

Chief Consultant Johnny Haupt Larsen

PERSONAL DATA:

Name: Johnny Haupt Larsen

Nationality: Danish

Year and date of birth: 1960.05.31.



Civil status: Married to Helle Larsen, Technical Designer, S. E. Brockhuus A/S, Consulting Engineers.

Number of Children: Louise 34 years and Katrine 30 years.

Profession: Consulting engineer.

Position: Chief Consultant.

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EDUCATION: B.Sc. Mechanical Engineering, Copenhagen Engineering College, Denmark. June 1983

B. Commerce (Danish: HD), The Copenhagen School of Business Administration June 1987

OTHER TRAINING: LEAN Management
Postgraduate course in the Legal Aspects of International Contracts.
Electronic Data Processing, Electronic Control Systems, Management and Planning.
ISO 9000 Quality Standard Course.
Quality Auditing Course registered by the Governing Board of the National Scheme of Assessors of Quality Systems

APPOINTMENTS Officially appointed external examiner at the final examination for B.Sc. graduates within mechanical engineering at the technical universities in Denmark.

Vice chairman in Danish Society for Fisheries Technology, 1999- 2001

MEMBERSHIP: *Ingeniørforeningen i Danmark* (The Society of Danish Engineers)

EMPLOYMENT:

2020 - **LarEII Associated Consultants.**
- Owner, Consulting Engineer, International Food Processing Advisor.

2011 - 2020 **Enavigo Consult A/S**
- Chief Consultant, project manager

- 2006 - 2010 **Danish Meat Research Institute (Slagteriernes Forskningsinstitut), DMRI a division of Danish Technological Institute, Dept. for processing and plant design**
- Chief consultant, project manager.
- 2000 - 2006 **LarEII Associated Consultants.**
- Owner, Consulting Engineer, International Fisheries Advisor.
- 1996 - 2000 **NIRAS Consulting Engineers and Planners A/S (former Abrahamsen & Nielsen A/S)**
- 1983 - 1996 **MATCON, Consulting Engineers and Planners A/S, Denmark**
- Senior consultant, project manager. Taken over by COWI in 1995.

LANGUAGE QUALIFICATIONS:	speaks:	reads:	writes:
English	EXCELLENT	EXCELLENT	GOOD
Scandinavian	EXCELLENT	EXCELLENT	EXCELLENT

KEY QUALIFICATIONS: Mr Johnny Haupt Larsen has extensive experience of project management, design and implementation of food processing plants in Denmark, Norway, Greenland, Germany, Spain, Canada, South Africa, Mozambique, Egypt, Ethiopia, Senegal, Tanzania, Vietnam, Scotland, Ireland and Eastern Europe, including Russia. In addition to meat industries, he has experience from the fish and shellfish industries regarding quality, capacities and other key aspects including environmental and energy conditions.

He has extensive experience from developing countries in projects especially in Mozambique with technical assistance to the DNP and the provincial fisheries department in Beira. The work included upgrading of processing facilities to EU standard, inspection of vessels, training of fish inspectors and workers in the industry, elaboration of business plans and establishing of a new Fisheries Quality Laboratory. But also, from Vietnam with a survey of the Vietnamese fish processing sector in connection with the planning of the environmental approaches to be supported from 2000 - 2005 introducing wastewater treatment and cleaner technologies. Followed by projects on introduction of cleaner technologies including design, comparative testing, presentation of results for entire Vietnamese fish processing sector and implementation of the new multiple purpose seafood processing lines, which improves on environment, workers health, productivity, economy and product quality. The projects also included set-up and review of environmental management systems for the processing industries.

Further experience from projects in Gambia regarding rehabilitation and extension of processing plants and from a feasibility study in Tunisia. The study involved layout, design, capacity and energy of a cannery for tuna, horse mackerel and sardine, can making and fishmeal plants. He has also participated in a feasibility study of Secondary Fisheries Schools in Indonesia with layout and budgets for a training plant for the processing of canned tuna, mackerel and sardines.

He has also extensive experience with a wide range of projects in Eastern Europe as project manager. The projects include seminars and workshops with theoretically and more practical hands-on training and education of all levels in the industry from top management to floor level with subjects as technology,

maintenance, HACCP, GMP, quality, hygiene, economy, marketing and management. Further projects including feasibility studies, business plans, product development and marketing, planning, technical design, clean & low waste technologies, supervision and start-up of production.

In the last years the experience is expanded with LEAN management, Value Stream Mapping and optimisation of production including yield, productivity and efficiency.

