

HANDBOOK OF CERAMIC LEARNING HISTORY

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1 INTRODUCTION

The ceramic industry covers a broad range of ceramic types. To fight competition, ceramists all over the world need to invest in quality and also try to make optimum use of resources required in ceramic production for minimizing production costs.

This book

- provides training material on basic techniques & skills for junior ceramic entrepreneurs in ceramic sector
- includes environmental management methods to save resources in ceramic production (gas, power, water)
- includes business management methods to run the company
- includes instructions how to use the CERVIVE learning history toolkit.

The handbook

- is based on the outcomes of the need analysis
- addresses real ceramists' needs
- use the training materials as references for deeper knowledge in specific ceramic techniques

PART I: DEVELOPING CERAMIC SKILLS

2 NEEDS ANALYSIS

To determine ceramic SMEs needs in European Union and locally (each project member's country) questionnaires were answered and direct discussions were made with the local firms.

The results of the needs analysis which come out of the questionnaires' statistical processing are as follows

- Most of the ceramists participating are SMEs, according to their employees (1-5) and annual turnover.
- Most of the ceramists deal with decorative ceramics & artifacts, then pottery and tableware. There are a significant percentage of them that produce other products, such as industrial ceramics (bricks, tiles etc.) or art. Almost 80% of the ceramists though are of the target group of the Cervive project.
- The majority of the ceramists get inspiration from history, then nature and everyday life.
- Most of the ceramists address to local people and tourists.
- The majority of the ceramists asked (69,4%) belong to the first and second generation, as 41,25% are of the first generation. Most of the ceramists answered that they are afraid of losing their continuity in their business, as most of them and of first or second generation.
- The majority of the ceramists consider high risk of not being able to pass their knowledge on future generation, probably as a result of being of first and second generation, and they are afraid of their company's continuity.
- A big percentage of 78% believe that their activity does not have any environmental impact.

- Product quality and know – how, play the most important role in the company's sustainability. Technological upgrading and exporting activity surprisingly do not have significant percentages.
- Ceramists believe that financial crisis and competition from abroad are the major risks for their viability in a percentage of almost 77%.

All the above, result in a general conclusion that the project's outcomes (including the Handbook) must contain data on:

- Techniques and materials
- Technological issues, methods, innovation
- Environmental practices
- Saving resources
- Marketing practices / planning
- Business affairs (start –up etc.)

4 IMPORTANT ISSUES

4.1 ENVIRONMENTAL MANAGEMENT IN CERAMIC SECTOR

4.1.1 General Information for EMS

Environmental management system (EMS) refers to the management of an organization's environmental programs in a comprehensive, systematic, planned and documented manner. It includes the organizational structure, planning and resources for developing, implementing and maintaining policy for environmental protection.

An Environmental Management System (EMS):

- Serves as a tool to improve environmental performance
- Provides a systematic way of managing an organization's environmental affairs
- Is the aspect of the organization's overall management structure that addresses immediate and long-term impacts of its products, services and processes on the environment
- Gives order and consistency for organizations to address environmental concerns through the allocation of resources, assignment of responsibility and ongoing evaluation of practices, procedures and processes
- Focuses on continual improvement of the system

An EMS follows a Plan-Do-Check-Act Cycle, or PDCA. The process is of first developing an environmental policy, planning the EMS, and then implementing it. The process also includes checking the system and acting on it. The model is continuous because an EMS is a process of continual improvement in which an organization is constantly reviewing and revising the system.

This is a model that can be used by a wide range of organizations — from manufacturing facilities to service industries to government agencies.

An EMS is flexible and does not require organizations to necessarily “retool” their existing activities. An EMS establishes a management framework by which an organization's impacts on the environment can be systematically identified and reduced. For example, many organizations, including counties and municipalities, have active and effective pollution prevention activities underway. These could be incorporated into the overall EMS.

There are a number of standards available, around which an organization can model its Environmental Management System (EMS).

There is ISO 14001, a standard issued during 1996 (revised 2004), and forms part of the ISO14000 series of standards providing not only a specification but guidance and advice on a wide range of environmental issues including auditing, labeling, life-cycle assessment etc.

There is also the Eco-Management and Audit Scheme (EMAS) a voluntary environmental management system (EMS), under which companies and other public organizations evaluate, manage and continuously improve their environmental performance. The scheme has been available for participation by companies since 1995 (Council Regulation (EEC) No 1836/93). The latest revision of EMAS came into effect on 11 January 2010. The elements of Regulation (EC) No 1221/2009 (**EMAS III**) improve the applicability of the scheme and strengthen EMAS's visibility and outreach. EMAS III makes registration to the scheme also possible for organizations and sites located outside the EU and EEA (European Economic Area— Iceland, Liechtenstein, and Norway).

The benefits of an effective environmental management system can be realized in:

- **Legislation.** The scope and severity of environmental legislation is ever increasing. A management system that ensures recognition of the requirements and compliance with them will ensure that fines are avoided and personnel is not imprisoned in addition to avoidance of the publicity that inevitably follows an environmental prosecution.
- **Cost Savings.** Successful environmental management will evaluate all opportunities for cost savings, the most common benefits derive from a review of resource/ energy utilization and its efficiency, forcing full consideration of alternative energy sources and their cost effectiveness. The other primary element will be minimization of waste and result and cost of disposal.
- **Customer Requirements.** Many companies have addressed the management system for customer requirements related to quality and ISO 9001. The range and diversity of customer needs and expectations is constantly growing with many customers increasing preference for use of suppliers and sub-contractors who can demonstrate that they are good environmental citizens. No customer would want to risk a tarnished reputation (or non-compliance to legislation) from the poor environmental performance of their suppliers and sub-contractors. The safest option for the customer is to use suppliers and sub-contractors who can demonstrate their positive environmental performance.
- **Marketing Opportunities.** All companies seeking growth obviously want their product and services attractive to a widest possible market. Poor environmental performance will encourage many potential customers to decide not to buy from the company; good environmental performance will ensure continuation of the widest possible market.
- **Investment.** The investors are increasingly moving to green portfolio's, and it is interesting that the financial performance of these portfolios has been good in comparison to more traditional investment. In seeking additional investment for the organization it is sensible to ensure the widest scope and this is only aided by a demonstrably sound environmental performance
- **Image.** The ability to demonstrate a responsible environmental attitude can dramatically improve the image of the corporation fostering better relations with the company's stake holders. Even more importantly, adverse publicity about the organizations environmental performance is always highly damaging.

4.1.2 Environmental Aspects & Impacts in Ceramic Sector

The environmental aspects are the elements of an organization's activities, products and services that can interact with environment.

