7. Business Stories

Books about management generally offer examples from famous US and West-European companies. In this part I would like to present two companies which arose from a zero point after the political change in the former Czechoslovakia in 1989. In 1989 the communist regime fell and from 1990 on it was possible to found companies and do business in this country.

In 1993 Czechoslovakia split into two countries – The Czech Republic (10.2 million inhabitants, capital Prague) and the Slovak Republic (5.4 million inhabitants, capital Bratislava). Both independent countries are today members of the European Union and collaborate with each other very well. Slovakia is the largest global car producer (more than 930,000 cars in the enterprises VW, KIA and Peugeot; 171 cars per 1,000 inhabitants) and Bohemia is the second on this scale (1.3 million cars in the enterprises Škoda and TPCA, 111 cars per 1,000 inhabitants). The whole European Union manufactures 14 million cars a year.

For those who do not know these two countries in Central Europe I would like to add that seven players from Bohemia and Slovakia were playing in the Stanley Cup final 2013. Four Czechs (Jaromír Jágr/Boston Bruins, David Krejčí/Boston Bruins, Michal Rozsíval/Chicago Black Hawks, Michael Frolík/ Chicago Black Hawks) and three Slovak guys (Marián Hossa/Chicago Black Hawks, Michael Handzuš/Chicago Black Hawks and Zdeno Chára/Boston Bruins).

The LINET Story



The company LINET was founded by Zdeněk Frolík in the Czech Republic in 1990. The firm started with a starting capital amounting to 15,000 USD in the ruins of an old agricultural farm. The firm had no product, nor customers or manufacturing equipment. Its founders had no knowledge about this business and the risks which it can bring. If they had had, the company would have never arisen.

Today the company LINET is the third biggest producer of hospital beds worldwide. Its headquarters are currently in the Netherlands – LINET Group SE and also the German company Wissner and several daughter companies in the Netherlands, Belgium, France, Spain, Great Britain, Sweden, Brazil and Mexico are members of this group. Further firms are being founded during 2013 in Singapore, China, Russia and Turkey. The 2012 turnover was 150 million EUR. Annually the group produces and sells almost 70,000 beds for hospitals and nursing homes. The EBITDA is more than 20 million EUR. Within five years LINET Group plans to achieve a turnover of 270 million EUR and EBITDA of 50 million EUR. During the last ten years the LINET turnover increased 5.5 times, EBITDA four times and the shareholders' equity has increased during ten years from 5 million to 236 million EUR. The company employs 900 employees – 550 in the Czech Republic. It sells its products to more than 100 countries worldwide. The sales are growing at the highest rate in the USA where the company started business in 2009.



LINET is typified by its strong innovative ability; it works with talents and is young by its average age as well as by its way of thinking. It has a strong capability to find new solutions, to learn and to realise its plans quickly. The key requirements on the employees are loyalty, diligence, fairness, motivation, determination and the ability to learn continuously.

The owner Zbyněk Frolík (1953) who worked as a technical manager at a hospital before the political change in Czechoslovakia and tried to make more money by growing and selling flowers, has a competitive spirit. He wants to be excellent, to do things in the best way

worldwide and to win. He considers every obstacle to be an opportunity, the problems and their solving make him stronger rather than tire him.

As to the innovations of his products, in which he actively participates, the founder of the firm says:

"We started with bent pipes, four wheels and one engine in the rear part. Today we do not view the bed as a final product but as a tool which is a logistic address on which a patient is placed. During the patient's stay on the bed we add the value by improving his/her state of health or eliminating harmful influences from the surroundings. We utilise the time of the patient's stay on the bed for collecting the relevant information for acquiring an early diagnosis, prevention and monitoring his/her state. We are able to measure the heartbeat, pulse, breathing, the blood pressure pulse wave velocity through the aorta, the response speed of the nervous system in the individual parts of the human body. We monitor on-line any change of the cordial performance, the intracranial pressure in the skull without any need of trepanation, the movement activity of the patient on the bed and other functions such as measuring the humidity under the patient or the ability to recognise in time the intention of the patient to leave the bed. We are able to transmit all this data wirelessly to the hospital information systems and remotely through the internet so as to diagnose the technical state of the bed or to carry out remotely the stocktaking of all the beds at a hospital e.g. in Australia. It means that today and also in the near future the bed will be a "HUB" on which a lot of monitoring functions will be placed, the bed will communicate with other appliances around the bed and with other beds as well, and the ability to foresee the onset of diseases and their development in time will be improved. This technology is designed in such a way that it can be also used in beds at nursing homes or at home."