Apart from general consulting services to the food industry, the major relevant projects include:

SELECTED PROJECTS:

- 2019 Finland – Training of production managers and foremen. The training course contained the following theoretical subjects:
- Conditions for improvement
 - The learning processes
 - Communication
 - Feedback
 - Management
 - Work instruction
 - Quality and Quality management
 - Yield, productivity and efficiency
 - Hygienic design
- The training course contained the following practical subjects:
- Work instruction (Recording video with work instructions carried out by participants)
 - Production Quality (Cases – different assessments with relation to quality)
 - Red – Yellow – Green analyses
 - Finding and correcting failures (Work assignments, PDCA model etc.)
 - Productivity (Workstation balancing – an example)
- 2019 Finland – Fact-finding for optimisation of cattle slaughterhouse including cutting and deboning. The fact-finding also includes proposals for improvement of quality, workers safety and management.
- 2019 – ongoing Germany – Design and layout for new cutting, deboning and packing plant for existing slaughterhouse with a capacity of 400 pigs/hour corresponding to 800 carcasses for cutting and deboning.
- 2018 – ongoing Spain – Jorge Grupo – Assessment of slaughter line for 15.000 pigs and 2500 sows per day. Assessment of cutting, deboning and packing plant for approx. 10000 pigs per day. Evaluation of present layout in order to improve on flow, reduction of internal handling and improve of overall product quality. Evaluate and propose technological upgrading of processing equipment.
- 2018 Germany – Gustoland/Westfleisch – Assessment of meat processing plant with regarding to layout, flow and production optimisation.
- 2017 Germany – Value stream mapping – Pig slaughtering.
- 2017 Germany – Westfleisch Erkenschwick - Production Master Plan for cutting and deboning plant for 10.000 pigs/day. Work included re-arrangement of lay-out, improvement of flow, introducing new technical solutions to problems on processing equipment.
- 2017 Iran – Assessment of production facilities regarding proper layout, production flow and safe production of poultry products at large poultry processor including review of

- the design and supervision of the installed equipment at new large slaughterhouse for poultry. Supervision of new building facilities in order to assure full compliance with EU and other international food safety rules and regulations.
- 2017 Norway/India – Workshop concerning implementation of LEAN in all production plants in Norway, India and South Africa.
- 2017 Denmark – Optimisation of sausage production and slicing including proposal for modernisation and extension of the facilities.
- 2016 - 2017 Denmark/Eastern Europe – Master Plan for new pig slaughterhouse and cutting/deboning plant. Planning for a new green-field slaughterhouse in Eastern Europe. Together with the client, the team reviewed the overall layout of the factory including definition of all product and production flows, staff requirements, material and waste handling and discussed hygienic principles and food safety. Other issues were the optimal temperature regimes for all the different production areas, refrigeration and process ventilation.
- 2016 Denmark – Bangs Hønniker, assistance to apply for authorisation, preparation of own control system and receive approval from authorities to start up and run a new mobile poultry slaughtering facility. Technical evaluation of facilities, layout and processing procedures.
- 2016-on going Denmark – Production audit at major Danish Meat processor to identify potentials for improvements. Beef, pork and chicken.
- 2015 - 2016 Denmark/Russia – Training of 18 managers from Cherkizovo in slaughtering, production and quality. The training included study visit to Danish slaughterhouses and meat processors in DK.
- 2015 – ongoing Tanzania – CLEAT - Projections of climate change effects on Lake Tanganyika. Fisheries management and more value adding and improved quality in the entire value chain.
- 2015 Senegal – Technical and commercial due diligence for a newly established fish processing complex with own vessel and new large processing plant including all facilities. Yearly production planned to be up to 90.000 tons Evaluation and verification of business plan and assessment of processing lines and building facilities.
- 2015 Kosovo – Preparation of logistic plans for the safe storage, collection and transportation of Animal By-Products from slaughterhouses in whole Kosovo to be in accordance with the EU regulations.
Specification for waste container, storage facilities and transportation means/trucks.
- 2015 Norway – Study/analysis for optimisation of chicken & turkey slaughtering, cutting, deboning, value adding and packing. Production 35.000 tons/year. The pre-analysis includes; Evaluation of layout, Value Stream Mapping, Yields, 5S, Technical conditions, Quality, Utilisation of energy & water, Management, and Economy.
- 2014 Kosovo – Preparation of presentations on Animal By-Products handling in accordance with the EU regulations. Carrying through of 3 seminars for the relevant stakeholders in Kosovo, being the competent authorities, slaughterhouses, meat processors and waste collection and transporting companies.
- 2014 Norway & Finland – Benchmarking study for slaughtering, cutting and deboning of cattle and swine comparing two Norwegian slaughterhouses and meat processing