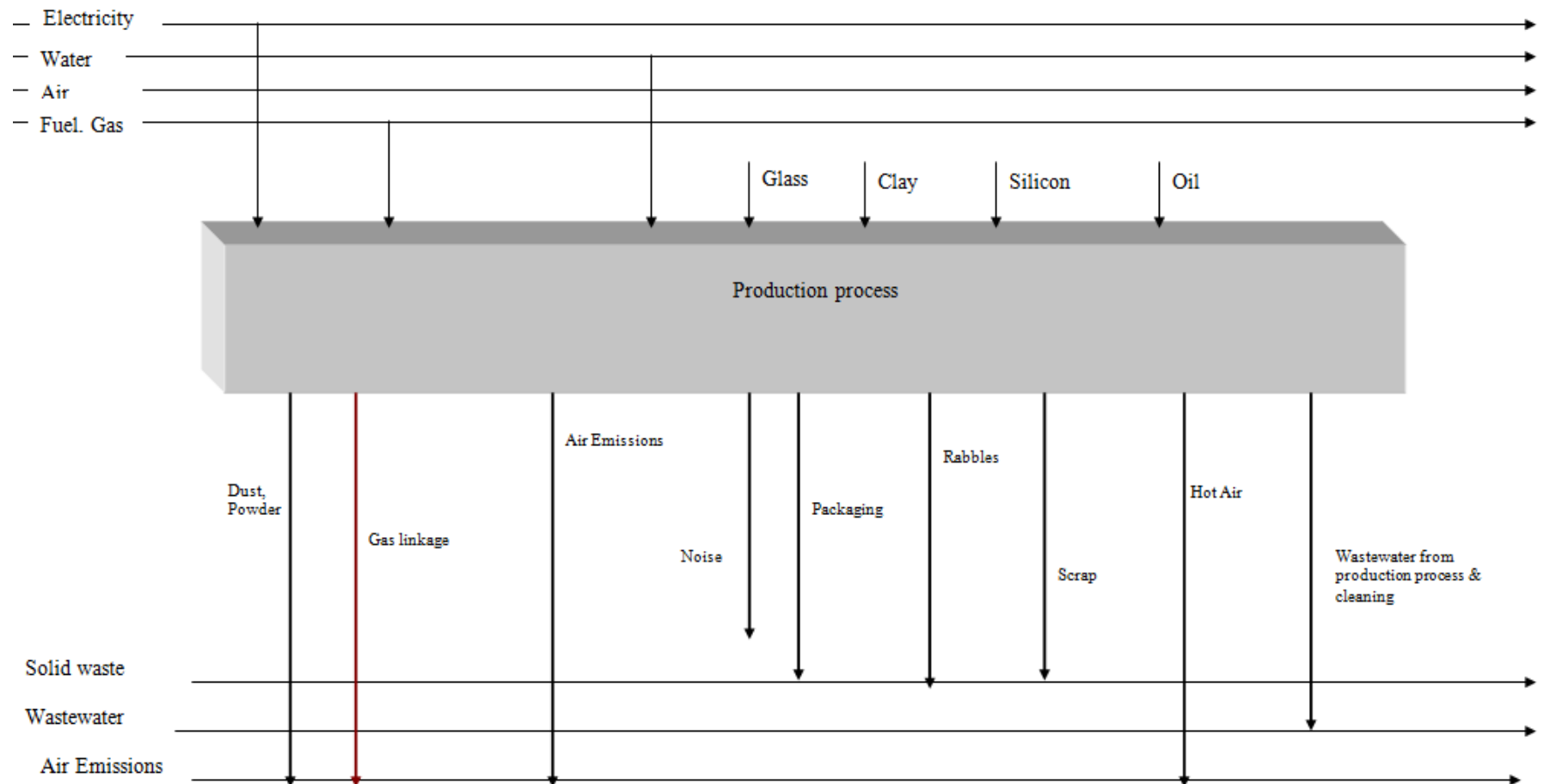
- ✓ Direct environmental aspects – aspects referring to the organization activity of which can be controlled
- ✓ Indirect environmental aspects – aspects referring to activity of the organization, which cannot be fully controlled by the organization

The environmental impacts are the effect of the environmental aspects, that is, they are the changes in the environment, either adverse or beneficial, that result wholly or partially from environmental aspects.

The activities, products and services of ceramic enterprises have effects on the environment by consuming materials, energy and water and by discharging wastewater, waste, gaseous emissions and noise.

The main environmental impacts of a typical ceramic company are presented in Figure 14 below.

Figure 1: Environmental Aspects & Impacts in Ceramic Sector



4.1.3 Legal Requirements – European Environmental Legislation

In the past 30 years the EU has adopted a substantial and diverse range of environmental measures aimed at improving the quality of the environment for European citizens and providing them with a high quality of life.

Companies which are established in an EU member state underlie the community legislation and are obliged to be informed about all relevant regulatory and statutory requirements. In case where the national legislation does not cover the European legislation then a particular accent is given in the last one.

Table 1: EU Environmental Legislation

Area	European Legislation
Environmental Assessment	<ul style="list-style-type: none"> • Directive 85/337/EEC on Environmental Impact Assessment • Directive 97/11/EEC amending Directive 85/337/EEC • European Council Directive 96/61 / EC of 24 September 1996 concerning integrated pollution prevention and control • Directive 2003/35/EEC amending Directive 96/61/EC • Directive 2003/87/EEC amending Directive 96/61/EC • Regulation (EC) No 1882/2003 amending Directive 96/61/EC • Regulation (EC) No 166/2006 amending Directive 96/61/EC • Directive 2004/35/EC of the European Parliament and the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage • Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organizations in a Community eco-management and audit scheme (EMAS), repealing Regulation (EC) No 761/2001 and Commission Decisions 2001/681/EC and 2006/193/EC • Standard EN ISO 14001:2004 Environmental Management Systems
Wastewater	<ul style="list-style-type: none"> • Directive 91/271/EEC on urban wastewater treatment (and some industrial waste)
Solid Waste	<ul style="list-style-type: none"> • Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on waste • Directive 2008/98/EC, amending Directive 2006/12/EC • Directive 94/62/EC of 20/12/1994 for packing and packing waste • Directive 2004/12/EC amending Directive 94/62/EC • Directive 2005/20/EC amending Directive 94/62/EC
Hazardous Waste	<ul style="list-style-type: none"> • Council Directive 91/689/EEC of 12 December 1991 on hazardous waste • Council Directive 94/31/EC of 27 June 1994 amending Directive 91/689/EEC on hazardous waste • Regulation (EC) No 166/2006 amending Directive 91/689/EEC • Directive 2008/98/EC of the European parliament and of the

Area	European Legislation
	<p>council of 19 November 2008 on waste and repealing certain Directives</p> <ul style="list-style-type: none"> • 2000/532/EC Commission Decision of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste (notified under document number C(2000) 1147) • 2001/118/EC Commission Decision of 16 January 2001 amending Decision 2000/532/EC as regards the list of wastes • 2001/119/EC Commission Decision of 22 January 2001 amending Decision 2000/532/EC replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste (Text with EEA relevance) • 2001/573/EC Council Decision of 23 July 2001 amending Commission Decision 2000/532/EC as regards the list of wastes • Directive 2002/95/EC use of hazardous substances in electrical and electronic equipment • Directive 2002/96/EC promoting the collection and recycling of such equipment • Council Directive 2006/66/EC of 06 September 2006 on batteries and accumulators containing certain dangerous substances
Air pollution	<ul style="list-style-type: none"> • Directive 96/62/EC of 27 September 1996 on ambient air quality assessment and management • Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe • Regulation (EC) 2037/2000 of the European Parliament and Council of 29 June 2000 for substances that destroy the ozone layer • Council Decision 2002/358/EC of 25 April 2002 concerning the approval, on behalf of the European Community, of the Kyoto Protocol to the United Nations Framework Convention on Climate Change and the joint fulfillment of commitments there under • Directive 1999/30/EC of 22 April 1999 relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air • Directive 1999/13/EC of 11 March 1999 for reducing VOCs emissions coming from the use of organic solvents in certain activities and installations • Directive 2004/42/EC of the European Parliament and the Council of 21 April 2004 for the limitation of VOCs emissions coming from the use of organic solvents in paints and varnishes and vehicle refinishing, amending Directive 1999 / 13/EC
Water quality	<ul style="list-style-type: none"> • Directive 2000/60/EC of the European Parliament and of the

Area	European Legislation
	<p>Council establishing a framework for the Community action in the field of water policy</p> <ul style="list-style-type: none"> • Directive 2008/32/EEC amending Directive 2000/60/EC • Directive 2008/105/EEC amending Directive 2000/60/EC • Directive 2009/31/EEC amending Directive 2000/60/EC
Noise	<ul style="list-style-type: none"> • Directive 2002/49/EC of the European parliament and of the council of 25 June 2002 relating to the assessment and management of environmental noise

4.2 SAVING ENERGY IN CERAMIC PRODUCTION

4.2.1 Body and raw materials

Additives for improving the insulation should be also energy sources. The combustion temperature of these additives has to overlap a broad temperature range. Waste graphite, Petroleum coke or coal-clays can help you to get sintering energy up to 800°C.

Sintering additives like ashes, waste glasses, glass and mineral wools or low sintering clays can help you to reduce the sintering temperature or to produce (dry and fire) lighter products with same mechanical properties.

Shaping needs plasticity. It is necessary that the right amount of water is used to get the correct plasticity. Saving water by using better clays that are easy to form or adding special additives that help to get the correct plasticity is a way to save drying energy.

The use of special additives for surface effects can look like flashed bricks. This can give gas savings while flashing.

New raw materials like Li-containing feldspars (Fig. 1) or Colemanite, mixture of Feldspars from K and Na or low sintering recipes (soft porcelain) can help you to reduce sintering temperature for up to 200°C and to save lots of energy.

Mono firing (no bisque firing) saves energy, but requires specially tailored bodies and glazes. Optimised bodies from traditional clays and china clays can decrease firing temperature up to 50°C.

Optimise grain size distribution especially for feldspar and other sintering additives decreases sintering temperature by improving the reactivity. There is an optimum, because milling of e.g. feldspars requires energy as well. Optimise bodies for fast firing kilns with e.g. calcined raw materials.

Spray drying needs the optimal litre weight: Saving water by using better raw materials or special additives which decrease water content of slip is a way to save drying energy.