The founder of LINET gives advice to young entrepreneurs – don't be afraid to follow your dreams and adhere to the slogan of Toyota that nothing is impossible. Play fairly; be different, innovative, positive and diligent.



Zbyněk Frolík, the founder and CEO of the company LINET

Linet **Product Problems and results** Establishing the firm in the area of an agricultural cooperative farm, starting capital 15,000 USD, building brand and company from point zero The first product - Decima 1990 – old farm near Prague A successful product, new manufacturing development centre with the goal of catching up with the world top manufacturers. Turnover 19 million USD. 1995-1996 – new manufacturing hall, development centre **Innovated product Decima 95** 275 employees, manufacturing area 21,000 m^2 amounting turnover 32 million USD, the concept of manufacturing system LINET - SMED, TPM, 5S, teamwork, visualisation, 2000-2002 quality in process, Kanban, Kaizen. A new concept of New products Eleganza and lifting the bed – a global Multicare standard today 320 employees, turnover 70 million USD, new customer and business centre, innovation of products through WOIS methodology defining contradictions, new functions, higher value customer and cost reduction at the same time, solving the area **Innovations** production planning and

2006

control, a new concept of the

system

manufacturing

LINET







580 employees, daughter companies abroad, turnover 100 million USD – solving logistics and HR development, on-line monitoring and process visualisation, new method of producing patient surface and front part of the beds, further product and process innovations bringing new benefits and a reduction of material and production costs



2013



global leader manufacturing beds with a turnover of 230 million USD. Leader in innovations, intelligent bed, contactless scanning of the patient's state of health and communication with personnel and family through GPS, web cameras, access to digital medical documentation, etc.

Influence on safety

- side-rails preventing accidents
- function lockout preventing accidental damage by the bed itself



Influence on health

- adjustability preventing immobilisation syndrome, patient positioning to positions nevessary for treatment
- auto-regression of the back and thigh parts – reducing the risk of bedsores
- anti-decubitus mattresses reducing the risk of bedsores

Influence on controllability

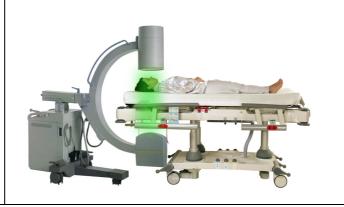
• columns, electronics – simple adjustment of the bed to a convenient position by the patients themselves





Influence on convenience

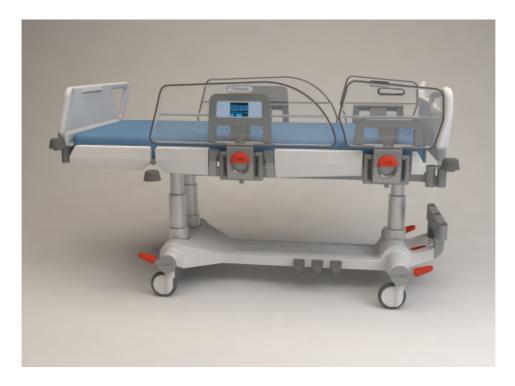
• X-RAY translucent mattress platform; reducing the need to move the patient



Influence of design on important functions of the patient (designer Ivan Dlabač)



Distinctive design elements are the fully transparent front sides and side-rails which fully maintain the function, however, do not create any barrier between the patient and the surroundings. It is a good example of where the design and technical solution affect the rehabilitation.



Influence of design on the patient (designer Ivan Dlabač)

The Value Curve shows a few differences of the LINET strategy compared to their competitors. The company already concentrated at the beginning on a narrower product portfolio than its competition. However, the products involve prefect knowledge of the customers' world and adapting the product to

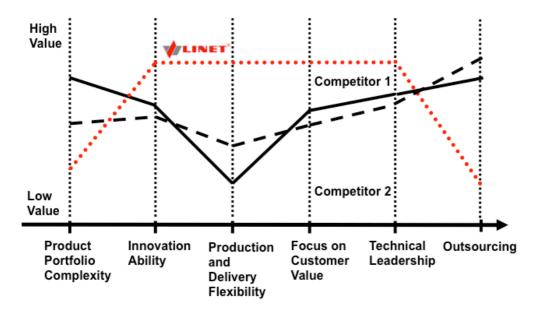
specific conditions. The smaller and well-organised segment portfolio enabled them to create deeper details in the area of innovations and to bring in the customer functions and flawlessness which a lot of competitors were not able to offer.

Probably the innovation capability of the company is its biggest competitive advantage. The innovation teams dealing with products have always been led by the head of the marketing department, and also the owner of the company Zbyněk Frolík who has always been a very active team member. The innovation project always defined contradiction-oriented goals, e.g. improving the patient self-service and mobilisation as well as increasing the safety of the patients, adding new functions and cost reductions.