- plants with a Finnish slaughterhouse and meat processing plant handling both swine and cattle.
- 2014 Denmark – Assistance to Steensgaard Slaughterhouse in setting up risk analyses for poultry slaughtering and cleaning of pig & cattle casings for human consumption. Setting up hygiene and sanitation control procedures for the slaughterhouse and meat production, including the restaurant and kitchen.
- 2014 Kosovo – Technical assistance and quality assurance on a detailed design for a new rendering plant in Kosovo to be in compliance with the EU regulations on proper handling and disposal of animal waste.
- 2014 Norway – Training of department managers from planning, manning, slicing & packing, mincing & packing, and material reception area at Norfersk, Hærland.
- 2014 Ethiopia – Environmental Impact Assessment for Jijiga Export Slaughterhouse for Mercy Corps/USAID. Special emphasis on solid waste handling, wastewater treatment and energy optimisation including environmentally friendly refrigeration plant.
- 2014 Norway – Optimisation and Value Stream Mapping at Norfersk
- 2014 Norway – Training of supervisors from the slaughter line and meat production in Bjerka.
- 2013 Norway – Training of supervisors from the slaughter line and meat production in Førde.
- 2013 Norway – Training of supervisors from the slaughter line and the meat production in Egersund.
- 2013 - ongoing Senegal – Analysis of groundnut processing and proposal for detoxification plant for removal of aflatoxin.
Design of process lines. Planning of production facilities in Senegal. Revised production facilities for plant in Denmark.
- 2013 Poland – Proposal for State-of-the-Art Fish Cannery.
- 2013 Ireland - Implementation of LEAN within pig slaughtering, cutting and deboning. Training of middle management and supervisors in LEAN methodologies and practical use of LEAN to reduce losses and improve productivity.
- 2013 Norway - Benchmarking – between 4 production facilities for slaughtering and cutting of cattle. Overall purpose was to find new and more reliable key figures for comparison of different production facilities.
- 2013 Taiwan – Clean & Lean with Zero Waste - Visit and analysing of the pig industry in Yunlin County to set-up and implement an environmentally friendly industry. The visit also included seminars for Yunlin County officials and for all stakeholders within the pig industry.
- 2013 Denmark – Steensgaard Herregaard - Assistance in preparation of layout and processes for a sustainable organic abattoir and meat processing plant with own shop. Assistance in the setting up of the own control system and getting the final authorisation from FVST.
- 2012 Ethiopia – Assessment of Abattoirs – Evaluating of 2 new build abattoirs in Ethiopia regarding building facilities, equipment, processing methods, labour skills and

- management capacity for KfW.
- 2012 Norway – Value stream mapping – slaughtering and cutting of lambs including production of consumer packs at Nortura, Malvik.
- 2012 Norway – Value stream mapping – slaughtering and cutting of cattle including production of minced meat in consumer packs at Nortura, Malvik.
- 2012 Montenegro – Preparation of a Feasibility Study for the disposal of animal by-products in accordance with EU regulation 1069/2009 and 142/2011.
- 2012 Norway – Value stream mapping – slaughtering, deboning and cutting of pigs and sows including production of consumers packed meat at Nortura, Steinkjer.
- 2011 Norway – Value stream mapping – slaughtering and cutting of cattle including production of minced meat in consumer packs at Nortura, Egersund.
- 2011 Norway – Value stream mapping – slaughtering and cutting of cattle at Nortura, Otta.
- 2011 Norway – Improved value chain for Norwegian/Polish pelagic processing. Determine the Norwegian and Polish value chain for salted and marinated herrings.
- 2011 Norway – Implementation of LEAN within meat processing at Terina, Lillehammer. Practical use of LEAN to reduce loses and improve productivity.
- 2011 Norway – Implementation of LEAN within meat processing at Nortura, Sarpsborg. Practical use of LEAN to reduce loses and improve productivity.
- 2010 Denmark – More efficient and fast cleaning of production facilities and equipment in slaughterhouses. Design and implementation of CIP system for rectum loosener.
- 2009 – 2010 Denmark – Preservation methods for animal bi-products. Testing and documentation of different preservation methods for animal bi-products. The methods include chemical and thermal treatment. The testing includes FFA, TVN and odour samplings. Overall purpose is to improve quality of animal bi-products for rendering and reduction of smell at slaughterhouse, during transport and production at rendering plant.
- 2008 – 2009 Denmark – Investment and development plan for production of spareribs and tenderloin, Jensen Foods, Struer. Detailed investment plan with layouts, production calculations and cost benefit analysis all presented in a complete investment prospect for the Board of management.
- 2008 Denmark – Optimisation of smoked salmon production, Polar Seafood, Esbjerg. Project ideas and plan for optimisation of the production.
- 2008 Denmark – New methods for handling and transportation of animal by-products for Petfood production, BHJ A/S, Gråsten. Developing of ideas for new concepts on how to collect and store by-products at the slaughterhouses, new transportation means and how to unload and handle the by-products at BHJ's production plant. Including conceptual drawings and cost estimates. All with the overall purpose of replacing the existing use of plastic containers with more hygienic and less expensive methods.
- 2008 Denmark – Reduction of "GiveAway" in processed meat production, Tulip Food, Sdr.