Continuous mills save up to 2 % of water of slip and increases slip temperature up to 10°C (and decreases electric power consumption)

4.2.2 Shaping

- ✓ It's possible to save energy by stiff pressing. However, not all body formulations are suitable, as sometimes the energy saving is consumed at the extruding press as electric energy and finishing.
- ✓ Try to use the shaping temperature while entering the dryer.
- ✓ Re-use the temperature used for shaping while entering the dryer.
- ✓ Sophisticated designs can save weight of e.g. pavement bricks, by saving on the mass off the surface that is embedded into the soil. Design saving are also possible for facing bricks. An easy lattice allows energy saving by perfusion while drying or firing.
- ✓ Sophisticated designs can save weight that allows energy saving while drying or firing.
- ✓ Dry shaping or shaping in the dryer saves energy, but it uses more energy for shaping and can influence the quality of product, however there is an optimum.
- ✓ The less water you need for shaping all the less you have to evaporate while drying
 - Isostatic pressing is a 'dry pressing' technique hence water saving and eliminates the need for drying. If this technique is available use it for as many products as possible; today also bowls are possible to shape by this.
 - Most modern isostatic pressing methods need less than 2 weight% of moisture.
 - No drying of plaster moulds has to take place if isostatic pressing methods are used.
 - Isostatic pressing needs spray dried granules, the less water you use for your deflocculating, the less energy you have to use for that process (see also paragraph about drying in "Tiles"-section).
 - Use high litre weights for your casting slips; this will require less energy for drying the plaster moulds.
- ✓ Sophisticated design can avoid that parts of your product needs longer drying or firing.
- ✓ The more colours your decoration allows within one firing step the less energy you need for decorating firing.
- ✓ Develop a smart storage of products and decors that allows you to dry and fire greater batches of products, that saves energy.
- ✓ Smarter process control for shapes and decors allows you to optimize your production process allowing for reduced energy consumption.
- ✓ Using novel shaping techniques (flexi flat) that use fewer moulds that don't require drying saves energy.
- ✓ The use of more energy efficient burners, which can be switched off when not required should be employed in the glazing line.
- ✓ Pressure casting techniques avoid drying of plaster moulds and decrease water content by up to 2 weight%, but need tempered slips and electric energy.
- ✓ Better production planning of products allows you to dry and fire greater batches of products, which saves energy.
- ✓ Small numbers of different products allows you to optimise your production process also for energy consumption.
- ✓ Logos and Badging is being carried out by laser marking/fusing of ceramic pigments and is a firing process. This has a number of advantages i.e. reduction of stock and losses of badge creep during refire.

4.2.3 Drying

In the ceramic industry, drying generally means the evaporation or volatilization of physically bound water. It is well known that water is characterized by a high specific thermal capacity (4,2 kJ/kg) and a very high evaporation heat (2.500 kJ/kg). These material properties inevitably cause a high-energy consumption. The only objective can be to approach the theoretical (minimum) consumption as close as possible.

- ✓ A common way to reduce the drying energy consumption in older companies is to couple the dryer and kiln.
- ✓ Today the coupling of dryer and kiln is state of the art, however it is also important to modify working practices i.e. weekend breaks for shaping and drying need to be carefully controlled.
- ✓ Another method of modernising is to control the ventilation/burner system and the drying atmosphere.
- ✓ The use of small amounts of high temperature air, decreases air loss due to exhaust gases.
- ✓ The air should flow through lattice bricks.
- ✓ An impact flow of drying air is more efficient then a laminar flow and modernising of dryers is possible.
- ✓ Figure 15 shows that lowest energy costs (heat and electric) which can be reached at an optimum of heating energy and movement of drying air

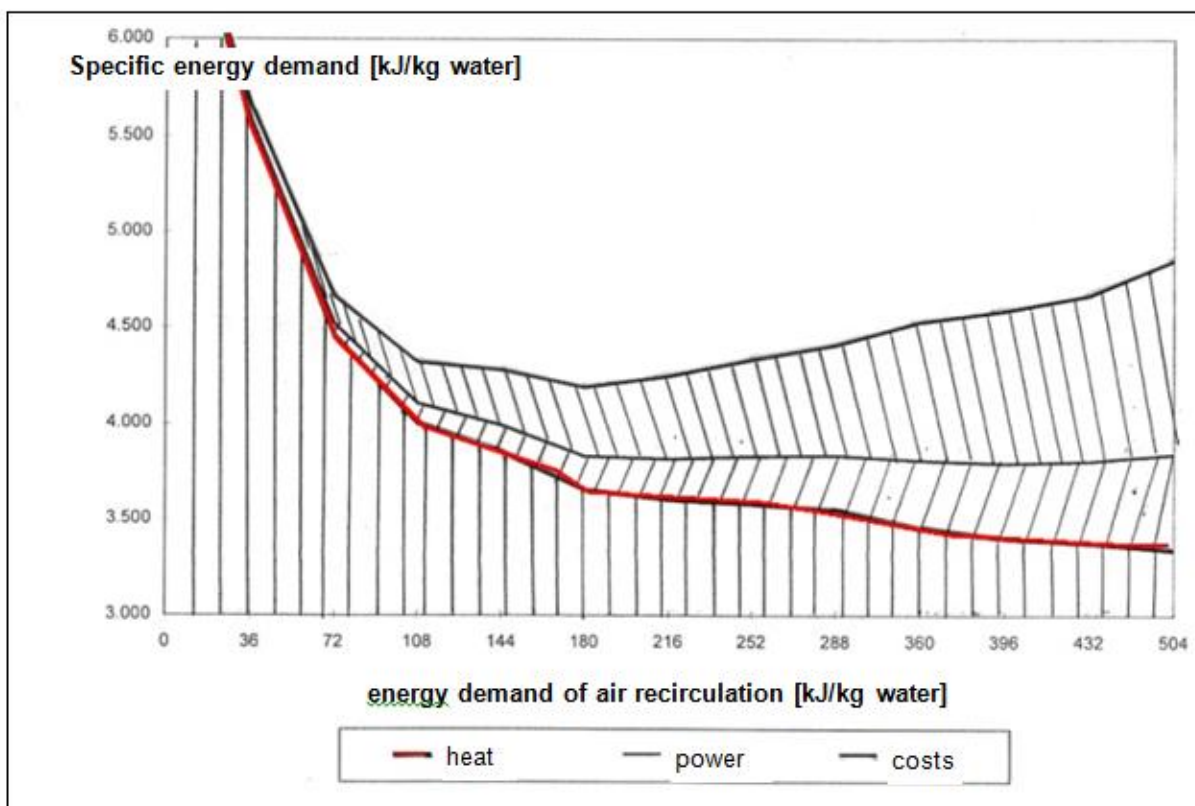


Figure 2: Energy demand of heat vs. energy demand of air recirculation in dryers

- ✓ The setters and the setting density should ensure that most of the surfaces are easy reached by the drying air.
- ✓ Shorter drying times save energy.
- ✓ To achieve the required humidity for drying avoid adding moisture and if required increase the setting density.
- ✓ Redirecting airflows can improve consistency and reduce drying time; intermittent airflow patterns can reduce drying time and improve yield.
- ✓ Software to simulate the drying process. Links to control data via specialized companies are a good way to optimize drying.
- ✓ In the case of a coupled system between dryer and kiln, the kilns energy supply and not the dryers demand determines the energy level that the dryer gets, otherwise poor energy use in the dryer causes a higher energy consumption for firing.
- ✓ The system that connects the hot air from the kiln with the dryer should be well insulated.
- ✓ Most modern drying equipment and technology can save up to 90% of drying time compared to conventional drying.
- ✓ Alternative drying systems are available using a steam atmosphere, this is called 'airless drying' and is claimed to have reduced drying times up to 80%.
- ✓ Alternative I/R burner systems are available using a mesh, these can be powered by a number of different gases are easy to control and are very energy efficient. These can be incorporated into existing dryer cabinets.
- ✓ Modern setter systems as shown in Figure 5 can save energy.

In the ceramic industry drying generally means the evaporation or volatilisation of physically bound water. It is well known that water is characterised by a high specific thermal capacity (4,2 kJ/kg K) and a very high evaporation heat (2.500 kJ/kg). These material properties inevitably cause a high-energy consumption, especially for spray drying of slips where water contents up to 50 weight% are common.

One of the most energy efficient kinds of spray drying is the cogeneration of heat and power.

The higher the litre weight, the lower the energy consumption of the spray dryer (fixed remaining moisture for pressing).