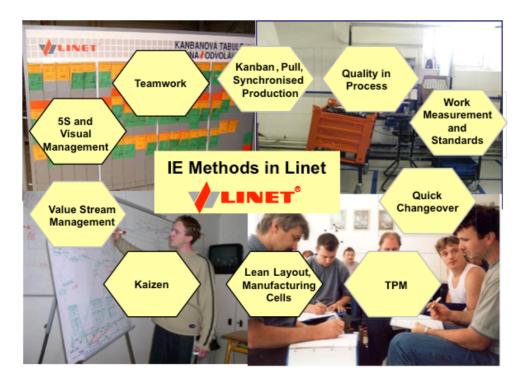
The continuous innovations were also running in the work-flow system, purchasing, production and distribution with the aim of achieving maximum flexibility. The methods of Industrial Engineering for reaching maximum workplace flexibility (SMED, TPM, visual management, standardisation, 5S) as well as flexibility in the processes and value streams (Value Stream Mapping, Kaizen, Quality in Process, manufacturing cells).

The company has established close contacts with its customers and the service employees also take part in the innovation processes but there are also teams in which the customers also participate. The company LINET thoroughly studies the customer processes, the ways how the bed is utilised as well as any problems which arise during its usage.

The company attempts to achieve technical leadership in the product area as well as in the manufacturing technologies. During the time period when the majority of competitors were more or less outsourcing their activities, LINET was studying new technologies; they optimised the processes and mastered not only the development and assembly of complex products but also the development and production of individual components and modules. LINET is also developing a lot of special tools, fixtures and special devices for its production.



Linet Value Added Curve



Linet Flexible Manufacturing System



Working Place Standard





Air bolster

Flexible Equipment and Machinery



Flexible Equipment









Manufacturing Cell

Example – Innovation Project in LINET

Project: Innovation of hospital bed

Project duration: 6 months

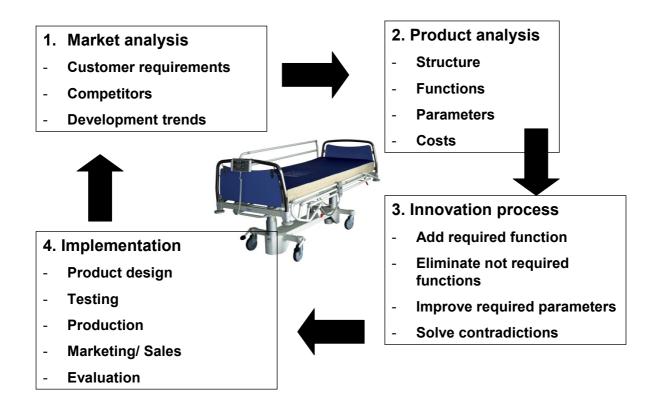
Project team: designer, production engineer, external consultant, logistic expert,

process engineer, service, marketing, customer

Project inputs: Target price, target markets, product life cycle, production volume

Project goals: New product with higher customer value (new functions, better

parameters, lower costs)



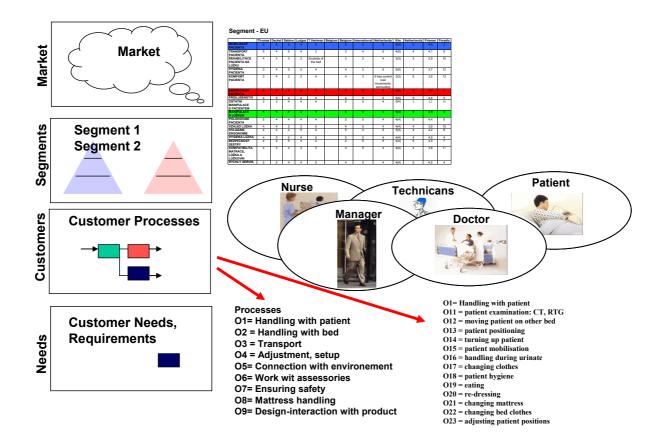
Innovation project – hospital bed

The innovation project started with an extensive analysis of the markets, trends and customers. The following groups of customers were defined – nurses, patients, physicians, hospital managers and service technicians (maintenance workers) of the beds at hospitals.

After an agreement with the management we sent a team of students to the hospital which analysed the processes and various situations when the bed was being used. Subsequently these analyses were discussed thoroughly at workshops with the customer groups.

At the same time the analysis of problems caused by the beds at hospitals – falls from the beds, inflammations and infections.

