibid
[112] ibid

companies and other organisations to increase the safety and availability of critical therapies. The Baxter's experience in manufacture and commercialization of products and therapies is often combined with another organisation's exploratory research and other complementary resources.[114] One example is the collaboration with the International Society of Nephrology to promote scientific advancement in the field of kidney diseases. Together they launched Renal Discoveries, a program that embodies Baxter's commitment to improving the lives of patients with chronic kidney diseases. It provides needed resources that ensure continual innovation, exploration and application of vital research to expand knowledge about kidney diseases and its treatment.[115]

Mr Häggquist finishes reading the report sitting in his office as another one of his colleagues enters the room. I heard about the executive group meeting and I thought it would be a good idea if I told you about how we at Gambro R&D works and cooperates within the organisation and with universities, says Mr Crona. I was just going to send you an e-mail, it's your area of expertise here at R&D, says Mr Häggquist and Mr Crona starts to explain for him who...

Closeness to the universities and financing research

Gambro is striving to be a world leader in knowledge building, innovation and creative development within their fields. The future development and value-creating capacity of the company's operations are closely linked to the research expertise. The strength of Gambro in the research area is a knowledge-intensive culture in close interaction with clinical operations as well as an extremely strong external network. The research personnel have ongoing contact with clinical activities through "Therapy Groups" in Europe and the U.S. Gambro's researchers collaborate with physicians, nurses and hospital technicians to evaluate new treatment concepts and ideas. To ensure continuous feedback between research activities and customer needs the researchers has an ongoing cooperation with the marketing departments. Gambro has collaboration with various universities and through this the company participates in a number of projects leading to doctoral dissertations. Gambro supports 20 prominent universities in Europe and the U.S. Examples of how Gambro contributes to new innovations through dialogue with researchers in the academic world and specialist in the medical-technology field.

1. At the University of Heidelberg in Germany an ongoing project is focusing on kidney disease and various aspects of peritoneal dialysis.

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[113] *Expanding Manufacturing Capabilities and Technological Expertise*, Baxter Sustainability annual report 2001
[114] *Collaborations and partnership*, Baxter Sustainability annual report 2001
[115] *Supporting scientific discoveries and collaborative research*, Baxter Sustainability annual report 2001

2. The Stuttgart University and the Frauenhofer Institute, in Germany, together with Gambro is conducting a research in nano-biotechnology, focusing on new membranes structures.
3. Cooperation with Twente University in the Netherlands is to find new and less expensive production processes for dialyzer membranes.

After Mr Crona has left the room and Mr Häggquist is alone again he thinks through the day, the meeting and all the information and data his colleagues has gathered or discussed with him. The most interesting of the day's events was when Mr Crona told about the universities and their work there. I wonder if and how we could cooperate more with them, he says loud to himself.

Management Challenges for the future! Example: Gambro/Sweden

Part 2e CSO

This is a Multidiscipline case containing one main case and five sub cases:

Part 1; General information about Gambro

Part 2a CEO; Additional information for the Executive Management
Part 2b CHRO; Additional information about Human recourses
Part 2c CMO; Additional information about Marketing and Sales
Part 2d CTO; Additional information about Research and Development
Part 2e CSO; Additional information about Strategy Development

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This in an Educational case written by Johanna Herrlander and Ann-Sofie Lundberg as one part of our master's thesis, which is the conclusion of our Master of Science degrees in Biotechnology and Engineering with completion in Industrial Management and Engineering (Johanna Herrlander) and Industrial Management and Engineering (Ann-Sofie Lundberg) at the Faculty of Technology, Lund University. This multidiscipline case is a semi-functional case which means that is contains parts that are added by the authors. The case has been quality certified by Gambro's head of Research, Kristian Enkvist. Academic tutor was Carl-Johan Asplund, Lecturer at the department Of industriel management and logistics

Ann Norell, chief of Strategic Development walks back to her office with a purposeful manner. Half way to there her phone rings. She answers immediately. Hello sweetheart, mum is on her way. Mrs Norell's son Algot, who is five years old, says I want to play with Tom this afternoon. His mum said we could be at his place, please mum can I. Of course darling, I will pick you up in an hour and a half, mum needs to go now, love you says Mrs Norell. Love you too say Algot. Mrs Norell places her mobile back in her pocket and enters her office. She quickly puts down her notes from the meeting. She writes an e-mail to all her staff members, briefing them about the meeting and asking for their contribution. The fist e-mail arrived just 15 minuets later. The e-mail was attached with a file, Gambro Strategic Development. Oh, it's the document for the new employees working at Strategic Development; I'll better read it to make sure they got everything right, thoughts Mrs Norell to herself.

Gambro Strategic Development

Gambro Strategic Development was established at the end of 2000 as part of the drive to strengthen the Group's business. It has two main roles:

- To support the business areas in their efforts to implement existing strategies,
- To develop foundations and recommendations for long-term strategic decisions made by Group management and the Board of Directors.

This means that the Strategic Development is involved in driving the strategic planning process and managing the portfolio of strategic investments.

The principles of Gambro Strategic Development are that all investments should be fully in line with Gambro's vision. Another principle is that a good balance should be maintained between short-, medium- and long-term investments and the last principle is that all development work should be based on existing know-how and assets such as technological platforms, scientific knowledge or production expertise.

Gambro Strategic Development can also assist the three business areas if asked, for example with competitor analyzes and business development. Each business area is thus responsible for developing and implementing its own strategies. A project where this is done is the cooperation between Gambro Strategic Development and Gambro Renal Products. The project is to identify prospective partner companies in Japan. The ambition is to extend the business area's geographic coverage. The Japanese market accounts for one-fourth of all dialysis worldwide and therefore represents an attractive prospect.

The group is to perform a systematic exploration of future new growth areas. This new areas should not fall within any of the presents areas but should be based on existing know-how. They are also responsible for long-term scenario planning, threats and opportunities for the future.

The annual planning process is based on a value-based model (VBM). All value creation in this model derives from three sources; profitability, growth and efficient use of capital. For strategic planning a balance between these three factors are to be found in order to create the greatest possible future value.[116]

> *They have done a great job, thought Mrs Norell after she had read the document. The day was soon to be over and she was looking through some files, when a new e-mail arrived. This time it was from Mr Forssell, and the file was called - The dialysis market and drives.*

The Dialysis market

The market has been characterized by consistent growth over the past few years, a growing annual rate of 6-7 percent. As a consequence of the increase in general life-expectancy, a rise in the incidence of illnesses that can lead to chronic kidney failure and better treatment methods the trend of growth will continue. The rates of chronic kidney failure may vary by region due to genetics, differences in lifestyle, transplant policies and financial constraints of the healthcare systems. The only alternative to dialysis treatment so far is transplantation, which is only possible for about 5 percent of the patients. Research concerning transplants from different species, e.g. pig kidney to human recipient, i.e. xeno-transplants while not have an effect on the market for another 10-15 years.[117]

The growth of patients with End-Stage Renal Diseases, (ESRD) was approximately 7 percent in 2001. Of the 1.5 million ESRD-reported patients, 1.1 million undergo either hemo- or peritoneal dialysis on a regular basis.

Studies show that...

Studies show that the access to treatment is still limited and a number of patients with terminal renal failure have not received treatment yet. This shows that it is a global variation which is influenced by national economic strengths. [118] Another study demonstrates that once a certain standard of living has been reached other factors come to play a more dominate role to explain the differences between countries. These factors may include age structure of the population, incidences of diseases associated with renal failure and dietary habits.[119]

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[116] *New phase in strategic development*, Gambro annual report 2001
[117] *Dialysis market growth of the dialysis industry,* Gambro annual report 2001
[118] *Dialysis market, end-stage renal disease – a global perspective*, Gambro annual report 2001
[119] *Dialysis market, end-stage renal disease – a global perspective*, Gambro annual report 2001

The global dialysis patient population can be divided…

The global dialysis patient population can be divided into two categories, where one group stands for 60 percent of the dialysis patient population.

- 60 percent is treated in just five countries (USA, Japan, Germany, Brazil and Italy) and is representing less than 12 percent of the world population.
- 40 percent can be grouped into
    - 20 percent, the 10 highest-ranking countries of dialysis patient population and is representing 29 percent of the world population.
    - 20 percent, 100 different countries representing approximately 50 percent of the world population.

Within these categories significant variations in prevalence of treated patients can be found.[120]

When closing the e-mail another e-mail pops up. Her colleagues are really ambitious, she thinks and she is proud of being their chief. The next e-mail arrived is from Miss Taxter and concerned Profits and future aspect.