The energy consumption of spray drying decreases for smaller granules, if the quality demands allow.

The better the insulation of each spray dryer, the lower is the energy consumption.

Preheat the combustion air for burners with waste heat from the kiln or spray dryer

Instead of cyclones a dust separator and slip heater can be used. The remaining dust from the spray dryer is washed out by the slip. The slip is heated from this process. Recommended for slips that are milled by discontinuous mills

4.2.4 Firing

The specific energy consumption for sintering ceramic products depends on the required firing temperature. The temperature is determined by the composition of the body, the processes of material formation and the intended properties.

- ✓ In the main firing zone an excess pressure of 10-15 Pa is recommended.

- ✓ For some producers it is still a possibility to make energy savings by changing from solid fuel like coal to LPG or oil which will increase the energy efficiency.
- ✓ For mono firing the biscuit firing is cancelled however special glazes and bodies are required.
- ✓ Use of renewable energies, i.e. biogases produced by companies in their own reactors can save costs and CO₂ emissions; however biogases can't cover the whole energy need
- ✓ Increasing control of firing with new burner systems and multi zone control.
- ✓ Impulse burners are more efficient than conventional ones.
- ✓ High velocity burners (velocity of heated gases > 100 m/s) are recommended for the preheating zone until 700 °C. At this lower temperature heating by convection mostly takes place. Kilns can be modernised with these modern burners, to save energy.
- ✓ Techniques already described for drying are also important for firing: allow the hot gases best heat transition to your working load.
- ✓ Allow the hot gases the best transfer to your working load.
- ✓ The combustion air should be preheated; at higher firing temperatures preheating saves energy. The preheating should be done by using kiln exhaust air.
- ✓ Use preheated working loads from the dryer, e.g. setting pallets for drying and firing or by direct setting on kiln cars for drying.
- ✓ The final development that some producers have used is emissivity coatings in certain sections of the kiln to reflect the heat to the required area thus reducing the temperature lag between 'part' and surrounding air. This in theory has reduced gas costs by up to 10%.
- ✓ Use heat recovery from waste gases and flue gas from post combustion.
- ✓ Reduce waste air losses by reusing it to heat on the whole length of kiln.
- ✓ Organize your production to produce one product over a longer range of time. Try to optimize your temperature curve for that product. With different products in the kiln it is more difficult for real optimization to take place. Think about small intermittent kilns. For small batches think about cooperation with different plants or about reducing the number of different product types.
- ✓ Heat recovery from waste gases.
- ✓ Kiln furniture is one of the greatest energy consumers. Most modern types of kiln furniture are made from SiC and have a weight saving design.
- ✓ The best setters for tableware are "No" setters in e.g. roller kilns.
- ✓ The lower your amount of scrap, the lower is your saving energy.
- ✓ Intermittent kilns can be operated much more energy efficiently if heat recovery systems together with preheating of combustion air or are coupled with dryers.

4.3 NEW BUSINESS IN CERAMIC SECTOR

4.3.1 The person and the idea

To become entrepreneurs, to start-up a business and, therefore, to put him/herself on the market as active operators is a complex process. Each entrepreneurial idea, before becoming an active initiative, needs to be valuating in every details and it needs to be structured in all his implication.

The path to create a new business, to have concrete successful chances, requires a careful attention and a research of coherence between several aspects, which we can summarize as: **the person, the idea, the market and the resources.**

A. The Person

If you want to create a new business the starting point is a reflection about yourself, your traits and motivations.

Only if you think about yourself you can identify your strength and what to improve, understanding if to create a new business it is really coherent with your person.

As ever, there are not any recipes or magic formula, but we must verify the existence of motivations, attitudes and skills that, all together, take part in the will of assuming the entrepreneurial risk. First, it is useful if you ask to yourself the following questions:

- Do I believe on my skills and generally am I an optimistic person?
- Do I want to wrestle myself with my potentiality?
- Am I available to live with uncertainty situations?
- Do I get dejected or am I able to find a reason to go on?
- Do I have a good level of self-esteem?
- Do I know how to organize and plan my own time and the others one time?
- Do I have the professional skill to propose myself to an expected customer?
- Am I able to listen to the other and to understand them?

Becoming entrepreneur means to bet on yourself and on the own capacity to decide, plan and persuade. The qualifications, or best, the leading attitudes required to start-up a self-employment job can be summarize in the following points

Risk Attitude

To decide to start-up a self employed firm does not mean that this firm will be successful for ever. Customers' tastes change very quickly, and also the conditions that allows a business success change very quickly (you can think about the deep modifications happening in the retail market). Therefore, entrepreneur is a person who risks, and he/she is aware that his/her choices should be not coherent to the market's needs in the future.

- ✓ Bravery
- ✓ Optimism
- ✓ Spirit of enterprise
- ✓ Care about the others and about the environment
- ✓ Ability to listen to the others and to the surrounding environment

Ability to resist to anxiety, frustration, stress

Customers that do not pay, suppliers that not deliver, products that you don't sell, banks that want back the loans suddenly: who manages a self employed job face everyday with such problems and should be able to manage them rationally, without anxiety and frustrations.

- Resistance, physics and psychological – ability to manage stress
- Ability to optimize time
- Ability to manage stress and conflicts

Motivation

Entrepreneur must possess the desire to be successful, placing resources and time. It is needful to have trust in own capabilities and optimism to overtake the first difficulties, proceeding with determination towards the achievement of own goals.

- ✓ Awareness of own desires

- ✓ Determination
- ✓ Capacity to process and to pursue a strategy
- ✓ Commitment and devotion
- ✓ Motivation and capacity to motivate the others

Autonomy

Entrepreneur is the first decision maker as regards market, organization, financial and product choices about his/her business. This is in contrast to the self employment job, in which there are ranges of defined task and where however there is a hierarchic referent with whom solve problems and doubts. Therefore, it is important that the future entrepreneur knows and can use techniques and tools proper of the sector in which he/she wants to perform.

- ✓ Self control
- ✓ Autonomy
- ✓ Planning skill
- ✓ Ability to evaluate own brief and long term choices results
- ✓ Initiative
- ✓ Authoritativeness
- ✓ Knowledge of the sector in which he/she decides to work
- ✓ Knowledge of a foreigner language (not always needful, but clearly desirable)
- ✓ Basic economic financial knowledge
- ✓ Informatic and Internet knowledge
- ✓ Technical and professional knowledge proper of own sector

Innovation/change Capacity - Creativity

Customers' tastes change, more effective opponents come in the market, our advertisement is not effective anymore, etc...: which such occurrences, entrepreneur must be able to modify the kind of service/product offered, to study new strategies and new markets to serve; generally, entrepreneur should be able to innovate, change, modify own business.

- ✓ Curiosity
- ✓ Desire to go on learning
- ✓ Willingness and broadmindedness towards what is new and different
- ✓ Creativity

Criticism Capacity

It allows to evaluate rationally own ideas and to read market changes continually. It permits to adjust, if not straight to change, the route at own job according to new tendencies. This quickness of mind must go together to a good ability to overtake delusion: to start up an enterprise is not a linear path without obstacles, but undoubtedly it involves an impact with problematic realities.

- ✓ Balance
- ✓ Responsibility sense
- ✓ Synthesis capacity
- ✓ Concentration capacity

Managerial/Organizational Capacity – Leadership

To manage an enterprise means to be able to organize the work (of his/her own, of the others), and it means to be able to plan the achievement of a product and to supply a duty according to the time of delivery of the supplier, to the machine processing time and to the delivery time agreed with the

customers. It also means to be able to determine our products price, to plan effective promotional campaign, to recognize in every moment the economic and financial enterprise situation. These organizational and managerial capacities can be empowered with suitable training paths.

- ✓ Capacity of reconciliation and mediation, of time and different needs
- ✓ Resources organization capacity
- ✓ Capacity to take quickly and rationally decisions
- ✓ Capacity to identify, define and share business goals

Relationship Capacity

Enterprise management requires continuous relationship with customers, providers, banks, public bodies etc. It is essential to manage these relationships well for the enterprise success. This management requires a strong time investment and relationship capacity ownership.

- ✓ Communication skill
- ✓ Team working attitude
- ✓ Leadership skill
- ✓ Relationship attitude

Furthermore, entrepreneur is responsible towards the customers for the delivery of products or the supply of a service. For this reason, entrepreneur must carry out his/her work in the foreseen time even if, to do that, he/she must work long hours, e.g. in the evening, on Saturday or Sunday.