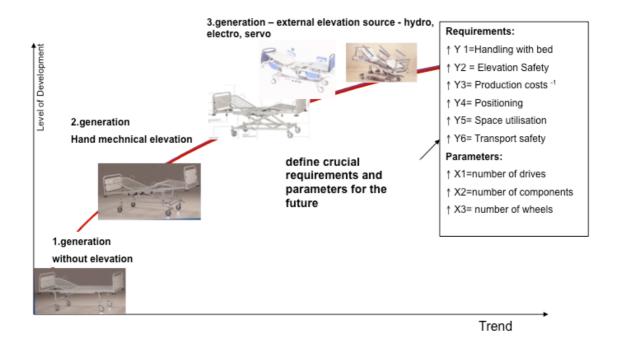
These analyses resulted in key requirements on a new generation of beds in a contradiction matrix. Subsequently the evolutionary trends of the bed and its individual modules as well as various concepts for technical solutions of new functions were analysed.



Market Analysis



Process Analysis in Hospital



Analysis of Innovation Evolution Trends

Function	Solutions			Other solutions	
Function 1 moving up loading plate	Sparta Calma	Terno		7	
	0	0			
Function 2 handling with back element	7-3		5		
			7-7		7

Analysis of Functions and Solutions Concepts







Project results

Product sale increase: +20%

Number of parts: -15%

Production costs: -30%

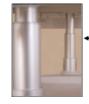
Production time reduction: -40%

New functions +10%

Number of Parts - 15 %



Number of Parts - 30 %



Eleganza De Luxe	before	after
Production Costs - €	1350	650
Time Standard	15	8
Eleganza Standard	before	after
Eleganza Standard Production Costs - €	before 1000	after 450

Handling mechanism	before	after
Production Costs - €	60	23
Time Standard	3	0,3

The OMS Story

"It's not the strong companies that beat the small ones but rather the faster the slower ones, those of better quality those with a lower one, the more courageous the less courageous." Vladimír Levársky, the founder of the company OMS.



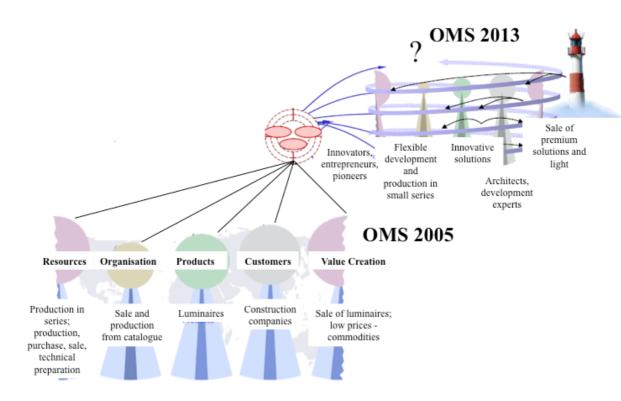
Vladimír Levársky, the founder and OMS CEO

- In 1995, the former maths teacher Vladimír Levársky founded the lighting company OMS with a start-up capital amounting to just 17,000 €.
- He gradually started to develop and sell the luminaires.
- Today the company OMS collaborates with top designers and belongs among the leaders in the area of development and sale of comprehensive lighting solutions.
- The company values flexibility and speed, high morale, to be a step ahead, the desire for successes, uniqueness and total quality.
- OMS is one of the leading global companies in the area of lighting and exports its goods to 122 countries worldwide.

In this turbulent world those actions and deeds which bring real knowledge and experience are important. The procedure "action – assessment – knowledge – correction" works better than complicated planning which often fails. This management style which resembles the system "attempt – failure" leads through the chaos to the goal faster than systematic and bureaucratic planning. The luminaire producer OMS Dojč is an example of this management system. The development and manufacturing of a product on a specific order from a customer takes 16 days in OMS – the competitor, a major renowned international company, can realise it in several months. OMS possesses knowledge; its competitors have analyses and plans.

OMS flexibility in numbers

Number of luminaires produced a month: 260,000
An average production batch: 23 pieces
An average delivery deadline of standard product: 5.3 days
An average delivery deadline of a new solution: 16 day



OMS Strategy

Strategic changes:

- From imitating to setting the trends. The company at the beginning imitated and copied the global players. Today it attempts to state the global trends in the area of lighting solutions, innovations and technical progress.
- From selling the luminaires to selling the light. The company proceeded from the sale of luminaires to selling comprehensive lighting solutions for interiors as well as exteriors. It has invested in LED technologies and in manufacturing technologies which facilitate extreme flexibility and production in batches (lot size).
- Through the transfer to comprehensive and innovative solutions the company has acquired new groups of customers architects, investors and developers.
- During the years 20012 2013 the company presented a precisely defined and measurable value for the customer called LQS (Lighting Quality Standard) clearly defined and measurable lighting quality parameters for the customer. The philosophy is based on the fact that the customer does not buy a luminaire but the light which has to possess measurable quality parameters. OMS defined them in six areas 6E Ergonomics, Efficiency, Emotion, Esprit, Ecology, Exceptionality.