Profits and future aspect

Healthcare is often paid for by governments and financed through taxes and/or social security contributions, or private health plans. But this is not the case in many developing countries where dialysis patients are obliged to finance their treatment on their own or insure themselves privately with limited financing from government or charity institutions. Healthcare spending is absorbing an increasing portion of GDP[121], from 6-10 percent in the developed economies of Europe, Asia and Latin America.[122]

Future aspects

There is a growing awareness that better care quality delivered in the dialysis unit reduces overall healthcare spending for dialysis patients. Better care quality reduces the need for supplementary treatment. As the economies in emerging markets create more wealth and allows an increasing number of patients to gain access to life-saving dialysis treatments the expenditure on healthcare are going to grow. Sixty percent of total patients in the U.S. are treated by the five biggest providers of dialysis care, all privately-run dialysis chains. According to FMC (definition? Fresenius Medical care?) the

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[120] *Dialysis market, end-stage renal disease – a global perspective*, Gambro annual report 2001
[121] *Gross Domestic Product* - The GDP of a country is defined as the market value of all final goods and services produced within a country in a given period of time. www.wikipedia.se ,25-05-07
[122] *Dialysis market growth of the dialysis industry*, Gambro annual report 1999

share of private chain providers will increase from currents levels of 5 percent to around 30 percent, creating further business opportunities and enabling FMC to expand their clinic network.[123]

Profits opportunity

When using a dialyzer in treatment of patients new tubes and renal filter are being used each time and every single patient who has chronic kidney failure is doing the procedure three times a week. Therefore companies within renal care can make profits here and the articles of consumptions are 85 percent of the value of the renal market. Gambro is great on articles of consumptions and when selling the machines to customer Gambro commit them to buy articles of consumptions of them. The PD demands a lot of single use material and therefore 18 percent of the market value comes from here, hence only 10 percent of the patients are treated with the Peritoneal Dialysis (PD).[124]

Gambro has a strong position on the Western European market which is 25 percent of the world market. The Japanese market is of the same size as the Western European market, where Gambro is the biggest player of the non-Japanese contenders. At the American market Gambro's market share is 12 percent which is 30 percent of the world market. Baxter is the company, which dominate the market with 30 percent market share. In the Western European market the biggest competitor is the German company, Fresenius Medical Care (FMC).[125]

High market share do not have to mean greater profitability. Profitability can be achieved by cost-efficiency. Another way to higher profitability is constant change or to develop products, which means that higher margins can be taken. It may be an expansive process, which only gives positive results under a short period.[126]

> *Mrs Norell closes the door to her office and walks to her car. When she's walking out of the company building she gives a thought to what could be Gambro's next step in the future, e.g. new markets to entry. As she drives away to pick up her son another e-mail arrives to her inbox.. This time it is from the specialist of new markets, Mr Black. The e-mail is called, "New markets to explore".*

The Asian Healthcare Market

The healthcare in Asia will grow about two and one half times the growth rate in the West over the next 20 years and the overall quality is getting better. As the wealth in Asia is increasing Asians are living longer and diseases of the poor are being replaced by the diseases of the West, i.e. cancer,

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123 *Dialysis market growth of the dialysis industry*, Gambro annual report 1999
124 *Bra företagsköp lyfter Gambro*, Veckans affärer, affärsdata, 04-05-07
125 ibid
126 ibid

diabetes and heart diseases. Today many people in Asia are willing to pay for better healthcare. It has been predicted that Asia, excluding Japan are going to spend on healthcare $225 billion in the next 3-5 years. But most Asians today rely on state-subsidized care; more than 130 millions can pay for some type of private healthcare. The private healthcare is going to grow dramatically the next ten years and commanding over 60 percent of the overall healthcare sector. Globalization of healthcare will continue to grow at full speed into the 21st century. There is a need for the global companies to source parts, manufactures, and services and perform R&D throughout Asia in order to maximize economies of scale, get closer to their customer needs. Regulatory issues will continue to be harmonized globally. For example, clinical trials performed in the U.S. and/or Europe in time will really be utilized in Japan. It is going to be more common with medical alliances between business groups and medical institutions.[127]

The African healthcare market

The African healthcare market have the last couple of years been improved. The improvement is in the quality of hospitals and the availability of qualified doctors. This has done possible because many African countries have gone from traditional medicine to modern and well-structured healthcare systems. The African countries can today also better meet the growing demand for quality healthcare services. The industry is in African characterized by a division between the private and public sectors both in terms of facilities and funding. HIV/AIDS may be the biggest problem facing the public sector because it will continue to place considerable strain on the public health system. Within both public and private hospital sectors in Africa all government efforts are used to make healthcare more accessible and affordable for the general population of Africa.[128] Thus, there are those African countries that still lack access to the most basic healthcare. Factors that make it difficult to support the already fragile health infrastructure are political instability and deep poverty. The entire family's means of economic survival can be cut off if one of the key members in the family is sick. Many African countries deal with complex health issues ranging from poor maternal and child health outcomes, famine, malaria, malnutrition and the devastation of the HIV/AIDS pandemic barrage the continent.[129]

At the African healthcare market there exist opportunities for supply of a wide range of hospital equipment, instrumentation, machinery and allied medical products. Most of the equipments and products are being imported from countries around the world. The market is price-sensitive and African

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[127] *Overview of Asia, Healthcare Markets and Regulatory issues in the region, Key Future Trends in the Asian Healthcare Markets,* (August 2001), www.pacificbridgemedical.com, 14-05-07, Published by Pacific Bridge Medical – Asian Medical Publications.

[128] *Healthcare in Africa – New hospitals in Africa provide quality healthcare*, www.Africa-Business.com, 14-05-07

[129] Director relief international, *Africa*, www.directrelief.org, 14-05-07

buyers are always looking for better quality at lower price.[130] The key market for healthcare products is in South Africa although there are significant markets outside of Africa's largest economy. Algeria, Egypt, Nigeria, Tunisia, Morocco, Libya, Kenya, Ghana, Senegal, Cameroon and Tanzania all offer opportunities for suppliers. This is at two levels, the first being as a direct supplier of drugs and equipment into the market, but also importantly as a supplier of inputs into the domestic industries of several countries, as in North Africa, Nigeria, Ghana and Kenya.[131]

The Middle East Healthcare Market

In most of the Middle Eastern countries there have been improvements within healthcare. The better healthcare is interrelated with other factors such as food and nutrition, sanitation, water supply, literacy and income distribution. The main provider of healthcare in the region is the government because this is seen as a public responsibility. The countries in the region can be divided into three groups:

Countries characterized by substantial capital, rapid development and small indigenous health professionals, such as Saudi Arabia, Kuwait, United Arab Emirates, Qatar and most Gulf states.

Countries characterized with less capital, higher population, a quantitatively larger medical infrastructure, and more trained medical personnel, such as Iran, Lebanon, Jordan, Egypt and Turkey.

Countries characterized where extensive medical service plans have been halted or greatly decreased in scope because of civil strife or war, such as Iraq.

The healthcare sector is rapidly expanding. This will have an impact on the economies and the lives of people of the region. According to executives of the medical exhibitions and conferences to be held in the region the market is one of the fastest growing and most attractive for the world’s hospital equipment and services companies. The Middle East region has a total expenditure on healthcare including private hospitals amount to US$39 billion.[132]

The next morning Mrs Norell is back int her office. She always starts here morning drinking her black cup of coffee, while she is opening her mail box. This morning she spots the e-mail from Mr Black. Maybe this can be something for the future of Gambro, she says after finished reading the e-mail. Or should Gambro take into consideration other future aspect when investing in long-term project she mutters to herself.

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[130] *Healthcare in Africa – New hospitals in Africa provide quality healthcare*, www.Africa-Business.com, 14-05-07

[131] *African healthcare sector shows renewed growth*, Biz Events Exhibitions, www.bizcommunity, 14-05-07

[132] *Australian Government – Austrade*, www.austradehealth.gov.au, 14-05-07

Chapter 4 - Instruction's Manual

The instructor's manual will give the reader an insight on how the multidiscipline case can be used in an educational simulation. The manual will describe; the target group for the case, the learning goals for the case learning experience and also define the case difficulty level. Characters and assignments are carefully described here.

Instructor's Manual
for the multidiscipline case

Management Challenges for the future!
Example: Gambro/Sweden

This is a Multidiscipline case containing one main case and five sub cases:

Part 1; General information about Gambro

Part 2a CEO; Additional information for the Executive Management
Part 2b CHRO; Additional information about Human recourses
Part 2c CMO; Additional information about Marketing and Sales
Part 2d CTO; Additional information about Research and Development
Part 2e CSO; Additional information about Strategy Development

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This in an Educational case written by Johanna Herrlander and Ann-Sofie Lundberg as one part of our master's thesis, which is the conclusion of our Master of Science degrees in Biotechnology and Engineering with completion in Industrial Management and Engineering (Johanna Herrlander) and Industrial Management and Engineering (Ann-Sofie Lundberg) at the Faculty of Technology, Lund University. This multidiscipline case is a semi-functional case which means that is contains parts that are added by the authors. The case has been quality certified by Gambro's head of Research, Kristian Enkvist. Academic tutor was Carl-Johan Asplund, Lecturer at the department Of industriel management and logistics

Summary

It is of great importance to use the Case together with this instruction's manual. Through the manual the case writers are able to communicate their educational thoughts and methods in order to ensure the expected learning outcome of the case. The objective for the use of the manual is that after working through this case with the following material presented in the instructor's manual the students will achieve a higher level of managing decision-making, team cooperating skills and communication skills. They will also gain an understanding for the work and challenges that might face an executive management.

This case is written about Gambro and the year is 2001. Gambro is a medical technology and healthcare company, which makes dialysis products, operates dialysis clinics and supplies blood bank technology worldwide. Gambro is one of the three world leaders. In this case you will get to know the company with focus on Renal Care.