The first months of an enterprise are essential for his take off: it is needed to invest money in advising campaign, to introduce our to the customers, to demonstrate to the market to be able to satisfy his needs. In the early stage of the enterprise, the entrepreneur should consider to not get remuneration, being able to survive only with personal funds. Furthermore, the start up of a entrepreneurial job implies establishment and promotional cost, technology investment cost (needed to produce, e.g. computer, equipment, machinery etc...), raw material cost, etc... So, the entrepreneur need to invest a large amount of money.

Finally, often entrepreneurial activities are seasonal (some months there is more work, some other less); there are also critical time, in which there are less customer, or in which they are late in payments. Because of all these elements, an entrepreneur can not be sure about his/her remuneration, as can be an employee.

It is needed to evaluate all these elements, before to start up an enterprise.

B. The Idea

Once you have reasoned about your own personality concerning the achievement attitude and about the management of a business plan, you have to find the right idea. Surely, to find the idea is the first difficult that a potential entrepreneur meet on his/her path. Too often we think that an idea, to be successful, must be original and innovative. But this is not always true.

To find the idea, you need to develop your own **power of observation**. It should be useful to concentrate on the local economy situation (or national and international too), keeping yourself up to date about different economic areas and about their chance of expansion. You should take a look around, in the daily, keeping your eyes open on habit and way of life: they represent a precious source to understand customers' taste.

An entrepreneurial idea can spring from a lot of things, even from what seems to be amiss apparently. The idea can spring from:

- ✓ a hobby or interests cultivated on spare time;
- ✓ an experience or familiar tradition;
- ✓ an experience as employee, transforming the work relationship into professional collaboration;
- ✓ an invention, an original product whose characteristics can be interesting for some customers;
- ✓ the discovery of new technology;
- ✓ the expansion of the demand about a product or service;
- ✓ the modification of customers' taste and their predisposition to buy;
- ✓ other enterprises success;
- ✓ the identification of a lack in market

The entrepreneurial idea represents the beginning of the necessary path to start up a self employment. But you have to verify if there are the needed conditions that allow the idea to become a business plan.

Briefly, you have to identify the needed skills and capacities to manage the project, verifying if and how much you possess such traits and, otherwise, how to acquire it and who can give you such knowledge.

4.3.2 Market and Recourses

Once you found the idea, you have just overtook the first obstacle. To that point, you have to ask to yourself: *can my idea give life to a realistic project?* To be able to answer, we need to start with an analysis process to verify if this entrepreneurial idea got a market.

A. The Market

More **potential customers needs (primary or superfluous)** the enterprise will be able to **satisfy**, more success opportunity the enterprise will have. For this reason it is very important to answer with certainty to the following questions:

Who are my potential customers?

What are they needs, desires?

Is there any other enterprise in the region offering products able to satisfy these needs?

What will distinguish my product or service?

You have to collect the greater amount of information possible, to consult studies and dedicated magazine of the sector; to collect expert and not-expert opinions: people who have specific competencies in the sector, potential opponents, but also relatives and friends, who can help you to see the “things” from an external point of view, identifying obstacles, giving you their opinion and suggestions.

To identify **own market of reference**, you need to **define** the **need** and the **desire** you want to satisfy, and the customer's **outline** and traits to who you refer to.

The market of reference is composed by the whole potential buyers sharing the same need or desire, probably interested in buying the offered product or service.

A reasonable analysis about your own market of reference consists of the following steps:

- to define the kind of need or desire the product/service will satisfy;
- to estimate the number of potential buyers and their available outlay;
- to analyse the possible concurrency already present and the obstacles to the admission in the market.

The customers

If you want to start up an enterprise far from towns or in little countries, in which the market possibilities are restricted, your analyses about your potential customer requires a careful attention. How do understand **how many** customers are interested in the product/service and **what** are their traits? It is possible to proceed with simple steps:

To perform a **research** (consulting statistic data and studies available) to define with a good approximation the potential customers. After, **to border the wideness of the market** in which you want to act (municipal, provincial, regional, national, international, or a mix of it) to evaluate if in that geographical area there is a demand about the product/service you want to offer.

At this point, you can try to draw a **“portrait”** of the potential customer. Between the whole who have shown an interest on the product, you have to establish who really wants to spend and, among these, their easiness/comfort to reach the enterprise(as long as it is necessary: if you sell via mail or Internet, this element will lose importance)

This table below contains some input to how realize a **questionnaire about the purchasing behaviour** of potential customers of the enterprise

QUESTIONS TO BE INSERTED IN THE QUESTIONNAIRES	VARIABLE (OPTIONS)	KEY OF READING'S ANSWERS
In which situation/context we use the product X	Professional, domestic, spare time etc...	Features of the product to made
Who use the product	Family, children, friends, colleagues, etc.	
How to improve the product	To permit an articulated answer	
Circumstances that drive to test a different product	Lower cost, higher practicality, better design, etc.	
Product's strength and weak points	To permit an articulate answer	
What other products you buy jointly to product X	Y, Z, etc.	Ideas to distinguish the production
Frequency wherewith you buy product X	Daily, weekly, biweekly, monthly, six monthly, yearly, etc.	Promotional/marketing strategy
Judgement about product price	Correctly, high, cheap, etc.	
How you knew the product	Friends, newspaper, advertisement, etc.	

Where you preferably buy the product	Corner shop, shopping mall, department store, etc.	Selling procedure/ localisation of the selling point
Suitability/advantage to find the product in an area where it is not available now.	Other selling points, Internet, not conventional places, etc.	

The Competition

It is important to keep in mind that, probably, other enterprises already exist that work in the sector and market you chose. For this reason you should try **to identify your potential competitors**, trying to get the more amount of information possible about them, focusing on their strength and weak points.

It is important to not consider only the **manifest competition** – the one who offers the same product/service – but also the **enlarged competition** – i.e. the one relevant to those goods and products whose purchase involve the potential income appointed for the purchase of your product/service.

It should be proper to make a list of the competitors (asking to the local Chamber of Commerce too) and, for every one of them, try to answer to the following questions:

- ✓ What does he/she offer?
- ✓ At what price?
- ✓ How does he/she sell it?
- ✓ Are the customers satisfied?
- ✓ About what are they not satisfied?
- ✓ What market share does he/she cover?
- ✓ Where is he/she situated?
- ✓ Where are their customers from?

Internet is a valid allied because with his browser it allows you to have a clear idea about the general scenario. It is important to integrated such information participating to trade fairs and exhibition concerning your sector and it is also important to consult dedicated magazine. It could be useful to go and verify the prices and services quality offered by the competitors.

To collect these information will help you for:

- discover which solutions your competitors gave to some problems you can force early;
- discover if they have some weak point;
- exalt the offer of your enterprise through his distinctive and successful elements.

On the basis of that reflections, the future entrepreneur have to create his share market, trying to offer a product/service able to meet future customers' demands.

The Share Market

Now it is time to estimate the **own share market**, in other terms you have to understand if you can find your space in that market or if it is filled. Have a look to how proceed:

- ✓ to perform an estimation (through Chamber of Commerce data) of the people that will buy the product we want produce (e.g. 1000) and about what they spend every year for that product (€ 300). The **potential demand** in that area will be Euro 300.000 (1000 x 300).
- ✓ to estimate the portion of demands already satisfied by the shops of that area (through sales figures data, that could be Euro 240.000). This means that exists a **portion of market** equivalent to Euro 60.000.
- ✓ now let us suppose, being prudent, that the enterprise will produce 1.000 pieces, for Euro 40 at piece. In that case, it will be the “**space**”. To produce the product will cost Euro 40.000 (1000 x 40) while the profit will be equal to Euro 60000 (each piece will cost to the customer Euro 60). If with this difference of Euro 20.000 between cost and profit you can start up the job, you can easily go on to realise your business plan

B. Recourses

Now it is the time to define in detail **how and with what produce** own products or services. In concrete terms, you should list everything you will need to produce a certain product (material and immaterial – as time – without leave out human resources). The **materials** to be considered will be:

- ✓ Raw material
- ✓ Working hour
- ✓ Electric energy
- ✓ Rooms
- ✓ Eventual collaborator
- ✓ Carriage
- ✓ Other costs

For each elements you have to establish, with the more accuracy you can, the traits, the unit cost, the number of needed units and the existence of possible alternatives.

Every single aspect will determine the total cost of each product, that added among them will give the production cost.

This passage is decisive because it drives to reflect for a useful **selection of alternative production methodologies**.

Each resources you want to use costs: wage, moneylender interest, goods price, etc; but often you can get the same product mixing the different element in a different way.