- OMS decided on new methods of communication with the customers – the virtual 3D lighting shows, social networks. They built a 3D cinema in a truck with LQS presentations for various types of applications – in the office, hotel and outlet. The first presentation took place at the lighting fair in Frankfurt Main and since then the truck has been visiting European cities where the OMS experts present to the key customers the values which they are offering.





Tool for modelling LQS – lighting quality for customers

The innovations, flexibility and speed, the ability to learn and rapid realisation are the key elements of the OMS strategy.

OMS innovates on the level of the whole business system and the innovations have to possess the following properties:

- to considerably increase the value both for the customer and the producer/suppliers
- to improve the customers' quality of life
- to improve the environment
- to provide emotions besides the measurable values
- to remove discrepancies, conflicts, paradigms or contradictions which have not been solved
- only the customers, by buying and paying for a product, decide what an innovation is.

The 3D LQS presentation in a truck which has been criss-crossing Europe for two years (http://www.omslighting.com/news/1934/european-lighting-tour)







Success factors of the company OMS during recent years

- The strong product portfolio, exceptional solutions and innovations
- The speed and flexibility of development and production
- The branded electronic components of high quality
- The local production, a network of verified local suppliers
- The products tailored to the customers' needs
- Company's own development, design, optical efficiency, technologies (LED) and defining new trends LQS, 6E
- The willingness to meet any customers' demands

OMS values

- The flexibility and speed
- The high morale
- Setting trends to be a step ahead of the market, competitors, business partners
- The desire to win
- The innovativeness and exceptionality of the solutions
- The total quality production, suppliers, service.

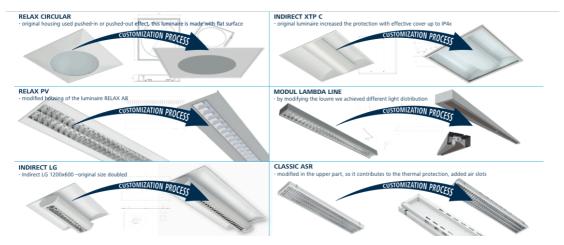
OMS regularly analyses the global trends in the area of lighting and collaborates with the best European researchers and designers in this area.



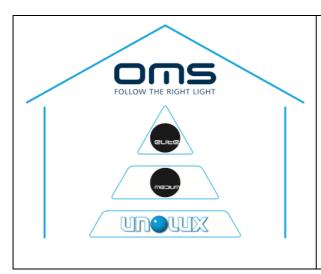
Wherefrom – initial state, past	Where – future
Value for customers	Value for customers
- Broad assortment of good quality products for a reasonable price	 Exceptional solution for customers – selling light and solution LQS 6E
Value for the company	Value for the company
- Creating profit through a wide assortment, price and production volume	- Creating profit by a higher margin in premium segments, by selling solutions
Customers	Customers
- Warehouses, construction and installation companies, producers and suppliers	- Developers, investors, architects, electricity distribution companies, partners for selling light and solutions
Products and services	Products and services
- Luminaires and accessories, service	- Open innovation, Lighting Innovation Centre, comprehensive solutions
Processes and organisation	Processes and organisation
 Development – copying, imitating, competitive through prices, assortment and flexibility. What are our processes and organisation for servicing customers? Production – from manual work to new Technologies and lines Sale and communication with customers – catalogues, leaflets, e-mail, visits of customers' premises Purchase in large amounts at reasonable prices 	 Development – company's own innovation centre (Lighting Innovation Centre), collaboration in international networks with top research, development and designers Production with latest Technologies with the highest flexibility Sale and communication with customers – European Lighting Tour, 3D, virtual reality, social networks, networking, iPad Purchase – maximal flexibility in the area of volumes and prices, general innovations and delivering novelties as quickly as possible
Resources, partners, knowledge	Resources, partners, knowledge
 "High-performance" and disciplined employees Employees oriented on technique and production Managers Reliable and modern technologies 	 Innovators, entrepreneurs, pioneers Innovation and customer-oriented employees International leaders The latest flexible technologies