The MD case contains one main case containing general information about Gambro and five sub cases. The exercises will run for two seminars. The main case will be the foundation of the discussion during the first case seminar, were the students will take on different roles from an executive group. The main issue of the case is; which are the future management challenges facing Gambro? After the first case seminar the students will receive additional information from their departments, sub cases for the different roles. These will be solved and add more information to the original issue. Finally the students are to make a decision as the executive group concerning the main issue.

The original target group for this case is students studying their last year of their master of engineering degree at the Faculty of Technology at the University of Lund, with a specialisation with in business administration called "business and innovation".

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Introduction

This is an instructor's manual for the multidiscipline case - Management Challenges for the future! Example Gambro/Sweden. The objective for the use of the manual is that after working through this case with the following material presented in the instructor's manual the students will achieve a higher level of managing decision-making, team cooperating skills and communication skills. The students or case participants will also gain an understanding for the work and challenges that might face an executive group. It is of utmost importance that you, the case instructor has read the cases in order to run this case exercise. Answers to the case will not be given here. It is not the answers of this case that is of interest but the discussion leading to the answers. Each group of students may come up with different answers and discussions leading up to them. Therefor we recommend you, the case instructor to read through the MD case.

Target group

The main target group for the case is students studying their last year of their master of engineering degree at the Faculty of Technology at the University of Lund, with a specialisation with in business administration called "Business and Innovation". In the end of the specialisation Business and Innovation the students are taking the course Industrial Management. This case was developed in order to be used during this course. Another target group could be other students studding business administration and technology within another context, e.g. Technology Management students studying at the Faculty of Technology at the University of Lund and other Industrial management and engineering students from different schools. Here follows a list of literature containing theories and concepts in which the students should be familiar with when solving this case.

Expectations on the participants

The cases high conceptual level is demanding a lot from the students. Preferably they have been using cases before and they have some knowledge of business economics. The main target group for this case is students taking the course Industrial Management at Faculty of Technology at the University of Lund. In order to be able to take this course the students need to have completed two out of three courses that apart from Industrial Management are included in the specialisation "Business and Innovation". They also need the knowledge from the basic courses in business economics.

Examples of literature that the students should feel familiar with in order to be able to solve case and to achieve the learning goals will follow;

- Johnson, G & Scholes, K. Exploring Corporate Strategy. Prentice Hall, 1999
- Lehmann, D.R. & Winer, R.S.: Analysis for Marketing planning, McGraw-Hill

- Dodgson, M: The Management of Technological Innovation, Oxford University Press, 2000, ISBN 0-19-877535-0
- Matheson, D and Matheson, J: The smart organization, Creating value through strategic. R & D. Harvard Business School Press, 1998 ISBN 0-87584-765-x

Learning goals

The use of this case will foster further development of insights into the participant's own strengths and weaknesses and allows for a profound personal growth. Students develop skills of truly professional fieldwork when repeatedly obtaining the opportunity to identify, analyse and solve different issues in diverse settings by using cases. Cases enable the participant to learn by doing and to learn by teaching others as well as engaging them in the process of learning how to learn. Cases are also an ideal tool when testing the understanding of and the ability to apply theory into practice. [133]

One of the learning goals for this case is that the students should develop an understanding for decision-making in a company environment. By being active and attending the case seminars the students should feel more secure in their skills of oral presentation, founded decision making and their ability to apply theory. Another learning goal is to learn how to cooperate, discuss, analyse and solve problems together. The use of this case shows the participants how work can be planned and organised, how systems operate and how organisations compete.

[133] Learning with cases (1997)

Level of difficulty

The case difficulty cube by J. Erskine and M Leenders, 1997 is a model in which the educational challenge of this case will be classified in different dimensions on an increasing difficulty scale. The difficulty scale of each dimension has three degrees. The further out a dimension is classified the more of an educational challenge that dimension contains. See exhibit 1.

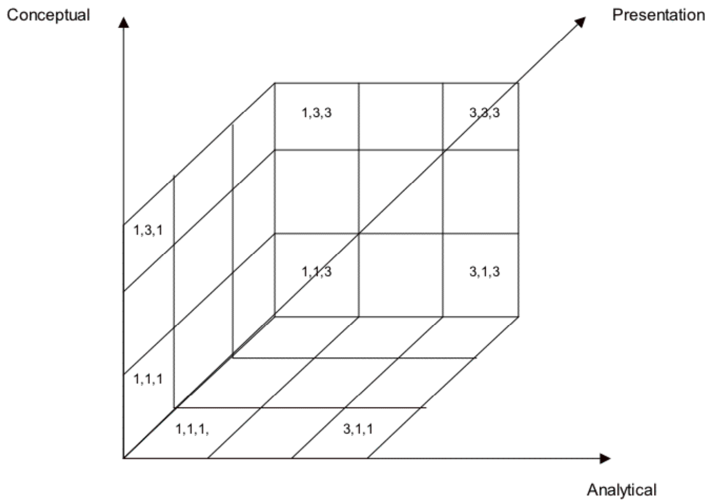

Exhibit 1 *The level of difficulty cube*

Analytical Dimension

The analytical dimension establishes the nature of the case readers' decision-making task. By choosing a more difficult dimension students are forced to reason more clearly and logically when searching through the case data. This case is placed on the second degree of difficulty. The final decision taken is excluded in the second degree. Reading the case together with the assignment the participants will receive the issue is presented to them. The case readers' task is to analyse the situation, generate additional alternatives and make a decision.

The Conceptual Dimension

The conceptual dimension has three degrees of difficulty in two different aspects. The first one has to do with how difficult the concept or theory is in itself. The second aspect relates to the number of concepts that need to be used simultaneously. The conceptual dimension of this case is at the second degree on the scale. The participants need to know and apply several theories, models and concept to be able to motivate their task conclusions. The theories, concepts and models they are to use should be familiar to them from their education in Industrial Management and Engineering.

The Presentation Dimension

This dimension has to do with how the information is presented in the case. This case is a multidiscipline case, which makes the presentation of the information complex. The case is long and in order to solve the sub cases relevant information need to be found in the main case and in the sub cases. The information presented is unorganised and not all information is relevant. This puts the case on a level three of difficulty.

Learning situations

This case will involve different learning situations for the participants (the students). These situations will be described here. To start off the students will receive different material in the different situations, which are described here. Secondly the participant's task is described and finally the learning outcome of each learning situation is explained.

The case leader role

The case leader (the teacher) will take on the observing role through the entire case process. They are to assist the students by answering questions when needed.

Amount of participants

The class running the case can be from 5 to 30 participants. The participants will form groups of five in learning situation two (see further down) and everyone will be assigned a role. There should not be more than five groups all together for one case session. If the class are unable to form groups of five and ends up with participants without assigned roles these will become observing consultants, see characters further down.

One; Written individual preparation 1

Material

1) The main case, Management Challenges for the future: Example Gambro, Part 1
2) Appendix IM 1, Getting to know Gambro

The students will receive the main case together with an instruction of their individual preparation, see appendix IM 1. Preferably three to seven days before the first case seminar. The instruction includes a brief introduction on how to approach a case in order to make the individual preparation as effective as possible. The short cycle process, from the book Learning with cases by J. Erskine and M Leenders are presented together with the assignment and a short presentation of the student's role as a member of the executive group.

Participant's task

The participant's task is to read the instruction, getting to know Gambro and the main case, Management Challenges for the future: Example Gambro, Part 1. They are to do the assignment described in the instruction individually. The students will sort the case information, apply theories, concepts and models and identify management challenges facing the company.

Learning Outcome

When working through the individual preparation students practice their ability to analyse and sort information. They practice their ability to use models, theories and concepts from their education in Industrial Management and Engineering. By completing the individual preparation students gain confidence in their ability to identify issues with the use of their education in a complex setting. The students will develop skills of professional fieldwork when obtaining the opportunity to identify, analyse and solve different issues in diverse settings writes J. Erskine and M. Lenders in the book Learning with cases. Working through and completing the individual preparation, also prepare the students for the case seminar. Through applying theories and techniques learned in order to make a correct and useful analysis the student's application skills are improved[134].

Two; Small group discussion with roles - 1

The learning situation starts with the participants forming groups of five or six. Each participant in each group will receive one instruction each. Here different characters are described. Preferably these are handed out randomly.

Material

1) Appendix IM 2-7, Instruction 1 for CEO, CHRO, CMO, CTO, CSO and Observing Consultant

Role player's task

The case participant's are to take on their role as one of the executive management members. They are to play the role during an executive meeting. The CEO will lead the discussion. Everyone will give a presentation of his or her individual work. Their roles have specific issues that they also need to consider, which are revealed (för ni avser väl inte attt smäda varandra?)during the meeting. In the end the identified challenges are to be prioritised. This prioritising needs to be motivated and all participants need to cooperate. The three most important management challenges are to be found and motivated.

Observing consultant's task

The observing consultant's task is to observe the different discussions and behaviour within the different executive management groups.

Learning outcome

By taking on an executive role the different participant's will be focusing on different issues. Participants taking the role and responsibilities of specific people in specific organisations are given

[134] Learning with cases (1997)

the chance to practice management in an imitation environment, with minimum risk involved writes J. Erskine and M. Leenders in Learning with cases. The different roles will contribute to a dynamic discussion where everyone needs to be involved. This encourages students to communicate debate and speak for their role. They also need to analyse their different individual works together, which will increase their analytical and cooperation skills. By making the group prioritising the different challenges they will learn that trade-offs need to be made and everyone will not be satisfied. Their roles have specific issues that they also need to consider, which are revealed during the meeting. The motivation of the priority forces the students to consider different outcomes and the effect they might have. This increases their ability to make motivated decisions.