To determine what resources use, you should consider the following principles:

☒ **To ponder the cost**

Choosing in every situation the mix of elements generating the lowest cost. The greater risk is to undervalue costs, more than an an exceedingly value of the profit.

☒ **To prefer variable costs**

When entering a new market, the risk of losses is higher than the fixed costs are higher. Choosing a structure in which variable costs are more important than the fixed is recommended: it makes the enterprise less vulnerable to a wrong value, even if it cannot guarantee the maximum of the profit.

In fact, variable costs are joined to the production, and so, theoretically, they are the less “dangerous” because the enterprise will sustain them according to how much it will produce.

☑ **To ponder the quantities**

The other parameter to keep always in mind organizing the production is the one concerning the quantities of goods and services to product: it is evident that the choice to how combine and how to organize the different productive elements is very affected by the “number” of the copies you have to realize.

☑ **To consider time factor**

The last important element to keep in mind is the variable time: who gives life to a new entrepreneur have to face questions ythat have a brief and/or long time expecting. The fundamental difference between the brief and long-time is in the possibility to modify or not that area of the enterprise called facility, or else all those elements that, for different reasons, are not modifiable in reduced times

A different discourse concerns human resources. First of all you have to establish if you want to pursue the entrepreneurial path alone or with someone else. It is proper to start from same definition:

The self employed person works autonomously to realize a good or a service, without having an organization. He basically works alone, without the support of a economic structure.

Instead **the entrepreneur** is the individual who operates a direct activity to realize goods or services for the market, thanks to an organization different productive elements.

The juridical **results**, both civil and fiscal, of that choice are different. In the case of the self employed person, the entrepreneur manages the enterprise, he/she take upon him/herself the decisions, but he/she is the only subject responsible of the business: so, he/she got all the power, associated to a high level of responsibility and so to the economic risk. In the case of the entrepreneur his/her responsibilities are limited, because they are shared with other persons. But in such situation is very important to select the partner/collaborator carefully, pondering all the advantages and limits they have.

It is important to think about the **traits of the subjects** which you want to share the business and to the kind of **relationship** you wan to establish with them. Here follow some remarks:

- ✓ What kind of competencies or knowledge is needed?
- ✓ Do I have all the necessary capacities, technical skills and knowledge to start up the project?
- ✓ Do I need to involve other persons?
- ✓ What should they do?
- ✓ What kind of role and responsibility they should have?

4.4 MARKETING STRATEGY

Every company, even the smallest one, should take promotion activities into account while performing its tasks. Current market is characterized by strong competition, which means that effective marketing efforts

are necessary to win customers for our services or ceramic products. Therefore marketing analyzes, plans and strategies are nowadays undertaken not only by medium and large market players. To create a good marketing plan it is necessary to know customers and market requirements, and to respond quickly enough to the ongoing fast changes.

To check if we have a marketing strategy, we can use the diagnostic sheet proposed by Nigel Piercy in the book entitled "*Market-Led Strategic Change*".

How are we doing?							
Needs more attention				Quite good, good, very good			
STRATEGIZING							
Do we have the mechanisms and processes for management to focus on strategy?	1	2	3	4	5	6	7
Are we forcing ourselves to look to the future and to confront the changes in our industry?	1	2	3	4	5	6	7
MARKET CHOICES							
Have we got a view of market definition based on customer needs and customer differences?	1	2	3	4	5	6	7
Do we have a model of the segmentation of our markets based on customer benefits?	1	2	3	4	5	6	7
Does our market segmentation link strategy to operations?	1	2	3	4	5	6	7
Do we know what we are looking for in markets (marketing attractiveness) and in our market position?	1	2	3	4	5	6	7
Are we avoiding the traps of being stuck in Peripheral Business, Illusion Business or Dead-End Business?	1	2	3	4	5	6	7
Can we list our priority markets and segments on a page of paper and justify those choices?	1	2	3	4	5	6	7
DEVELOPING THE VALUE PROPOSITION							
Have we got all we can from	1	2	3	4	5	6	7

mission analysis to link corporate values to market success factors?							
Do we have a thorough understanding of the company's overall corporate strategy and core competencies?	1	2	3	4	5	6	7
Can we translate core competencies into differentiating capabilities for this market?	1	2	3	4	5	6	7
Do we have a foundation for competitive differentiation that will be effective and sustainable?	1	2	3	4	5	6	7
Do we have a full understanding of our marketing assets and how can we use them to build sustainable competitive advantage in this market?	1	2	3	4	5	6	7
Do we have strength in branding which we are using as part of our Value Proposition?	1	2	3	4	5	6	7
Can we write down our Value Proposition on half a page of paper, and does it still look convincing when we do?	1	2	3	4	5	6	7
ASSESSING THE KEY RELATIONSHIPS							
Can we identify the parties with whom effective relationships are essential to drive the market strategy?	1	2	3	4	5	6	7
Can direct marketing be useful for us?	1	2	3	4	5	6	7
Do we fully understand what our Value Proposition means to our relationship with our customer and what it will take to deliver the Value Proposition?	1	2	3	4	5	6	7
Do we fully understand what the market strategy requires of our co-workers?	1	2	3	4	5	6	7
Are we sure that co-workers can and will deliver what is required to	1	2	3	4	5	6	7

drive the Value Proposition?							
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Each company whose aim is not only to survive, but also to achieve a long-term success in the market, should carefully plan their market activities. In addition, the marketing strategy is a kind of passport to the future which defines basic directions of the company's development in a medium and long-term period. These development directions should be then translated into very specific decisions and action programs, which should be included in a detailed marketing plan. Thus, strategic planning is based on searching for the company's market opportunities, creating its strategy and of course a marketing plan development. The design of a strategic marketing plan should answer the following questions:

- What is the mission of our company? (what we want to be on the market, the value we offer our customers, something that we can express in terms of benefits to the potential buyer, such as a leader in ceramic decoration, 100% hand made, design in harmony with the future, etc.)
- Where do we want to operate in the future (target market, segment of choice)?
- What development strategy are we planning to adopt taking the scope of activity into account? What will be the sources of our competitiveness?
- How can we translate the company's strategic objectives into the applicability of certain operational marketing means and decisions on product, price, promotion, and distribution?

But having a strategy is not enough. It is essential to have a marketing plan! So the method that enables transition from a strategy to a plan would be as follows:



Marketing and sales management operational strategy
sales management
internal marketing

While planning at the organizational level, business owners should have a clear picture of the mission, objectives, and constraints (it does not mean a negative approach, but rather an attempt to avoid situations when the employees with great commitment develop innovative plans just to hear that the proposed changes are not acceptable). The next and probably the biggest step in planning is market and resources review (usually centered around the marketing mix structure). We need to look at the market, product policy, pricing policy, distribution policy, communication policy, and to organize proposals in each of these areas into packages forming an integrated plan.

In practice, the audit would cover the following topics:

MARKET

- customer needs and factors associated with the purchasing process (target: focus on customer needs)
- products and customers (creating a product and customer definition that reflect the market rather than technology or business)
- main products (in order to determine which products are absolutely necessary to remain on the market)
- product evaluation by customers
- competitor analysis
- market environment (placing planning into the broader context of changes occurring in the outside world)

PRODUCT

- market position (priorities + critical success factors - in other words what we need to have to satisfy consumer priorities)
- marketing objectives (including the linkage with sales and market share)
- the results compared with our competitors' results
- product attributes (focus on strategic product differentiation characteristics rather than the product as such)
- product mix (a list of deficiencies and corrective actions, maybe product diversification)

PRICE

- input-output relationship and the pricing policy objectives
- the company's product prices and market prices
- the manufactured products' price sensitivity (to determine what gets more expensive and what is cheaper)
- price level (compare our discount structure with the structure of main competitors)

DISTRIBUTION

- identification of all channels through which goods and services reach the client, as well as the market part supported in each of them. Identifying trends (establishing an on-line store?).

- existing sales forms and their evaluation
- preparing the sales department for market tasks implementation
- sales targets and allocation of tasks to individual units or employees

MARKETING COMMUNICATION

- our position (knowledge on the customers' opinion about our company and our main competitors)
- media (determining available mass media and comparing them with each other, for each market segment).

The purpose of a marketing communications audit is to trace the capabilities and needs of all forms of marketing communication - personal selling, advertising, sales promotion, and public relations.