OMS strategic innovation approaches

1. Customisation



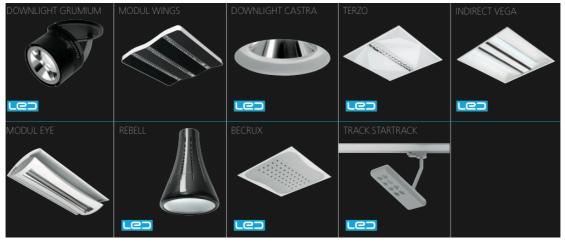
2. Segmentation of Brands

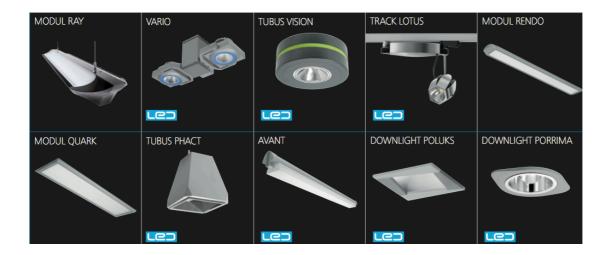


ELITE – an exceptional and unique architectonic brand of the best quality. Innovative solutions based on the latest lighting trends.

OMS – a strong commercially oriented quality trade mark. High variability, flexible customisation and efficiency.

UNOLUX – the best European brand of lighting with high quality in a lower price segment





3. Diversification



4. Flexibility

Operating flexibility

- The commercial and architectonic product portfolio suitable for both indoor and outdoor lighting using the latest LED technologies
- The continuous processing of the orders and rapid reaction to the customers' requirements
- The immediate staff capacity
- The short delivery terms (3 7 days)
- The customer-oriented solutions

Strategic flexibility

- The capability to innovate quickly
- Following the latest trends
- Grasping new opportunities
- The continual geographic expansion

- Utilising new technologies
- The flexibility courage speed

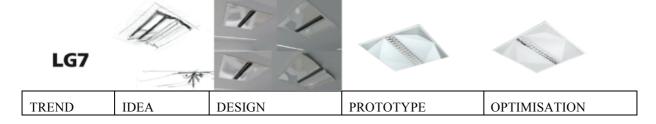
Flexible technologies



New designer solutions

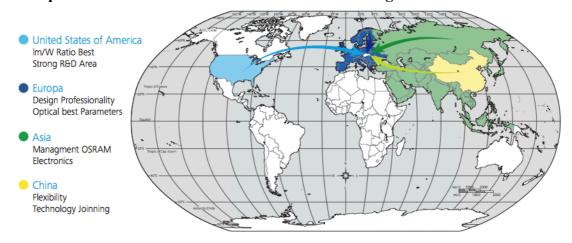


5. Solution Comprehensiveness





6. Rapid Transformation to New Trends and Technologies



OMS innovation procedure

- recognise and model the future environment of the business space
- create the future customer
- map, adjust or create trends
- adjust strategy according to which you want to work
- adjust philosophy, vision and goals in the company
- find the courage to do things don't talk about them, do them!
- motivate, "set aflame and inspire" your team
- prepare support for innovations the innovation harmony (if you start, this effort works, perceive and read it)
- communicate with the market constantly but manage and decide you, yourself
- be prepared for obstacles, resistance, laziness, unwillingness
- innovate constantly and improve your management system

Example – innovating OMS processes. Transfer to flexible manufacturing cells.

The objective of the project was to create a new concept of production for various product groups, increasing the flexibility and production productivity through flexible manufacturing cells.

Project sequence	Time	Methods
Defining goals and sequence of the project	2 weeks	Preparing project, project sheet (schedule)
Analysing product portfolio in relation to the assembly lines	2 weeks	Analysis of sale, PQ analysis, analysing assembly procedures and bills of material, economic models
Analysing the current performance efficiency of the assembly line - snapshooting	3 weeks	Snapshooting, analysing the material flow, time analyses, Value Stream Mapping
4. Designing a concept, principles of new assembly lines	6 weeks	Defining the time standards, taking and balancing the line, line layout design
5. Detailed design of the pilot assembly line (production-logistics)	8 weeks	Detailed designs of workplaces and ergonomics, supplying and placing the material, logistics and management
6. Implementing the project of the pilot assembly line and assessment	8 weeks	Cartoon simulation, corrections, design and manufacturing working desks and buffers, building and testing the line
7, Implementing to other assembly lines	12 weeks	Creating further lines of a similar concept, completing logistics – supplying material and production planning and control