Three; Individual preparation 2

Materials

1) Management Challenges for the future: Example Gambro, Part 2 HR, SD, M&S, R&D, E
2) Appendix IM 8, Getting to know the department, HR, SD, M&S, R&D and Getting to know the departments (E)

The assigned roles from learning situation three will follow the participants through the following learning situations. This means that the CHRO's will receive *Getting to know the department HR* together with the sub case, Management Challenges for the future: Example Gambro, Part 2 HR and the CSO's will receive *Getting to know the department SD* together with the sub case, Management Challenges for the future: Example Gambro, Part 2 SD and so on. The CEO's will receive *Getting to know the departments* together with the sub case, Management Challenges for the future: Example Gambro, Part 2E. The observing consultant's receive all the Part 2 cases together with their instruction.

Role player's task

For the preparation for the second case seminar the participants are to read the case and try to identify the issues facing the department.

Observing consultant's task

They are to read all part two cases and prepare for the next observing session.

Learning outcome

The participants are to take on a role as a chief officer with all the responsibilities that that includes. The different voices from the case characters are to be considered. As the chief officer the participant need to make a decision on which issues he or she are to taking to the executive group.

Four; Small group discussion within role groups

At the case seminar students will form groups with all that has taken on the same role. For example all CHRO's are in one group and all CEO's in another and so on.

Material

1) Appendix IM 9 Instruction for the department meetings

Role player's task

All groups are to continue their task from the individual preparation 2. They are to analyse and decide which issues they need to discuss at the next executive meeting. They also need to motivate their conclusions.

Observing consultant's task

The task is to observe the different discussions.

Learning outcome

Here participants get the opportunity to help each other and to learn from each other. In the small group all participants obtain the opportunity to speak. They need to analyse and solve the issue together as well as make a decision that everyone is comfortable with. This will contribute further so their communication skills and their ability cooperate.

Five; Small group discussion with roles - 2

Now they are gathered again in their executive groups to finally make a decision on which the most important management challenges are.

Material

1) Appendix IM 10-12, choose one and give to CEO, 13-16, Instruction 2 for CEO, CHRO, CMO, CSO, CTO

Role player's task

Here the executive group meets for the last time. The CEO will lead the discussion. Everyone will give a presentation of his or her department's opinions. During the meeting the CEO have specific environmental change concerning Gambro's future that the executive group also need to consider. These are revealed during the meeting. In the end the identified challenges are to be prioritised and the two most important needs to be found. The choice of the two most important and the priority of them needs to be motivated and all participants need to cooperate.

Observing consultant's task

Here the observing consultant/-s including the case leader is/are to observe the discussions in the different groups and try to find out the essence of the discussions. They/he/she should prepare the final large group discussion where everyone is participating. The observing consultant/-s should identify the different management challenges that the groups have decided to be the most important. They are to present these to the large group and conclude the whole case learning experience.

Learning outcome

Here the participants will learn the effect a crisis or a business environmental change might have on a company and its decisions.

Six; Large group discussion with executive management groups

Participant's task

Their task is to listen and contribute to the observing consultant/-s final conclusion.

Observing consultant's task

Their task is to lead the final discussion and present the case conclusion, the recommendations for the CEO.

Learning outcome

In the large group discussion the students are given the opportunity to a more public learning by teaching. In order to make the most out of the large group discussion the students ought to be active in contributing, listening, questioning and responding. Students active in the classroom discussion prepare themselves for the future organisational task standing ahead by improving their oral communication skills. In the large group discussion a complete understanding of the case is developed. If the case is not truly solved before this session here should be the place. The case instructor is leading the large group discussion.[135]

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135 Learning with cases (1997)

Time frame

Learning Situation nr.	Material to participants	Happening	Where?	Time for the task
1	One week before LS 2	Written Individual preparation	Home	1-3 h
2	At the start of LS 2	Preparation for taking on a role	University	15 min
2		Small group discussion with roles	University	30 min
3	One week before LS 4	Individual preparation	Home	30 min- 1 h
4	At the start of LS 4	Small group discussion within roles	University	20 min
5	At the start of LS 5	Small group discussion with roles 2	University	25 min
6		Large group discussion	University	10 min

Characters

Chief Executive Officer (CEO) Fredric Drapkin

Fredric Drapkin is the Chief Executive Officer (CEO) of Gambro Renal Care. Mr Drapkin is 35 years old and comes from Stockholm. He has been with the company for a couple of months and has not worked at Gambro before. He is sympathetic (ni menar sympatisk? Överväg ord som nice eller pleasant. Sympathetic har ibland en nedlåtande klang), experienced, ambitious and extremely positive. He is the kind of CEO that sees everybody. He is responsible towards the board and is keen to be prepared at all times. He is a natural leader, who listens to his co-workers and contributes to their discussions.

Chief Human relations Officer (CHRO) Per Malmén

Per Malmén is the Chief Human relations Officer (CHRO) at Gambro Renal Care. Mr Malmén is 54 years old and comes from Gothenburg. He has worked with Gambro for 15 years. He is careful, thoughtful, and ambitious and he has done a lot for the employees since he became CHRO. He has been extremely involved in the integrating process during the reorganisation and his aim is that the two company organisations shall become one. The CHRO is responsible for the employees at Gambro and puts their interest first.

Chief Marketing Officer (CMO) Louise Brännström

Louise Brännström is the Chief Marketing Officer (CMO) at Gambro Renal Care. Mrs Brännström is 42 years old and comes from Linköping. She has been working with Gambro for five years and during her years she has been working for Gambro in France for two years. She is outspoken, spontaneous and creative, but her colleges sometimes have trouble understanding her wild ideas. Because of her stubbornness and her expertise's her colleges appreciate Mrs Brännström greatly. She is responsible for the relations with the customers and puts their needs in the first room. She is also responsible for the sales offices, how need to deliver acceptable results.

Chief Technology Officer (CTO) Carl Häggquist

Carl Häggquist is the Chief Technology Officer (CTO) at Gambro Renal Care. Mr Häggquist is 61 years old and comes from Lund. He has been with Gambro for two years. He is intelligent, humorous and popular by his co-workers. When you enter Carl's office you will see piles of papers everywhere, numerous of used coffee mugs and his computer always running in the corner. Mrs Norell the CSO and Mr Häggquist the CTO are each other's opposites, which can effect their cooperation in the executive group. During their first and last development project together they drove each other crazy. Mr Häggquist is responsible for all research and development projects at Gambro.

Chief Strategy development Officer (CSO) Ann Norell

Ann Norell is the Chief Strategy development Officer (CSO) at Gambro Renal Care. Mrs Norell is 37 years old and comes from Stockholm. She has been with Gambro for seven years. She is pedantic, structured and controlling. She is the kind of person who welcomes challenges. Her colleges admire her cleverness her ability to stay focused at all times. She has some troubles understanding how unorganised people ever get anything done. Mrs Norell the CSO and Mr Häggquist the CTO are each other's opposites, which can effect their cooperation in the executive group. During their first and last development project together they drove each other crazy. Mrs Norell is responsible for the long-term effects of different projects.

Observing consultant's

The observing consultants are extern consultants from a well-known company with a great reputation. They are at Gambro to observe the work of the executive group.

Appendix

Appendix IM 1 Instruction for individual preparation - 1

Getting to know Gambro

We are welcoming you, a member of the executive group of Gambro Renal Care to the World of Gambro. As you know, and have been further acquainted with, Gambro Renal Care is facing a lot of challenges for the future. You as an important member of the executive group 2001 needs to be prepared for what is facing the company. For the executive group meeting to come, the CEO has asked for your contribution, because of your unique expertise. Your assignment before the meeting is to identify the most important challenges that Gambro is facing, using the models, theories and concepts from your education in Industrial Management and Engineering with focus on your specialisation in "Business and innovation".

How to approach a case, individual preparation

In the book, Learning with cases by J. Erskine and M.Leenders 1997, they talk about some important steps when reading a case and solving a case individually. These are to be used on any case and should be applicable. The case that we have constructed is a multidiscipline case and some of theses steps will be more relevant on the different discipline cases. Therefore we would like you to bare this in mind and use the steps you feel relevant in the situation.

The Short Cycle Process [136]

The purpose of the short cycle process is to get familiar with the case. It involves following steps.

7) (Skall numreringen var så här?)Read the first one to three paragraphs and the last one to three paragraphs
8) Ask yourself the following questions: How is the decision maker (who am I) and what is my position? What seem to be my problem, what is significant to my organisation? Why is this a problem, how did it became a problem now and why am I involved? When does the problem need to be solved, the decision made? How much time do I have to make the decision? How can I estimate the case on the case difficulty cube on the analytical and the conceptual dimension?
9) Look at the pictures, diagrams and figures
10) Read headlines and opening paragraphs
11) Read the first and the last part of each paragraph
12) Answer the assignment questions

[136] Learning with cases (1997)

Appendix IM 2 Instruction for CEO 1

Fredric Drapkin is the Chief Executive Officer (CEO) of Gambro Renal Care. Mr Drapkin is 35 years old and comes from Stockholm. He has been with the company for a couple of months and has not worked at Gambro before. He is sympathetic(se tidigare kommentar), experienced, ambitious and extremely positive. He is the kind of CEO that sees everybody. He is responsible towards the board and is keen to be prepared at all times. He is a natural leader, how listens to his co-workers and contributes to their discussions.