- Borup.
Design and implementation of production management tool for reduction of "Give Away". Including the instruction and training of operators and managers in use of the system and motivation for continuously follow up on the on-line results.
- 2007
Turkey – New processing plant for seabars and trout.
Preparation of layout, calculation of production capacities and elaboration of process flowcharts for a new trout processing plant with a yearly capacity of 13.000 tons raw material. The products to include whole fresh and frozen trouts and seabars, headed and gutted trouts, fresh fillets and smoked filets. The factory and production to be in compliance with international and EU demands.
- 2007- 2008
Norway – FHL Pelagic Forum, Developing of the Norwegian Pelagic Sector.
Preparation of a business plan for the pelagic sector and establishing of industrial networks, increased globalisation of the industry, developing of new "Value added" products, developing the frames for a Special Purpose Company and establishing of an E-trade platform with integrated traceability system.
- 2007
Denmark – Production Audit, Tulip Food, Sdr. Borup.
Analyses of the entire production with identification of all critical areas. Estimation of potential savings and presentation of proposals on how to achieve the estimated savings. The above "Give Away" – project is one of 8 major areas for savings and increased profitability.
- 2006 - 2007
Norway – FHL Pelagic Forum, Developing of the pelagic fish processing industry.
Detailed planning and programming of the developing of the pelagic sector. Presented at a seminar in Bergen in January 2007 for the entire Norwegian Pelagic Industry.

Elaboration of Benchmarking for 4 pelagic industries.
- 2006 – 2009
Denmark – Developing of new equipment for automatic cleaning of pig casings, Dat-Schaub & DAKA.
Technical specifications, development of test equipment, testing of equipment, design of final equipment.
- 2006
Denmark – Developing of mechanical equipment for handling of chocolate, TOMS Industries.
Conceptual design with budget estimate, cost-benefit and production of simple prototype.
- 2006
Norway – FHL Pelagic Forum, Developing of the Pelagic Sector.
Analyses and presentation of scenarios for the development of the pelagic fish sector.
- 2005
Vietnam – SEAQIP – DANIDA, Study tour in Denmark.
Planning, arranging and carrying through of study tour for 25 – 30 Vietnamese seafood processors. Purpose of study tour is to visit organisations, institutions and seafood processing companies having worked with and implemented the latest environmentally friendly technologies, EMAS and similar approaches.
- 2005
Grand Lake – ILIC, Egypt - Planning and detailed design of new upgraded fish processing plant for Grand Lake in Abu Simbel based on the business plan prepared under the PSD programme in 2004. Assist in tendering, purchase and installation of processing equipment followed by start-up of processing plant including training of management and workers and preparation of technical instructions and manuals. Finally, to assist in setup and implementation of HACCP.