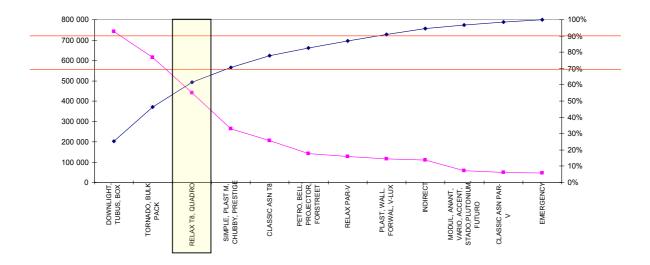
The analysis of the current state – high WIP and missing standardisation

The analysis of the current state showed the following problems:

- Unknown standards of work consumption for individual operations
- No comparison possible with the planned performance efficiency and following the line productivity
- Unclear utilisation of people (productivity) difference of performance
- Lack of standards of work consumption affect the accuracy of the processes of calculation, planning and rewarding
- Lack of standardisation prevents systematic process improvement

The goals of the project:

- 1. Increasing the flexibility which will bring a change of the performance efficiency from 40 to 500 pieces
- 2. Improving quality the problem will be recognised in the process and solved immediately
- 3. A faster reaction and higher reliability by shortening the throughput time into minutes
- 4. Reducing the handling operations, elimination of handling with empty cardboard boxes
- 5. A more effective production planning and control
- 6. A simpler and more effective pricing and following of costs
- 7. A simpler analysis and measurement of work, standardisation and comparing performances

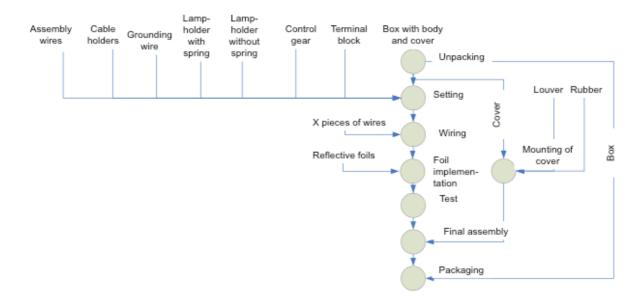


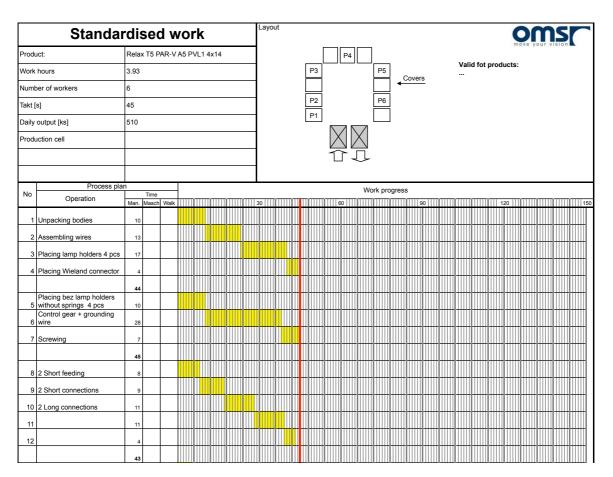
PQ analysis of assembly procedures and selecting a product group into a cell

Project steps:

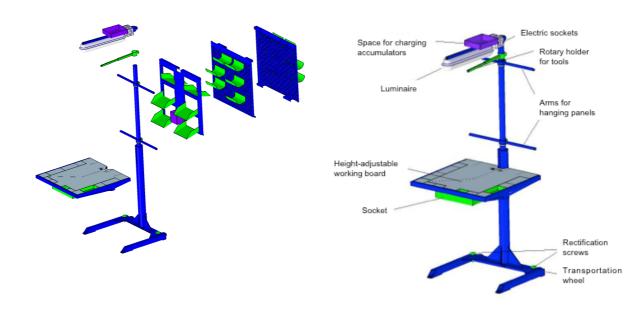
- 1. The analysis of the volume produced
- 2. Defining the types of assembly
 - o Single-purpose assembly line
 - Assembly cell for product groups
 - Separated assembly desks
- 3. Defining the takt of the assembly lines
- 4. The concept of the assembly line layout
- 5. The analysis of the assembly procedures
- 6. Stating the intensity of labour and balancing the lines

- 7. The detailed design of the assembly lines
- 8. Supplying the parts to the assembly line
- 9. The standardisation and quality assurance
- 10. The visualisation and reporting
- 11. Improvement