Remember that the analysis objective is to test our market concept, express it in specific terms, which will be understood within the company, and a review of the transition of marketing strategy into operational marketing plan. The conclusions that we draw on the basis of a marketing audit will be used for SWOT analysis (an analytical technique) that determines our strengths, weaknesses, opportunities, and threats arising from the environment. We can define the organization's strong points as the totally or partially controlled resources (e.g. staff qualifications, good company reputation in its environment) that distinguish it in a positive way in the environment and among competitors. The weaknesses are those aspects of the organization, which limit the efficiency and can block its development in the future (e.g. interpersonal conflicts, outdated machinery, low quality of products produced using the old technology). Opportunities and threats can also be found in the environment (the elements of the environment that can be taken into account: state power, government institutions, competitors, suppliers, customers, market, public opinion). Possible opportunities: unrestricted movement of goods in the EU area, partnership with a foreign partner. Possible hazards: the tax system change, increasing competition in the product market or insolvency of the main cooperator. The next step of SWOT analysis is to combine the diagnosis and forecast on a family business level and its environment.

STRENGTHS

- short chain of command
- known and highly regarded company
- flexible approach to customer
- make to order
- good reputation among customers

WEAKNESSES

- dependence on import
- lack of clearly defined strategy
- too small production capacity
- poor marketing level

OPPORTUNITIES

- easier access to the market also on an international scale
- the possibility to fund the development from the European Union funds

THREATS

- sensitivity to changes in tariffs and foreign exchange
- potential new competitors
- emergence of substitutes
- further electricity price increase

Note: The strengths and weaknesses must be recognized by customers, while the opportunities and threats exist in the environment - they are associated with us, but we cannot control them directly.

Based on these analyzes goals should be specified, and the areas of the company's activity, necessary actions and their steps should be more accurately identified, in other words the strategy and marketing plan should be described. It is important that the document (marketing plan) contains all the relevant issues:

- summary of the current position on a given market.
- forecast concerning the current strategy effect.
- our goals on the market
- our market strategy reflecting core market choices (based on the market definition and segmentation, as well as the analysis of market position and market attractiveness of our Value Proposition (combining mission, competitive differentiation and marketing resources) and relationships that we want to establish and use as a mechanism to drive our strategy.
- expected competitive response to our strategy.
- our proposed marketing programs.
- our concrete tactical plans and action plans.
- our financial forecasts.

The marketing plan includes the marketing mix, namely:

The product, pricing, distribution, and promotion.

Product, describe for example:

- a family brand, today it plays an increasingly important role to clients. In this case brand is the name, symbol, or logo defining our product. The brand will help our customers differentiate our offering from other offerings, and will cause that the customers will treat other our products with the same confidence.
- packaging - in developed marketing it is an element that creates the real product having an informative value and attracting customers. In recent years, there is the tendency for economical and ecological packaging.
- product life cycle.

Price, describe for example:

- how price is determined: focus on costs, competition or demand.
- pricing policy: high price (new products, luxury), average price (aiming to reduce competition), low prices (an instrument of expansion, market penetration, increasing the company share).
- elements stimulating prices: discounts, rebates, promotional prices.

Price is one of the basic elements-it creates revenue. All other marketing strategy elements are costs.

Distribution, describe for example:

- distribution channels: manufacturer-consumer, manufacturer-retailer-consumer, manufacturer-sales agent-consumer, manufacturer-wholesaler-retailer-consumer - rate the possibility of change or acquisition of distribution channels.
- logistics-that is a set of activities to supply goods to retail chain points or consumers.

The presence of agents in the channel reduces the overall number of transactions with an ultimate consumer, which significantly lowers distribution costs, may also mean benefits resulting from specialization, and allows the manufacturer to expand into new markets.

Promotion, describe for example:

- applied promotional mix (advertising: what and where?, personal selling, sales promotion: price cuts, contests and sweepstakes, celebrations, sponsoring).
- promotional budget.
- promotion effectiveness evaluation.

Pricing and distribution method are marketing activities performed mainly within the company. Promotion has a different nature-it means contact with potential clients in order to persuade them into our offer and product purchase. Advertising is the most common promotion of the product. It is visible on the television, internet, radio, press ... Advertising is a powerful ally of an entrepreneur, it can significantly increase sales, but it may also be very expensive. Keep this in mind when selecting the type of media, in particular:

- its territorial range.
- the method of reaching the recipients.
- time and place of the message.
- the likelihood of perceiving the ad by the recipients.
- advertising costs per 1 recipient.

We can advertise almost anything: product name, company logo, brand or place of sale. It is important to check the advertisement impact on customers and realization of the assumed tasks.

Personal selling is another form of promotion based on direct contact between the customer and the seller (direct appointment, phone call, internet). Unfortunately, its range is limited and it is a fairly expensive form.

Sales activation - it is a type of promotion involving periodic additional support of the offering through additional promotional tools:

- free small samples of ceramic products.
- special exhibition of goods.
- presentations at point of sale.
- exhibitions and demonstrations of pottery.
- discount coupons.
- special offers, prizes, rewards for regular customers.

Public relations (PR) - the relationship with the environment. Even a small business should take care of their good opinion in the immediate vicinity, on the street, in the city. You do not have to sponsor the national team - it is enough to support a school team, buy Christmas gifts for the employees' children, or support local cultural events.

Let's mention the most popular promotion instruments again:

- personal selling
- telemarketing
- publications in technical journals
- mail offers
- address and trade books
- newspapers and magazines
- radio and television
- fairs, exhibitions, shows
- catalogues and brochures
- posters and leaflets
- letters

- packages
- information boards
- brochures and photos
- public relations
- sponsorship
- seminars, conferences
- samples, gifts

The last phase in the strategy formulating process is division and initiation of resources, which allows the company to move from the planning stage and concept development to their implementation in practice. From a marketing point of view, an important factor in determining the choice of strategy is the development of the company's market position. The implementation process is also important, it requires allocation skills i.e. assigning resources to tasks, monitoring the results of marketing activities, as well as organization and co-operation. The scope of operation is defined in two dimensions:

- products,
- markets (the circle of actual and potential buyers of the product).

Given the above relationships, the following types of strategies are distinguished:

Market penetration - it gives the development opportunity using full capabilities of existing markets and existing products. It assumes an increase in the product sales and consumption by the existing customers and stimulation of potential buyers' purchases. It is applied in a saturated market conditions and for product that are in the advanced stages of their life cycle. It means aiming for development using basic principle of rational economy consisting in maximizing the benefits of the achieved market position. The strategy can be implemented three ways:

- by shielding own field of activity (protection against competitors in existing markets), it may mean in-depth market segmentation, searching for special market segments, focusing on regular buyers,
 - attracting new customers by improving products, price reduction, intensive distribution and sales activation,
- increasing purchase frequency can consist in convincing potential buyers of new applications for the existing products or inducing customers to buy larger quantities.

The strategy can be implemented by:

- increasing demand from existing customers,
- attracting buyers who have bought the same products from our competitors,
- impact on potential buyers who haven't bought the products yet.

The main tools used by companies applying penetration strategies include:

- free samples of goods,
- price cuts
- increase in product sales of the product.

This strategy may result in the market share increase, so the company can get more favourable impact conditions and price stability, as well as the decrease in unit costs as a result of larger production and marketing scale.

Market development - the company development is a result of offering the same product in other

geographic markets or other market segments. Searching for new markets for an existing product can be achieved by:

- geographic (spatial) expansion i.e. entry into other territorial markets (exports).
- entering new, yet not supported segments of the market.

Typical implementation methods are new distribution channels, price differentiation, using a promotion system to convince potential buyers of the purchase usefulness, etc.

Most of the actions in this strategy are focused on acquiring new customers. This strategy is favoured by companies whose strength is technology, and product development is a chance for mass production.

To expand the spatial range of operations, the company may apply:

- concentric expansion- entering the same product on the markets immediately adjacent to the existing area of the enterprise activity.
- selective expansion - the company enters the most attractive markets, independent of their location, after an assessment of their attractiveness.
- insular expansion - creating centres on geographically large markets for further concentric or selective expansion.

Product development - offering new or upgraded products at the current market. Companies use it when the current product does not exhaust their capabilities or an alternative product can be produced using the existing skills and knowledge. Depending on the scale of product innovation, various company actions are possible. Sometimes it is necessary to offer a completely new product with different characteristics which means significant capital investment. In another case, it is enough to make only small changes to improve product attractiveness, i.e. product packaging or dosing. These changes condition the increase in the additional buyers' demand for given products, and thus provide sales increase. This strategy is closely linked with the product life cycle analysis and can take the form of:

- increased market share,
- maintained market share,
- collecting market benefits,
- exit out of the market.