- The new plant including fish farming and fishing operations to be approved for export of products to EU.
- 2004 – 2005 Vietnam – SEAQIP – DANIDA, HAVICO - Developing the 2nd generation MSP line for implementation at HAVICO in Vung Tau for their production of value added products in the new processing plant under construction.
- 2004 Grand Lake – PSD – DANIDA, Egypt - Co-operation project with Egyptian company Modern Structures and Equipment Ltd under the private sector development programme. The first phase of the project under the Start-Up facility includes: Technical draft project and business plan for processing facility in Abu Simbel of EU standard; Introduction of environmental friendly productions and cleaner technologies, Increase efficiency of fishery and improve raw material handling and storage onboard the fishing boats; Design of new fishing vessel or purchase of second hand vessel, Feasibility study for farming of Nile Perch and a market survey for the Egyptian freshwater fish on the EU market.
The second phase of the project will be to implement the project or parts of it depending on the results of the studies made during the first phase of the project.
- 2003 - 2004 Sojusrybprom – Kaliningrad, Russia – Business plan for new frozen fish production plant including new chill and cold stores. The project consists of business plan with technical project including layout, flowcharts, description of processing, production capacities, technical specifications and investment budget.
- 2003 - 2004 Koga Maris – Hel, Poland – Layout for new chill store and layout for new frozen sprat production plant including extension of existing cold store. The project includes layouts, flowcharts, description of processing, technical specifications and tendering.
- 2003 - 2005 Vietnam – SEAQIP – DANIDA – Design and implementation of computerised production control system for the MSP lines in CASEAFOOD. Including training of managers and operators in the use of the system for optimising of the production yield and productivity. The final implemented system and the results achieved will be presented for the entire seafood processing industry in Vietnam at a seminar.
- 2003 Vietnam – SEAQIP – DANIDA – Testing of new Multipurpose Seafood Processing Lines. The objective of the consultancy is, under the framework of the component description for SEAQIP, to demonstrate to the Vietnamese seafood industry the benefits of the new Multipurpose Seafood Processing Line by participation in and supervision of the final installation and running in of the work stations at CASEAFOOD. Prepare testing manual and train the local experts of SEAQIP and the staff of CASEAFOOD in conducting the tests to compare the MSP lines and the existing worktables. Supervise the start-up of testing. Process testing data (including data on health-related issues) after 3-4 months of testing and present the results and recommendations. Revise if necessary the construction drawings for the work station based on the results of testing. Participate in two workshops at CASEAFOOD where the test results were presented to representatives of the seafood enterprises in Vietnam and the work stations was demonstrated.
- 2002 Vietnam – SEAQIP – DANIDA – Introduction of clean technology & wastewater treatment in the seafood industry in Vietnam. The objective of the consultancy was, under the framework of the component description for SEAQIP, to continue providing support to increased awareness and implementation of processing technologies and management methods for reduced negative environmental impact in the seafood industry.
- 2002 Denmark – Intertec A/S – Preparation of layout for high quality tuna processing plant in the Philippines including process flows and recommendation on construction materials and details to fulfil the highest demands for modern processing facilities.

- 2001- 2003 Latvia – National Board of Fisheries – SAPARD – Preparation for application and use of the Support of Pre-accession Programme for Agriculture and Rural Development (SAPARD) for the improvement of fish products, processing and marketing. Funded by Danish Ministry of Food, Agriculture and Fisheries, Directorate for Food and Agro Business.
- 2001 - 2002 Lithuania - Ministry of Agriculture Lithuania, Fisheries Department – EIA- Environmental Impact Assessment. Improved environmental awareness by training in cleaner technology and introduction of environmental management in the Lithuanian fish processing industry. Funded by Danish Ministry of Food, Agriculture and Fisheries, Directorate for Food and Agro Business.
- 2000 Fishermen's Association, Hel Poland - Prepare and present an idea for common herring and sprat unloading, sorting and preliminary processing facilities for the fishermen in Hel Fishing Port.
- 2000 - 2001 Karsin S.C., Karsin Poland - Preparation of layout, new product assortment and business plan for a new canning plant build in connection to the existing plant in Karsin.
- 2000 Superfish S.A., Kukinia Poland - Preparation of layout and investment budget for a new preliminary fish processing plant to be situated in the Kolobrzeg Fishing Port.
- 2000 Losos sp. zoo, Ustka Poland - Preparation of draft project including layout, process description, capacity balances and investment budget for a new cannery with a capacity of 50 mio. cans per year.
- 2000 Mozambique – DANIDA- In general to support the Department for Fish Inspection and Quality (DNP) and the provincial department for Fisheries in Beira. More specifically to assist in the: Preparation of guideline for establishing of new processing facilities, business plans, evaluation of vessels and shore-based processing facilities, training curricula, technical documentation and maintenance manuals for the processing equipment, technical installations and refrigeration plants etc.
- 1999 - 2002 Poland - Danish Environmental Protection Agency - Assistance to the Polish Fishing Industry by introduction and implementation of cleaner technology concepts in utilisation of natural Baltic fish resources. Technical assistance to establish sorting of catches directly from vessels, set-up silage processing plant and marketing of the silage as animal food. The project included analysis of industry, design of new plant and equipment, tendering, purchase, supervision during installation and start-up. Training of managers and workers in the use and maintenance of the new plant. preparation of technical documentation and manuals.
- 1999 Vietnam – Implementation of cleaner technology.
An analysis of the current situation with respect to environmental impact and environmental management in the seafood processing industry and to provide guidelines and recommendations for future interventions by SEAQIP phase 2, with a view to the most effective use of allotted resources.
- 1999 Belarus – Design and planning of a fish processing plant. Preparation of detailed draft design for new marinated herring processing plant in Brest. Project included detailed layout, investment budget, technical installations, raw material and final product balances, process flow and descriptions, recipes and production manual for new product types.
- 1999 - 2000 Lithuania - Ministry of Agriculture Lithuania, Fisheries Department - An analysis of