New working standards





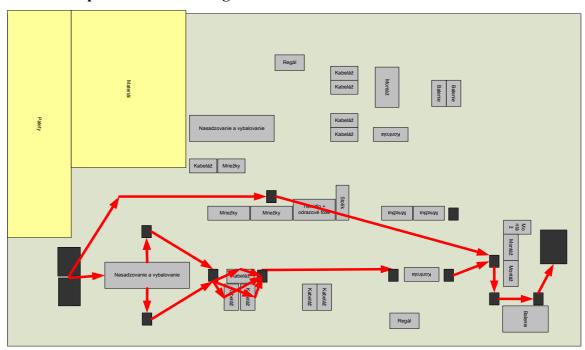


New workplace design and visualisation

Results – Summary

Parameter	Before change	After change
Productivity pcs/hour	4.11	8.33
Production area m ²	130	36
Production throughput time	575	15
Inventories	523	20

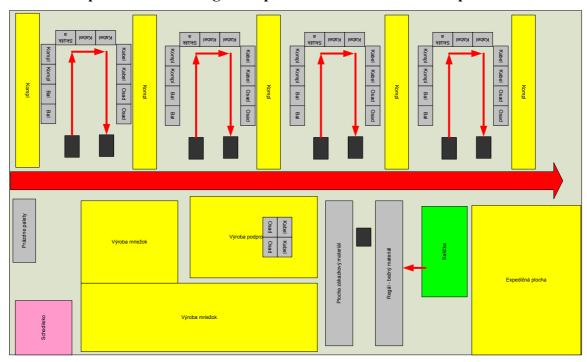
Production process before change







Production process after change -4x production cell in the same space





Summary

I have introduced two companies. One from the Czech and the other from the Slovak Republic. The first one (LINET) started its activities in 1990, the second one (OMS) in 1995. Both firms started with a starting capital amounting to less than 20,000 USD and today their turnover counts in tens of millions of EUR – LINET 150 million EUR and OMS 75 million EUR.

What have these companies in common?

- 1. Both owners have a sporting spirit and a desire to win in the best global competitions. Both of them were national winners of the Ernst & Young competition "The Entrepreneur of the Year" and both of them have ambitions to be the best in the world with their products.
- 2. Both owners are personally engaged in realising the company strategies and innovation projects.
- 3. Both companies built their own centres for selecting and developing talents, entrepreneurs and innovators.
- 4. Both enterprises systematically study the latest trends of the customers, on the market, new technologies for their products and manufacturing processes and invest in them.
- 5. The companies LINET and OMS do not copy the best practices but they have developed their own unrepeatable business and production systems.
- 6. Innovativeness and flexibility dominates over systemacity and standardisation in both firms. It is difficult to standardise and stabilise the systems when the company and its products are being changed all the time and the customer orientation, flexibility and speed of reactions are the main competitive advantages.
- 7. A lot of errors which have to be recognised and eliminated at their rise develop in such a dynamic company management system. The ability of permanent experiments (not the Power Point analyses) is at the same time a practice of acquiring new knowledge and know-how.
- 8. Both firms create networks with research centres, universities, designer studies and consultancy companies.
- 9. Both owners possess unusual inner energy but also the ability to impart energy to other people, to make principal decisions at the right time which are sometimes more based on their intuition than on rational analyses.
- 10. Both owners have strong moral standards which they implement uncompromisingly on themselves as well as their surroundings.

Conclusion

If you have attentively read this booklet and have gained a new impulse or information, that is fine. However, it makes no sense if you do not use it in action.

If this booklet has helped you search for answers to your own way and has planned its individual steps, it is excellent – you have a plan which can help you better prepare for your way. But the plan is nothing, if you do not start the way.

Have you started the way? Congratulations. You are not as successful as you imagined, things are developing differently? There are no direct and simple paths leading to great goals. Don't give up, take lessons from the errors and repair those things which are to be repaired.

Are you fatigued? Evagrius Ponticus, a Desert Father in the 4th century wrote that a state of internal exhaustion is achieved most quickly when we are impatient, when we have no self-restraint, and expect and require the best possible results as fast as possible. Choose which things are of key importance for your life and business and concentrate on them. Don't let yourself be distracted by other things.

Do you have any questions that you did not find any answer to in this booklet? Be happy. After all, you do not want to live your life according to a booklet. The most important questions and answers are within you.

Your have just planned important steps for the future of your company. It is possible you did not have some items of information or you are not sure if they are right. Return back, adapt and complete the plans for your actions. Visit your customers, ask them, listen to them, observe them when they are in action and try to understand them better. Not all actions will come off as you expect. Assess the cause, take lessons and prepare further steps.

Now the most difficult part of your business awaits you – the action, realisation and learning. Define great goals which will bring you to where your dreams reside. Good luck.