The board of Directors has asked Mr Drapkin to give an evaluation on Gambro's Branding Strategy on the next board meeting two weeks from today. As a result of the reorganisation this has become an issue for the company according to the Board of Directors. Mr Drapkin has found other strategic issues to consider therefore he has gathered the executive group for a strategic meeting. Attending the meeting are:

Chief Executive Officer (CEO) Fredric Drapkin
Chief Human relations Officer (CHRO) Per Malmén
Chief Marketing Officer (CMO) Louise Brännström
Chief Technology Officer (CTO) Carl Häggquist
Chief Strategy development Officer (CSO) Ann Norell

Mr Drapkin has identified a couple of important issues to discuss during the meeting in order to be able to give the board an evaluation later on.

Mr Drapkin opens the meeting (MR DRAPKIN SAYS): Welcome to this strategic meeting. I am meeting with the Board of Directors in two weeks. It is important for me to be prepared for this meeting and that your voices will be raised as well.

He will lead the meeting and discuss the following:
1) Ask colleges about their point of view. (Based on the case, individual preparation)
2) Discuss and analyse the priority of the different problems facing the company.
3) Ask colleges if they want to discuss something else during the meeting.
4) Decide which the three most important issues are. Motivate the chosen priority.

Mr Drapkin finishes the meeting by SAYING: Thank you all for your contribution, but I need more information. I would now like you to brief your staff members on the content of this meeting and find out their opinions and priorities. We will meet again in one week to further discuss these issues

Appendix IM 3 Instruction for the CHRO 1

You are now the now the Chief Human relations Officer (CHRO) at Gambro Renal Care, Per Malmén. Mr Malmén is 54 years old and comes from Gothenburg. He has worked with Gambro for 15 years. He is careful, thoughtful, and ambitious and he has done a lot for the employees since he became CHRO. He has been extremely involved in the integrating process during the reorganisation and his aim is that the two company organisations shall become one. The CHRO is responsible for the employees at Gambro and puts their interest first.

You have been gathered with your colleges in the executive group for strategic meeting, attending the meeting are:

Chief Executive Officer (CEO) Fredric Drapkin
Chief Human relations Officer (CHRO) Per Malmén
Chief Marketing Officer (CMO) Louise Brännström
Chief Technology Officer (CTO) Carl Häggquist
Chief Strategy development Officer (CSO) Ann Norell

You have prepared yourself for the meeting by identifying Gambro's problem areas. The aim of this meeting is to discuss these identified problem areas. You also have one thing that you want to discuss at the meeting; the integration between employees from Gambro and Hospal.

Appendix IM 4 Instruction for the CMO 1

You are now the Chief Marketing Officer (CMO) at Gambro Renal Care, Louise Brännström. Mrs Brännström is 42 years old and comes from Linköping. She has been working with Gambro for five years and during her years she has been working for Gambro in France for two years. She is outspoken, spontaneous and creative but her colleges sometimes have trouble understanding her wild ideas. Because of her stubbornness and her expertise's her colleges appreciate Mrs Brännström greatly. She is responsible for the relations with the customers and puts their needs in the first room. She is also responsible for the sales offices, which need to deliver acceptable results.

You have been gathered with your colleges in the executive group for strategic meeting, attending the meeting are:

Chief Executive Officer (CEO) Fredric Drapkin
Chief Human relations Officer (CHRO) Per Malmén
Chief Marketing Officer (CMO) Louise Brännström
Chief Technology Officer (CTO) Carl Häggquist
Chief Strategy development Officer (CSO) Ann Norell

You have prepared yourself for the meeting by identifying Gambro's problem areas. The aim of this meeting is to discuss these identified problem areas. You also have one thing that you want to discuss at the meeting; the increasing demands from customers and the impact that has on Gambro.

Appendix IM 5 Instruction for the CTO 1

You are now the now the Chief Technology Officer (CTO) at Gambro Renal Care, Carl Häggquist. Mr Häggquist is 61 years old and comes from Lund. He is intelligent, humorous and popular by his co-workers. When you enter Carl's office you will see piles of papers everywhere, numerous of used coffee mugs and his computer always running in the corner. Mrs Norell the CSO and Mr Häggquist the CTO are each other's opposites, which can effect their cooperation in the executive group. During their first and last development project together they drove each other crazy.

You have been gathered with your colleges in the executive group for strategic meeting, attending the meeting are:

Chief Executive Officer (CEO) Fredric Drapkin
Chief Human relations Officer (CHRO) Per Malmén
Chief Marketing Officer (CMO) Louise Brännström
Chief Technology Officer (CTO) Carl Häggquist
Chief Strategy development Officer (CSO) Ann Norell

You have prepared yourself for the meeting by identifying Gambro's problem areas. The aim of this meeting is to discuss these identified problem areas. You also have one thing that you want to discuss at the meeting; the importance of an increased cooperation with universities.

Appendix IM 6 instruction for CSO 1

You are now the Chief Strategy Development Officer (CSO) at Gambro Renal Care, Ann Norell. Mrs Norell is 37 years old and comes from Stockholm. She has been with Gambro for seven years. She is pedantic, structured, controlling. She is the kind of person who welcomes challenges. Her colleges admire her cleverness her ability to stay focused at all times. She has some trouble understanding how unorganised people ever get anything done. Mrs Norell the CSO and Mr Häggquist the CTO are each other's opposites, which can effect their cooperation in the executive group. During their first and last development project together they drove each other crazy. Mrs Norell is responsible for the long-term effects of different projects.

You have been gathered with your colleges in the executive group for strategic meeting, attending the meeting are:

Chief Executive Officer (CEO) Fredric Drapkin
Chief Human relations Officer (CHRO) Per Malmén
Chief Marketing Officer (CMO) Louise Brännström
Chief Technology Officer (CTO) Carl Häggquist
Chief Strategy development Officer (CSO) Ann Norell

You have prepared yourself for the meeting by identifying Gambro's problem areas. The aim of this meeting is to discuss these identified problem areas. You also have one thing that you want to discuss at the meeting; which branding strategy Gambro Renal Care should have in the future. You are questioning whether it is financially possible to keep two brands?

Appendix IM 7 Instruction for the Observing consultant

You are now one of the observing consultants at Gambro. You work with a well known consulting company, called Lundander & Co, which have a great reputation. You are at Gambro to observe the work of the executive group. You will be working at Gambro for two weeks and you have just started. You are also here to assist the CEO in the end of the period to prepare him for his meeting with the board. You have learned a lot about Gambro before you started your work there.

Your first task is to observe an executive group meeting at 20th of February 2001 between 10.00am and 10.30am. You should observe the different discussions and behaviour within the different executive management groups. Try to answer following questions: What are they discussing? What is their main concern? Are they taking on their executive roles and how is that working? Can you identify issues or concerns that you think that they should discuss? What would your contribution be? What else do you observe?

Attending the meeting are:
Chief Executive Officer (CEO) Fredric Drapkin
Chief Human relations Officer (CHRO) Per Malmén
Chief Marketing Officer (CMO) Louise Brännström
Chief Technology Officer (CTO) Carl Häggquist
Chief Strategy development Officer (CSO) Ann Norell

Your second task is to observe the work at the departments from the 21 to the 27th of February. You will do this by reading about the departments. (The different part 2 cases, this will be red at home) You will also observe, as you did above the work at the departments. (This will take place during the first 20 minutes during the second case seminar)

At the second executive group meeting at the 27th of February you will observe the executive group again. Here the observing consultant/-s, you and your colleges (including the case leader) are to observe the discussions in the different groups and try to find out the essence of the discussions. You should together prepare the final large group discussion where everyone is participating. You should together identify the different management challenges that the groups have decided to be the most important. They are to be presented in the large group and this should be your recommendation for the CEO for his board meeting to come.

Appendix IM 8 Instructions for Individual preparation 2

For the roles; CEO, CHRO, CMO, CTO, CSO

You have now been studying your department carefully. Now is the need to find the issues that your department priorities. In order to be able to convince the other members of the executive group it is important that these issues can be motivated not only from the perspective of the department but from Gambro's perspective as well. These conclusions and motivations are to be presented at a department meeting, where it is important that your staff understands you as well.

The executive group consist of:
Chief Executive Officer (CEO) Fredric Drapkin
Chief Human relations Officer (CHRO) Per Malmén
Chief Marketing Officer (CMO) Louise Brännström
Chief Technology Officer (CTO) Carl Häggquist
Chief Strategy development Officer (CSO) Ann Norell

Appendix IM 9 Instructions for Department meetings

As you will remember and have heard Mr Drapkin (CEO) finished the board meeting by saying: Thank you all for your contribution but I need more information. I would now like you to brief your staff members in the content of this meeting and find out there opinions and priorities. We will meet again in one week to further discuss these issues.

You have now been gathered with your colleges at your department for a strategic meeting concerning the most important issues and challenges that you as a department are facing.

You have all prepared yourself for this meeting by identifying your department's problem areas. The aim of the meeting is to discuss these identified issues and find out the three most important ones that you think the executive group should consider and bring to the board meeting.