- the industry's condition and performance including a strategy for preparing the industry for the Lithuanian admission to the EU. Project manager and responsible for the technical evaluation of the processing plants.
- 1998 - 1999 Poland - FAPA/Phare project - Development of organisational structures and investment planning for regional and national fish sector. Participation in establishing of producer's organisation and improving of quality and hygiene
- 1998 - 1999 Mozambique – DANIDA- In general to support the Department for Fish Inspection and Quality (DNP) and the provincial department for Fisheries in Beira in carrying out the planned activities for 1998 under the component B. More specifically to assist in the:
Identification of processing plants suitable for upgrading,
Elaboration of business plans
Elaboration of training material for fish processors
Planning of market surveys and a study tour,
Preparatory work regarding the establishment of port infrastructure service facilities
Preparation of the construction of a quality inspection laboratory in Beira, including the planning of laboratory staff training.
- 1998 - 2000 Latvia – National Board of Fisheries - Assistance to the Latvian fish processing industry by developing, piloting and implementation of an “own check programme” based on the HACCP concept, (Hazard Analysis Critical Control Point) to improve the quality, the export possibilities and the economy in the Industry.
- 1998 Mozambique - DANIDA - Team Leader for the study of the shore-based processing facilities in Sofala including estimation of the needed upgrading for the upper segment companies in Beira, elaboration of an outline design for a rural and an urban processing plant and to evaluate the proposal of setting up a designated processing zone in Beira. The study to be part of the Sofala Bank shrimp fishery operation studied and fleet operation process proposed to support the implementation of the Master Plan for the Fisheries sector in Mozambique.
- 1997- 1998 Kaliningrad - AtlantNIRO - Assistance in transforming of the fishing industry in Kaliningrad to become a viable sector by introduction and implementation of a tailored HACCP concept (Hazard Analysis Critical Control Point) to assure food safety in the fish processing industry and by improving its quality, marketing and economic performance and thereby strengthening its competitiveness as a supplier of fish products. The project includes: Two educational seminars on HACCP, quality, economy, management, marketing and technology. Elaboration of guidelines and recommendations about how to implement the HACCP concept and of a programme for improving the quality, marketing, and economic performance of the fishing industry. Training of the relevant staff of AtlantNIRO in how to implement HACCP in the industries. Follow-up and support to the implementation of the HACCP concept.
- 1997-1997 Lithuania - AB Siauliu Zuvis - Assistance to the fishing industry in Lithuania in preparation and presenting of rationalisation and modernisation plans for companies seeking project financing through Western development banks, Governmental agencies or through participation of industrial partners.
- 1997- 1998 Lithuania - AB Kaunas Zuvis - Development and implementation of Management Information Systems for the fishing industry in Lithuania.
Developing and assisting in the implementation of Management Information Systems in AB Kaunas Zuvis, a Lithuanian fish processing industry. The project will be carried out in co-operation with Fisheries Department, Vilnius.
The purpose of the Management Information Systems is to provide the management of the fish processing industry with an instant control system which

- during production time can give the necessary information for the management on costs, based on the actual flow of raw material and the desired end products. The project includes analyses, design, implementation, training and education.
- 1997- 1998 Lithuania - AB Siauliu Gela - Developing and marketing of new products for the fishing industry in Lithuania.
Developing of processing methods for maturing Baltic herring and sprats as a semi-processed raw material for further processing into marinated, pickled and/or salted fish products.
Developing of two or three new product categories with a number of variants in each category based upon market research and consumer group testing.
Implementation of the methods and products in AB Siauliu Gela and to assist in establishing the required marketing of these products on both the home market and on exports markets such as Russia and possible West European markets.
Training of marketing and production staff.
- 1996- 1998 Lithuania - Department of Fisheries - Assistance to the fishing industry in Lithuania on establishing a Trade Association and improving quality, economy, management and marketing.
Presenting to the group of company directors of the fishing industry guidelines and recommendations about how to establish a trade association to handle the problems of common interest to the sector and act as its spokesperson, nationally and internationally. The presentation covers the by-laws, procedures and routines of the association, the number and qualifications of its staff, and the ways and means of its financing.
Three training workshops for the managers of the Lithuanian fishing industry in understanding the needs for and possibilities of improving the quality, economic and marketing performance of their companies and the ways of doing it, including the related management tools, organisational development, technological and hygienic upgrading.
Elaboration of a programme for improving the above-mentioned performance.
Preparation for the financing and implementation of the programme in co-operation with the industry, the relevant Lithuanian authorities and existing multi- and bilateral aid programmes.
- 1996 Latvia - Roja Fish Cannery A/S, introduction of clean/low waste technologies - Analysis of the cannery and preparation of a proposal for implementation of clean and low waste technologies at Roja Cannery. The proposal included an estimate of the obtainable reduction of the water consumption and the environmental load of the wastewater. The proposal also included a description of the different technologies, their water saving and environmental effect, the investment cost, the economic benefits and finally a plan for the implementation.
- 1995 - 1996 Estonia - Salmo, clean/low waste technology (Phase 1) - Establishment of environmentally compatible Estonian fishing industry on feasible conditions regarding economy and energy. Technical draft project.
- 1995 - 1996 Estonia - model cannery - Establishment of a "Danish design" model fish cannery equipped with Danish production machinery and operating according to Danish standards for layout, hygiene, environmental protection, working environment, quality and efficiency of production. The model factory will be used as a working technical high-school to train the present and future staff of the Estonian fishing industry in all aspects of production technology, including energy savings, quality and management. It will at the same time act as an East European "shopping window" for Danish fish processing and environmental technology and know-how. Technical draft project.
- 1995 - 1997 Poland - Wilbo Seafood, Gdynia. Quality Management according to ISO 9002 -

- Demonstration project in Polish cannery with the purpose of enabling Sea Fisheries Institute, Gdynia to introduce Western quality standard in the food sector in Poland. - Project management, detailed technical design, implementation running-in, training and procedures for maintenance, all done for MATCON A/S which is responsible for the total project.
- 1994 - 1996 Latvia - Auda, clean/low waste technology (Phase 2, see Phase 1) - The project includes: technical draft project and marketing analysis, detailed design, technical manuals, implementation, training and education, diffusion of results, implementation of clean/low waste technologies in the entire Latvian fishing industry.
- 1994 - 1995 Lithuania, Ministry of Agriculture, Fisheries Department - Master plan for the fisheries sector.
- 1994 South Africa, Irvin & Johnson, Cape Town - Upgrading of white fish processing plants. Planning and designing of production, including development of new flow lines for reduction of production time from raw material to final frozen products. Evaluation of freezing technology including horizontal and automatic plate freezers, blast freezers and belt freezers.
The project includes planning, designing and implementation of production equipment and upgrading to international standards for production facilities including technical documentation and manuals for the new processing lines.
- 1993 Mozambique, Master Plan for the Fisheries Sector - Phase 1 of the elaboration of a master plan for the industrial and semi-industrial fisheries sectors of Mozambique including:
Identification of sector problems and development objectives in a logical framework approach (LFA).
Work plans and terms of references for 17 man-months of consultancy services.
Sector reports and master plan document.
Client: Secretaria de Estado das Pescas, Maputo.
- 1993 - 1994 Russia, Trawl Fleet Corporation, Kaliningrad - Project regarding the establishment of a modern fish processing plant and cold stores in Kaliningrad. The production is based on frozen raw material from the company's high sea fleet. The project is prepared for stepwise extensions of the plant and for flexible production lines. The project includes an implementation of energy saving thawing methods, management systems for quality assurance and cold stores.
- 1991 - 1995 Poland, Szkuner, clean/low waste technology - Establishment of an environmentally compatible Polish fishing industry on economically feasible conditions. A demonstration project introducing clean/low waste technologies. The project will at one selected Polish fishing industry, Szkuner, change the pattern of herring production by introducing clean/low waste technology components and modernising the plant according to Western standards with regard to hygiene, quality etc.
The project has identified the possibilities, the method and the economy of marketing fish silage for animal fodder in Poland and has made it possible to close down the highly contaminating and energy consuming fishmeal plant. A production and sale of 70 t of silage per day is established with great success.
Further results of the project are a reduction of water consumption by 50%, reduction of the total amount of organic matters in the wastewater and finally an improvement of the filleting yield by 7 %.
The project includes: technical draft project and marketing analysis, detailed design, implementation, training and education, technical documentation and maintenance instructions, diffusion of results, implementation of clean/low waste technologies in the entire Polish fishing industry.
- 1992 - 1993 Latvia, Baka Ltd., Ventspils - Pre-feasibility study for smoked sprat canning plant

with a capacity of 3500 tons of raw material per year. The overall purpose of the project was to assist the Latvian fishing industry "Baka Ltd." in their privatisation efforts through the elaboration of a definite project for a modern smoked sprat canning plant able to produce on market economy terms.

A well working modern processing plant of a high technological quality and hygienic standard is of decisive importance for the re-conversion that BAKA Ltd. is facing. Strategically, the plant must emphasise the production of canned smoked sprat of high and consistent quality for the export market. The "high quality" image will enable the plant to establish itself as a reliable supplier of products to quality-conscious segments with a great purchasing power.

The study includes description and definition of conditions, process-flow, layout, production control system, offal handling, technical installations, investment budgets, market survey and cost-benefit analysis.