The meeting includes the following discussions

- Brief each other on your individual conclusions
- Discuss and analyse the priority of the different problems facing your department
- Decide which are the three most important issues. Motivate the chosen priority

The executive group consists of:
Chief Executive Officer (CEO) Fredric Drapkin
Chief Human relations Officer (CHRO) Per Malmén
Chief Marketing Officer (CMO) Louise Brännström
Chief Strategy development Officer (CSO) Ann Norell
Chief Technology Officer (CTO) Carl Häggquist)

Appendix IM 10 Instruction for the CEO 2

The board meeting is one week away from today and you; Fredric Drapkin is the Chief Executive Officer (CEO) of Gambro Renal Care has gathered the executive group for a final discussion before the important meeting.

Attending the meeting, of February 11.35 am to 12.00 am are:
Chief Executive Officer (CEO) Fredric Drapkin
Chief Human relations Officer (CHRO) Per Malmén
Chief Marketing Officer (CMO) Louise Brännström
Chief Strategy development Officer (CSO) Ann Norell
Chief Technology Officer (CTO) Carl Häggquist

Mr Drapkin is 35 years old and comes from Stockholm. He has been at the company for a couple of months and has not worked with Gambro before. He is sympathetic, experienced, ambitious and extremely positive. He is the kind of CEO that sees everybody. He is responsible towards the board and is keen to be prepared at all times. He is a natural leader, how listens to his co-workers and contributes to their discussions.

Mr Drapkin has identified a couple of important issues to discuss during the meeting in order be able to give the board an evaluation later on. He opens the meeting (MR DRAPKIN SAYS): Welcome to this second strategic meeting. I am now only one week from meeting the board of directors. It is now essential that I after this meeting can make a decision on which issues to discuss with the board. (Detta är inte realistiskt. Normalt skickas styrelsematerialet ut minst en vecka innan mötet)

Mr Drapkin will lead the meeting and discuss the following:

1) Ask colleges about their point of view. (Based on department discussion drawn from the main case and the sub cases.)
2) Tell your colleagues about the environmental change that has occurred.
    a. The Chinese market is in progress and rumours say that low-price product soon will be on the market.
3) Discuss and analyse the priority of the different problems facing the company.
4) Ask colleges if they want to discuss something else during the meeting.
5) Decide which the two most important issues are. Motivate the chosen priority.

Mr Drapkin finishes the meeting by SAYING: Thank you all for your contribution. I now feel comfortable in my decision. Now I only need to listen to the recommendations from our consultants: Thank you so much for your expertises and for your contribution so far.

Appendix IM 11 Instruction for the CEO 2

The board meeting is one week away from today and you; Fredric Drapkin is the Chief Executive Officer (CEO) of Gambro Renal Care has gathered the executive group for a final discussion before the important meeting.

Attending the meeting, of February 11.35 am to 12.00 am are:
Chief Executive Officer (CEO) Fredric Drapkin
Chief Human relations Officer (CHRO) Per Malmén
Chief Marketing Officer (CMO) Louise Brännström
Chief Strategy Development Officer (CSO) Ann Norell
Chief Technology Officer (CTO) Carl Häggquist

Mr Drapkin is 35 years old and comes from Stockholm. He has been with the company for a couple of months and has not worked at Gambro before. He is sympathetic(se tidigare kommentar), experienced, ambitious and extremely positive. He is the kind of CEO that sees everybody. He is responsible towards the board and is keen to be prepared at all times. He is a natural leader, how listens to his co-workers and contributes to their discussions.

Mr Drapkin has identified a couple of important issues to be discussed during the meeting in order be able to give the board an evaluation later on. He opens the meeting (MR DRAPKIN SAYS): Welcome to this second strategic meeting. I am now only one week from meeting the board of directors. It is now essential that I after this meeting can make a decision on which issues to discuss with the board.

Mr Drapkin will lead the meeting and discuss the following:

1) Ask colleges about their point of view. (Based on department discussion drawn from the main case and the sub cases.)
2) Tell your colleagues about the environmental change that has occurred.
    a. The board has decided to merge the two brands into one, Gambro.
3) Discuss and analyse the priority of the different problems facing the Company.
4) Ask colleges if they want to discuss something else during the meeting.
5) Decide which the two most important issues are. Motivate the choosen priority.

Mr Drapkin finishes the meeting by SAYING: Thank you all for your contribution. I now feel comfortable in my decision. Now I only need to listen to the recommendations from our consultants: Thank you so much for your expertises and for your contribution so far.

Appendix IM 12 Instruction for the CEO 2

The board meeting is one week away from today and you; Fredric Drapkin is the Chief Executive Officer (CEO) of Gambro Renal Care has gathered the executive group for a final discussion before the important meeting.

Attending the meeting, of February 11.35 am to 12.00 am is:
Chief Executive Officer (CEO) Fredric Drapkin
Chief Human relations Officer (CHRO) Per Malmén
Chief Marketing Officer (CMO) Louise Brännström
Chief Strategy development Officer (CSO) Ann Norell
Chief Technology Officer (CTO) Carl Häggquist

Mr Drapkin is 35 years old and comes from Stockholm. He has been at the company for a couple of months and has not worked at Gambro before. He is sympathetic, experienced, ambitious and extremely positive. He is the kind of CEO that sees everybody. He is responsible towards the board and is keen to be prepared at all times. He is a natural leader, how listens to his co-workers and contributes to their discussions.

Mr Drapkin has identified a couple of important issues to discuss during the meeting in order be able to give the board an evaluation later on. He opens the meeting (MR DRAPKIN SAYS): Welcome to this second strategic meeting. I am now only one week from meeting the board of directors. It is now essential that I after this meeting can make a decision on which issues to bring up at the board.

Mr Drapkin will lead the meeting and discuss the following:

1) Ask colleges about their point of view. (Based on department discussion drown from the main case and the sub cases.)
2) Tell your colleagues about the environmental change that has occurred.
    a. An article concerning xeno-transplantation have shown that the progress have moved faster than thought before. The competitor Baxter has since long performed R&D work within this area.
3) Discuss and analyse the priority of the different problems facing the Company.
4) Ask colleges if they want to discuss something else during the meeting.
5) Decide which the two most important issues are. Motivate the chosen priority.

Mr Drapkin finishes the meeting by SAYING: Thank you all for your contribution. I now feel comfortable in my decision. Now I only need to listen to the recommendations from our consultants: Than you so much for your expertises and for your contribution so far.

Appendix IM 13 Instruction for the CHRO 2

Per Malmén is the Chief Human relations Officer (CHRO) at Gambro Renal Care. You have been gathered with your colleges in the executive group for a second strategic meeting, attending the meeting are:

Chief Executive Officer (CEO) Fredric Drapkin
Chief Human relations Officer (CHRO) Per Malmén
Chief Marketing Officer (CMO) Louise Brännström
Chief Strategy development Officer (CSO) Ann Norell
Chief Technology Officer (CTO) Carl Häggquist

You have prepared yourself for the meeting by identifying the problem areas of your department.

Mr Malmén is 54 years old and comes from Gothenburg. He has worked with Gambro for 15 years. He is careful, thoughtful, and ambitious and he has done a lot for the employees since he became CHRO. He has been extremely involved in the integrating process during the reorganisation and his aim is that the two organisation shall become one. The CHRO is responsible for the employees at Gambro and puts their interest first.

Appendix IM 14 Instructions for the CMO 2

You as the Chief Marketing Officer (CMO) at Gambro Renal Care, Louise Brännström, have been gathered with your colleges in the executive group for a second strategic meeting, attending the meeting are:

Chief Executive Officer (CEO) Fredric Drapkin
Chief Human relations Officer (CHRO) Per Malmén
Chief Marketing Officer (CMO) Louise Brännström
Chief Strategy development Officer (CSO) Ann Norell
Chief Technology Officer (CTO) Carl Häggquist

You have prepared yourself for the meeting by identifying the problem areas of your department.

Mrs Brännström is 42 years old and comes from Linköping. She has been working with Gambro for five years and during her years she has been working for Gambro in France for two years. She is outspoken, spontaneous and creative but her colleges sometimes have trouble understanding her wild ideas. Because of her stubbornness and her expertise's her colleges appreciate Mrs Brännström greatly. She is responsible for the relations with the customers and puts their needs in the first room. She is also responsible for the sales offices, how need to deliver acceptable results.

Appendix 15 Instructions for CTO 2

You as the Chief Technology Officer (CTO) at Gambro Renal Care, Carl Häggquist, have been gathered with your colleges in the executive group for a second strategic meeting, attending the meeting are:

Chief Executive Officer (CEO) Fredric Drapkin
Chief Human relations Officer (CHRO) Per Malmén
Chief Marketing Officer (CMO) Louise Brännström
Chief Strategy development Officer (CSO) Ann Norell
Chief Technology Officer (CTO) Carl Häggquist

You have prepared yourself for the meeting by identifying the problem areas of your department.

Mr Häggquist is 61 years old and comes from Lund. He is intelligent, humorous and popular by his co-workers. When you enter Carl's office you will see piles of papers everywhere, numerous of used coffee mugs and his computer always running in the corner. Mrs Norell the CSO and Mr Häggquist the CTO are each other's opposites, which can effect their cooperation in the executive group. During their first and last development project together they drove each other crazy.

Appendix 16 Instructions for the CSO 2

You as the Chief Strategy development Officer (CSO) at Gambro Renal Care, Ann Norell, have been gathered with your colleges in the executive group for a second strategic meeting, attending the meeting are:

Chief Executive Officer (CEO) Fredric Drapkin
Chief Human relations Officer (CHRO) Per Malmén
Chief Marketing Officer (CMO) Louise Brännström
Chief Strategy development Officer (CSO) Ann Norell
Chief Technology Officer (CTO) Carl Häggquist

You have prepared yourself for the meeting by identifying the problem areas of your department.

Mrs Norell is 37 years old and comes from Stockholm. She has been with Gambro for seven years. She is pedantic, structured, and controlling. She is the kind of person who welcomes challenges. Her colleges admire her cleverness her ability to stay focused at all times. She has some trouble understanding how unorganised people ever get anything done. Mrs Norell the CSO and Mr Häggquist the CTO are each other's opposites, which can effect their cooperation in the executive group. During their first and last development project together they drove each other crazy. Mrs Norell is responsible for the long-term effects of different projects.

Chapter 5 - Reflection

In the final chapter of this master's thesis a reflection on case and different learning's is made. The writing process will be described and commented on, the objevtives will be evalutated and recomendations for future work and case writers will be made.

Choice of company

While searching for interesting candidates for the Multidiscipline case Gambro was one of our options. Early in the search we came in contact with Kristian Enkvist SVP Research & Development at Gambro through our tutor Carl-Johan Asplund. Mr Enkvist's enthusiasm of cooperating with students and the interesting technology of Gambro made the choice obvious. Gambro as a company is large enough to be facing management challenges for different disciplines as for example within strategy and technology and also can be used to view the different roles of stakeholders in an executive group. They are stable and well established, which makes them a good basis for a case with the discussion held at the strategy level. There is not one clear management challenge that the company is facing. The company operates in global and complex environment, which is increasing the challenges and the complex nature of the company. This contributes to an interesting and dynamic case discussion where different runs or groups easily could come up with different answers to the case main issue. Because of the size of the company and the fact that Gambro is one of the market leaders there are a large amount of external information to find. This could be for the writers benefit as well as for ambitious participants. Because of the long history the case writers have been able to set the case a couple of years back. The writers of the case wanted to construct (överväg ordet design istället för construct) and write a case that could be reusable and also updated with modern information and issues. The company is located close to the case writer's campus area, which has made it possible to keep continues communication. Gambro operates in an industry, which is unfamiliar to most of the participants. This forces them to use the information in the case as basis for discussions.

The case writers had other options for the company of choice. The first interesting idea was to write a case about Carlsberg. This could have been a good choice due to the size, the interesting history of the company and the fact that they work on a global scale. Because of the location in Copenhagen, the language (Danish), the fact that the case writers did not have a contact at the company and the fact that the Carlsberg is so well known the writer did not chose Carlsberg.

Gambro fulfilled most of the expectations the case writers had on the company of choice. Mr Enkvist, the contact, contributed with inside information concerning the organisation, R&D and brands. Mr

Enkvist also let them come in contact with other relevant key employees at Gambro, Ingrid Ledebo and Annemarie Gardshol. They contributed with inside information and the company's culture and spirit. Unfortunately limited time from the case writer's perspective and the fact that Gambro is still restructuring several functions within the organisation made it difficult to find time for interview. This also contributed to difficulties finding relevant internal information.

Fulfilling objectives

To be able to valuate the sub objectives of the whole case learning experience the case test run and the writing process lies at the foundation of the following conclusions.

Dynamic

The multidiscipline case developed gives the participants the opportunity to be engaged in a dynamic discussion. As well as a reflective discussion and they will have the opportunity to debate around strategic management and leadership. By taking on different specified roles and working in small group all members of the group will contribute to a problem solving process.. The multidiscipline case structure increases the dynamic of the case itself. The case sessions with different assignments and bases of information should make this journey through the world of Gambro stimulating for all participants.

Authentic

The basis of information is taken from external information, e.g. annual reports, press releases, web pages and published articles. Because of the small amount of internal and primary information the case becomes more fictitious. It is preferable for the case experience that the case is reflecting a true situation.

Objective

Because of the fictitious nature of the case it is difficult to make the case entirely objective. The fictitious part of the case is written and made up by the case writers (the *written* text in the case). The many references use as basis for the information in the case increases the objectivity of the same. The fact that it has been difficult to find primary information limits the amount of different references. For this reason we draw the conclusion that a more objective case could have been written.

Realistic

The discussions that will be based on the case information could be occurring in a real business environment. The management challenges that may be identified when solving the case would most likely be valid. The way the case is set up to be used, with the different characters is not as realistic as it could have been with more primary information. However, it fulfils its purpose to simulate the operation of an executive group at a strategic level and its complex nature with incongruous voices (överväg different opinions istället för inconguos voices). Different characters have their personal and professional views, priorities and responsibilities towards both the company and their departments. To make the case more realistic it would have been preferred to have a case that took into consideration finance or economic issues the company can be facing.

Engaging

The fact-based information in the cases is presented between fictitious stories. The purpose of the fictitious stories is to entertain the reader and to brighten the reading. By making the participants prepare themselves for the case seminars and taking on roles of specific characters the case learning experience possess every possibility to be engaging.

Case literature

The advantages of the use of mainly one source; J. Erskine and M. Leenders are that their literature covers the whole range within case theory. By using one source the case writers have chosen one method for the entire case learning experience. J. Erskine and M. Leenders have been working with cases both for educational purpose and when teaching others how to write cases. The case writers have searched for other literature but found that the chosen literature was the one fulfilling the case writers' range of demands.

Literature for the use of and how to write the multidiscipline case have been hard to find. Carl-Johan Asplund and Paula Jordan have published articles in this area and they refer to the literature written by the authors mentioned above.

The writing process

The writing process started of on the right track by the case writers attending a case seminar during the course Technology Strategies. The seminar gave them an important insight on how cases can be run and written, what to think about and what to avoid. It also contributed to the case writers' creativity and knowledge concerning case based education.

By carefully studying case literature they became acquainted with different applications for case learning. By finding an interesting company, which fulfilled their expectations the case writing could take form. The decided target group made the direction of the entire writing process clear. The writers early chose a case structure that could be used to simulate an executive group meeting. This was one result coming from the target group of choice.

The multidiscipline character of the case was as mentioned before new to the case writers, which made case structure difficult to see at first. Information for the different sub cases in particular was difficult to find in order for the cases to contribute to the case goal and purpose. Different ideas where circling but after a few interviews with different case experts at the University of Lund the obvious case outline for serving the case goal and purpose was revealed.

The case writers tried to develop an economic case on an operational level but found this to be close to impossible because of the limited amount of inside information and the irrelevant contribution and linkage to the general case. After one of the expert interviews the main issue became broader in order to be able to be seeing the main issue in the main case as well as the sub cases. By making the issue broader it also became an issue at the strategic level through the entire case. After this the entire case could take form.

The main issue of the case was chosen in a way that the participants needed to use their prior knowledge as well as their creativity and ability to find solutions outside the black box. To increase the discussion dynamic of the case the participants are asked to take on different roles during the case seminars. This will also simulate the different voices that an executive group needs to consider when making a decision.

The case test run

The purpose of case test run was to identify missing information in the written case and to evaluate the educational idea behind the content of the assignments in the instruction's manual.

The case test run was running smoothly, the characters where well written and all participants quickly understood their role. The participants held a dynamic discussion during the entire time and the case writers were only observing during the discussion. The CEO took on the role extremely well by leading the meeting and making everyone contribute to the outcome.

The case test run was an important contribution to both the written case and the instruction's manual.

In order to increase the dynamics of the discussion even further the characters responsibilities and intentions were added to the instructions after the case test run. The written case needed more numbers and data over historical development considering economic development and product innovations. They would have liked to have more time to get to know their role and prepare their arguments for the meeting. This was changed and taken into consideration when making the schedule for the first discussion day.

The pros and cons of a multidiscipline case

The *advantages* are following:

- A multidiscipline case bridges together several areas as well as perspectives within the company. The students get insights on the company as a whole and on how specific areas within the company are working and what they are facing now and in the future.
- With a multidiscipline case the students can get an understanding of how decision making are progressed when more than one department at the company are involved. The different departments represent the different disciplines. This may not be done when using a single discipline case which is more focusing on a specific problem or question and not focusing on the dynamic within a company.
- Students develop skills of truly professional fieldwork when repeatedly obtaining the opportunity to identify, analyse and solve different issues in diverse settings by using cases.
- Cases enable the participant to learn by doing and to learn by teaching others as well as engaging them in the process of learning how to learn.

The *disadvantages* are following:

- Multidiscipline cases do not look at a specific area within a company or an industry. Therefore these types of case miss out on discussing and analysing a specific discipline more detailed.
- Students solving the case need to have a broad range of knowledge within more than one discipline. This decreases the range of usefulness.
- The instructor of the case also needs to have a broad knowledge and interest within more than one discipline. Therefore the demands of who uses the case are higher for a multidiscipline case than a single discipline case.
- It may demand more from the case writer to write a multidiscipline case. The writer has to take more into considerations when writing this kind of case. Considerations as how to bridge the different cases together, be more creative when deciding tasks for the whole multidiscipline case as well as the sub cases, the tasks should also match the learning goals that are to be achieved, etc.