- 1990 - 1992 Greenland, Royal Greenland Production, Sisimiut - Shrimp and fish processing plant. Restructuring of old and construction of new building for combined processing plant for Royal Greenland. 10 to 12 shrimp peeling machines including IQF-freezing lines, glazing, sorting and packing and 3 fish processing lines including horizontal plate freezing.
The services include process planning, planning of production areas, specification of production equipment, negotiation of contracts with sub-contractors, supervision, erection and start-up support. Project for the main contractor Atcon Greenland, A/S.
- 1992 Latvia, Auda, clean/low technology (Phase 1) - Establishment of an environmentally compatible Latvian fishing industry on economically feasible conditions. A demonstration project introducing clean/low waste and energy saving technologies. The project will at one selected Latvian fishing industry change the pattern of production by introducing clean/low waste technology components and modernising the plant according to Western standards for e.g. hygiene, quality etc.
The project includes identification and choice of the plant together with local authorities, project identification, technical draft project and application for completion of the project.
- 1991 - 1992 Poland/Latvia, workshops - Four training workshops of 10 days each for the fishing industry sectors on technology, quality and management. Assisting the companies in evaluating ways and means of improving the quality and economy of the production in order to ensure a viable development of the industries and to enable them to become producers of western standard quality products.
- 1990 - 1992 Scotland, International Fish Cannery Ltd., Fraserburgh - Cannery for sardine, mackerel and miscellaneous products. Capacities 3,000 t of sardine and 6,000 t of mackerel per year. Two existing canneries were merged and operated in one new building. The services rendered included preliminary plant layout with renovated and new equipment, material balances, building requirements and technical installations. The project included detailed layout and installation. The new plant was put into operation in 1993.
- 1990 - 1991 Denmark, food database on clean technology - Including fish, shellfish, dairy and meat products for the Danish Environmental Protection Agency. The database includes process description regarding quality, capacities and other key figures, specification of environmental conditions, clean and non-waste technologies. The project includes project managing, determination of database content and preparation of data cards for fish and shellfish processing.
Client: The Danish Ministry of the Environment
- 1990 Indonesia, Secondary Fisheries Schools - Financed by DANIDA. Layout and cost estimate for fish processing pilot plant for vocational training. The pilot plant included shrimp processing and canning of tuna, mackerel and sardine.

- 1990 Gambia, Banjul - Rehabilitation and extension of a shrimp and fish processing plant in Gambia producing block frozen products. Analysis of production flow, improved layout and introduction of new work routines to increase productivity and hygiene. Project for DANIDA.
- 1989 - 1990 Greenland, Royal Greenland Production, Ilulissat - New shrimp processing plant producing cooked, peeled IQF-products. Capacity 15,000 tons of fresh and frozen raw material per year. Detailed construction layout. Tendering and contracts. Budgeting and control. Detailed description of electrical control panels. Purchase and inspection of equipment in Denmark. Budgeting for and inspection of erection in Greenland. Operating instructions and start-up.
- 1989 Greenland, Project Management Tools - Development of computer programme as a tool for project management. The programme included sequential estimation of revenues, activity, resources and time planning. The programme included a report with tables, diagrams and time-schedules.
- 1986 - 1987 Greenland, Royal Greenland Production, Aasiat - Shrimp and fish plant in Greenland with a capacity of 10,000 t of raw material per year. The shrimp plant processes fresh or frozen raw material into cooked, peeled IQF-products for catering and retail. The fish plant processes raw material into a variety of frozen products. The project included layout, design of equipment and electronic control systems, control of equipment, technical documentation, supervision and production start-up.
- 1985 - 1986 Tunisia, Bizerte - Feasibility study of a canning plant for tuna, mackerel and sardine and a connected can making plant and fish meal plant. Capacity 16 t of raw material for canning and 10 t for fishmeal per eight hours shift. Layout, design, dimensioning and cost estimates. The study was made for the Tunisian Republic, Ministry of Agriculture.
- 1984 - 1985 Canada, Newport, new fish processing plant - capacity 9,000 t of raw material/year. Participation in layout of entire plant. Detailed layout of most departments including new detailed solutions for yield control systems, blast freezing, horizontal and vertical plate freezing of products and offal. Inspection of production equipment in Denmark. Supervision of installation in Canada. Follow-up after implementation and technical documentation, cleaning and maintenance instructions.
- 1983 - 1984 Denmark, Skagerak Fiskeeksport, Hirtshals - rationalisation and remodelling of herring, mackerel and cod filleting plant. Capacity 25,000 t of herring, 13,000 t of mackerel and 6,000 t of white fish per year. Various layouts of internal transport. Design of new weighing systems for raw material and herring fillets. Remodelling of cod filleting department including new trimming lines.