Suggestions for further work

When developing this multidiscipline case disciplines where chosen according to the target group and available information. Other sub cases could be added to the general case and other functions in an executive group could be considered. By adding more sub cases and more roles the case dynamic could increase even further. Different small groups of participants could consist of different members of the executive group. This would probably result in various solutions between the groups. All different roles could also be attending one big executive group, with representatives from all departments. The fact that these will complex the simulation should be taken into consideration. With the increased complexity comes a different time frame.

The case as it is could be used together with other teaching methods, which are possible to develop with the existing case information as a foundation of different discussions and issues. Other environmental changes could be added in the instructions for the second executive group meeting. This could change the outcome of the case discussion. The dynamic between the existing characters could be taken further with more incongruous information in the sub cases.

It is important to keep the target group in focus when changing the case. The purpose of the change should be clear in order to make a successful contribution to the existing material.

Recommendations for other case writers

The target group and the educational objectives and purposes should be clear at the start of the project or developed early in the preparation. It is preferable to make contact with interesting companies suiting the case purpose as early as possible. Companies usually have a limited amount of time, which makes it important to contact them in time (överväg early on I stället for in time) . The company should be chosen carefully during the preparation face of the case writing process. Important issues to consider when choosing a suitable company are; engaging contacts at the company, efficient available time to spend on the project (interviews, visits and help with finding inside information) and the possibility for key employees to cooperate and be a part of the case if needed. When the company is chosen it is important to book interviews as soon as possible with the key employees of interest.

During the entire writing process it is important to have the objective and purpose of the case project in focus. It is important to be creative and at the same time continually questioning to make ensure that the outcome of the case learning experience is in line with the learning demands of the target group. The learning situations should be in focus when designing the way that the case should be run. These learning situations usually develop over time and changes as the writing process is progressing. Because of the dynamic development of a case learning experience the instruction’s manual is preferable written when the entire case learning experience is apparent, usually in the end of the writing process.

Learning outcome

We as individuals and as a team have learned a great deal from this experience when writing a master’s thesis that differs from other thesis, though it is not a study. It was explained to us that no one else has done a thesis like ours before. For us this meant that we did not have the possibility to compare and exploit our idea for the thesis by using other thesis within the area. We could not either use the general structure as usually used when writing a thesis for presenting our master's thesis. Therefore we had to find out a way by ourselfs to present this idea to the readers. This has been a very good experience for us since we had to come up with an idea of structure and context, which required being motivating. For us this has meant that we had to consider every detail of the master's thesis context to assure that our purpose with the thesis, i.e. that it would be a case learning experience was fulfilled. We have also learned more about what management challenges a company can be facing and how they proceed within the company when facing challenges (den här meningen känns lite oklar). This knowledge might be helpful for us in our own careers, since we have got a flavour for how complex company issues can be. This experience has also taught us how to start up and finish a project by ourselves. We have by ourselves taken our own decisions concerning this project. Everything from designing the Multidiscipline case and the Instruction's manual and how to construct the thesis has been our choice. The idea to this project was given by our academic tutor, Carl-Johan Asplund at LTH in Sweden but it was we as writers who exploited and created the final design and context for this master's thesis. This has strengthened our self-confidence and we have learned how to plan, proceed and finish a project and also to convince others what we wanted to up fill with this project. This experience has been a great journey for us as individuals and as a team. We have learned that we are two very creative and focused persons that are not afraid of taking on new challenges. This experience is going to be useful for us when working at a company, though we have gained experience from project as well as experience from working in a team and the challenges that you are facing as a team. We can recommend everyone that is willing to do something that differs from the general master's thesis to do so. But bear in mind that you always have to have a clear vision and plan of what you want to do so that you can convince others that the project is possible to proceed and conclude.

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Interviews

Several interviews with Kristian Enkvist, at Gambro in Lund

Interview with Ingrid Ledebo, 03-05-07, at Gambro in Lund.

Telephone interview with Annemarie Gardshol, 10-05-07, at Gambro in Stockholm

Appendix

Log

The assignment started after a meeting with our instructor from the faculty, Carl-Johan Asplund. We received an article on multidiscipline case designing written by our instructor. We went to Skanör in south of Sweden for two days for a case seminar during the first week of our project. We were co-instructors at Technology Strategies, a course at the Faculty of Technology at the Lund University, which where one of our final courses the year before. It was a perfect field study for our future thesis.

The thesis started of for real when Johanna and Ann-Sofie had a day of brainstorming about multidiscipline cases, based on the received article on multidiscipline case designing. At that time we had Carlsberg in focus as our "case company". Our instructor came up with Carlsberg as a possibility. We went to the Carlsberg museum in Copenhagen to further get to know the company. The day after we had a meeting with our instructor to clarify what the article and the thesis was all about. We realised that we needed more information about case theory in order to fully understand our instructor and the subject of our thesis. We used the references of the article to find further literature. We searched through the database ELIN at The Lund University with the following keywords used: *case, learning, complex, teaching, Harvard, management, multi, discipline, decision etc*. The following four weekdays we studied literature on the subject with the purpose to develop our own understanding of case writing, learning and teaching. Carlsberg was one possibility, but while we further studied the case literature we realised that a company located closer to Lund would suite our purpose better. We made an outline of the thesis, before our next instructor's meeting.

On the following meeting we felt that we knew our direction. The outline of the entire thesis was as clear as it could be at that moment. What we needed the most now was a company to write the case at. Please read *Choice of company* in the chapter Reflection. We had a few options and our instructor would help us to get in touch with possible company contacts. We also were looking for a company that we could visit during an executive meeting to do some field study. The following days we were writing the background, the theoretical framework and the outline for the instructor's manual. We managed to find a company, Gambro, who would cooperate when writing the case but we did not find a company with an executive meeting that we were allowed in on to study.

We had a meeting at Gambro a week later and after giving them a brief introduction of our idea, the outline of the case and the purpose of the thesis Gambro became interested and we decided to write the case there. We got a contact person, Kristian Enkvist, at Gambro, who gave us a situation, that were discussed in the company some five years ago, to work with. The question that was asked at Gambro was if they should merged there two brands, Gambro and Hospal. We started out by reading about

Gambro at their website and in articles written about Gambro around the year 2001. We decided to meet with our contact again in roughly a week.

We met with Mr Enkvist and got a better understanding for the issues Gambro was facing. We left the meeting with a good idea of what to do next. We continued with writing the introduction chapter including the purpose and goal with the thesis. When the introduction chapter was done we continued by searching for more information for the case. We found information in annual reports around the year in question and other secondary information from the Internet mainly.

We met with our contact again and the purpose of this meeting was to better understand the organisation of Gambro with focus on the Renal Care Department. During this meeting we also asked to meet with other important people from the organisation in order to get a better understanding for the products, the customers and the market. From the two first meetings with our contact person at Gambro and from the data collection made so far, we worked out the outline of the introduction case. We came in contact with two different employees at Gambro, Ingrid Ledebo and Ann-Marie Gardshol through Kristian Enkvist. Mrs Ledebo has a broad competence concerning the products and Gambro's history. Here the case writers got a better insight in how the acquisition with Hospal had proceeded and more why Gambro chosen to keep Hospal before 1999 as a separate company. This has helped us to better understand the history between Gambro and Hospal and to develop characters in the main case. Mrs Gardshol has good knowledge concerning the market and the customers of the brands, Gambro and Hospal. We got after this interview a good understanding where the two different brands were sold in the world and why. From the interview we understood that the customers to the brands had a great impact on were they are sold and the sales organisation at Gambro. We decided to interview them both within one week.

We made three interviews with lectures at the faculty. Mona Becker at the department of Industrial Management and Logistics at the Faculty of Technology at the University of Lund to receive her point of view on an economic sub case. We realised after that interview that it could be hard to do an economic case concerning the issue of the case. We also interviewed Ola Alexandersson at the same department as Mrs Becker to receive his opinion on the marketing case and the thesis outline and case outline. Lars Bengtsson was consulted for his expertise in case writing and teaching. All these interviews gave us new perspectives on the case and from Mr Bengtsson's and Mr Alexandersson's interview we were able to remake our outline for the instructor's manual. Our outline of the case and the thesis was inline with the comments and suggestions that we collected from the interviews with Mr Alexandersson and Mr Bengtsson. After the interview with Mr Bengtsson we restructured the case outline. We decided to make a more dynamic case and case simulation in order to use different roles during the case seminar. We met with our instructor, Carl-Johan Asplund again to discuss the final case outline. This included a final decision on which sub cases to write and their contents. We decided to let all cases solve issues on a strategic level. The introduction case was the first case to be written.

The introduction case was then used during a case test run. This was done to ensure that the case worked as a basis for a dynamic discussion and to ensure that the idea of teaching the case was working in reality. A few changes in the introduction case and in the Instruction's manual for teaching the case was made after the case test run. The Instruction's manual and the sub cases were written. Finally the reflection on the entire work was written. The reflection was a chance for us, the writers to show our readers our learning's during the formation of this rather different master's thesis. In order to fully understand our writing method and writing process we strongly recommend you to read chapter 1, the introduction and chapter 5, the reflection.