PRODUCT DEVELOPMENT STRATEGY OPTIONS

- needs, technology,
- new design version, aesthetics, functionality, extended life cycle, higher and / or lower production costs, higher utility,
- extending the with new types of products manufactured with the existing equipment, new life cycle (the offering expanded with new kind of products produced using new devices).

The product development strategy is a kind of strategic actions difficult to implement. It is often chosen by companies whose existing products have a strong position in the market or a well-developed distribution channels through which a new product can effectively reach the target market segment.

The diversification strategy - entering new markets with new products. The company development is achieved by moving away from both the existing product manufacturing solutions, as well as from the current market structure. This option is the most difficult to implement. It requires new technologies, new skills, etc. It can be done by the company's own efforts, a license purchase, acquiring other companies or a merger with other companies. This strategy has the following variations:

- vertical diversification - expanding the business "back" (i.e. expanding the production of raw materials necessary to manufacture a given product) or "forward" (i.e. a chain of stores or warehouses). It can limit the operational risk by reducing dependence on suppliers and customers, but it makes it difficult to adapt the company to changing operating conditions. It is effective in mature production branches with low-intensity of technical progress.
- horizontal diversification - involves the introduction of new products into the production process, which do not belong to a given type of production, but are related to the company's experience and technical and economic capabilities. They are most often the products that meet different needs of the existing buyers or similar needs in other ways. Using this diversification can maintain or improve the company's competitive position and reduce the operational risk.
- parallel diversification - the company is carrying out parallel production of completely different kinds of products, changing the current production and market structure. It requires simultaneous operation in various market segments. The implementation takes place with considerable risk as compared with the other strategies of business development. It can be implemented in various forms ranging from own research and development, a license purchase, or establishing companies that offer opportunities unobtainable for any of the companies acting individually. Consistent implementation of this strategy results in the company transformation into an organization purchasing various entities under common management strategy.

Consolidation strategy - focus on strengthening the position gained so far in the market. Personal actions are focused on the best use of the employee potential, employment rationalization, and increasing employee qualifications. It is recommended to use payroll solutions that support the employee development, especially those with the highest value for the company. The following solutions seem to be the most appropriate:

- pay for knowledge and skills,
- various forms of remuneration taking into account participation in the company's results,
- various forms of remuneration related to performance,
- individual wage packages for employees achieving particularly high scores.

Strategic decisions affect all areas of the organization - product development, the geographic scope of the activities, competition methods, human resources management, financial policy, and the choice of suppliers. Remember, the strength of family businesses relies on the reputation gained in the market through the years of its existence. Reputation has a positive marketing effect, so that advertising by the so-called "word of mouth" method is the best promotion for the company's activities. The company does not need to spend considerable amounts of money on expensive marketing campaigns.

It's worth trying, apparently it's not about "what you do", but the way "how you do" - having a strategy will be easier. The sad truth is that none of us has the right to prosper, if we fail to provide goods that are most valuable for our variable and disloyal customers who however bring us their money. If we do not, others will do it. This content is not a cookbook, there is no single, proven and reliable recipe for a strategy and marketing plan.

Interesting facts, notes, hints:

- creating / joining networks or groups is valuable. It expresses our readiness for diverse and changing forms of cooperation, the goal of which may be to make a profit through family companies and an increase of knowledge. More and more often product / service customers and users become co-authors of innovation. Sometimes the author of an innovation is an anonymous collectivity (Wikipedia, Linux).

- establish and care for contacts with the environment. In the world of the Internet and globalization, it turned out that even large companies can not only rely on their own research concerning new products. They obtain such knowledge also from direct customers involved in the development of the offered goods.
- try to develop your own source of competitive differentiation (it can be a unique colour of your pottery, excellent after-sales service, the company's reputation, product availability, or distinctive packaging design).
- e-business is nowadays the fastest growing sales form.
- fairs, exhibitions - these are the places specially dedicated to your business, places where you can meet your current and potential customers.
- raising ceramic awareness -ceramic can not be compared to plastic, life-long education.
- regularly increase your sales network (your contact list should be constantly expanded with new people and customers).
- always carry a catalogue with you - you can meet potential customers anywhere!
- carefully prepare product presentation - show your knowledge.
- treat every customer individually – try to get to know their taste and needs.
- if the proper division of labour is established in a company, and it is assigned to a specific position or organizational unit, you can assume that the intergenerational change will not worsen the company's performance.
- in case of new products, with no equivalent in the market, the basis for determining the price level is the total cost of production plus an expected profit margin.
- the way to quality leads through the focus on processes, not on products, as we have already understood that the quality is not achieved by the elimination of defective products, but the elimination of the sources and causes of faults. In order to achieve perfect final products, we must ensure that errors do not occur over the entire so-called quality chain starting from the external supplier of raw materials through all the workplaces in the company up to the final customer.
- motivational tools are based primarily on the pride mechanisms which are much stronger than the mechanisms referring to benefits. A carrot and stick method is given up, so don't use bonuses and commissions, but rather a fixed remuneration dependent only on the position, and sometimes also on seniority and the financial results of the company. Commands are replaced by the supplier-customer contracts, and supervision by self-control and a sense of responsibility. An employee is no longer a "human resource", but he becomes a partner.
- communication is based on digital communication platforms using tools like Wikipedia, Twitter, blog, and social forums. Instead of transmission and distribution of information through sender-recipient channels, information is available on a digital platform similar to a web-like portal, from where it can be collected by all potentially interested parties (with different levels of access). In the twenty-first century companies alongside conventional resources - material, energy, financial and informational ones - knowledge becomes a resource of fundamental importance, which must be constantly acquired, updated and made available to employees.
- outsourcing can be applied in many fields, including marketing and sales.

In the last part, we present 200 Guerrilla Marketing Weapons (according to Jay Conrad Levinson):

Minimarketing

1. Marketing plan
2. A marketing calendar

3. Identity
4. Business card
5. Stationery
6. Personal letters
7. Telephone marketing
8. A toll-free phone number
9. A vanity phone number
10. The Yellow Pages
11. Postcards
12. Postcard decks
13. Classified ads
14. Per-inquiry advertising (PI) and per order advertising (PO)
15. Free ads in shoppers
16. Circulars and flies
17. Community bulletin boards
18. Movie ads
19. Outside signs
20. Street banners
21. A window display
22. Inside signs
23. Posters
24. Canvassing
25. Door hangers
26. An elevator pitch
27. A value story
28. Backend sales
29. Letters of recommendation
30. Attendance at trade shows

Large media

31. Advertising
32. Direct mail
33. Newspaper ads
34. Radio spots
35. Magazine ads
36. Billboards
37. TV commercials

Electronic media

38. A computer
39. A printer / Fax machine
40. Chat rooms

41. Forums
42. Internet bulletin boards
43. List building
44. Personalized e-mail
45. An e-mail signature
46. Canned e-mail
47. Bulk e-mail (spam)
48. Audio/video postcards
49. A domain name
50. A web site
51. A landing page
52. A merchant account
53. A shopping cart
54. Auto-responders
55. A search engine ranking
56. Electronic brochures
57. RSS feeds
58. Blogs
59. Podcasting
60. A personal e-zine
61. Ads in other e-zines
62. E-books
63. Content provision
64. Webinars
65. Joint ventures
66. Word-of-mouth
67. Viral marketing
68. Online auctions
69. Click analysers
70. Pay-per-click ads (PPC)
71. Search engine keywords
72. Google AdWords
73. Sponsored links
74. Reciprocal link exchanges
75. Banner exchanges
76. Web conversion rates

Information media

77. Knowledge of the market
78. Market research studies
79. Specific customer data
80. Case Study
81. Information sharing

- 82. Brochures
- 83. Catalogues
- 84. Business directories
- 85. Public service announcements
- 86. Newsletters
- 87. Speeches
- 88. Free consultations
- 89. Free demonstrations
- 90. Free seminars
- 91. Articles
- 92. Columns in a newspaper
- 93. Writing books
- 94. Publishing-on-demand
- 95. Workshops
- 96. Tele-seminars
- 97. Infomercials
- 98. Constant learning

Human as a medium of marketing communication

- 99. Marketing insight
- 100. Entrepreneur
- 101. Employees and reps
- 102. A designated guerrilla
- 103. Employee attire
- 104. Social demeanour
- 105. Target audience
- 106. The inner circle of influence
- 107. Contact time with customers
- 108. How you say "Hello" and "Goodbye"
- 109. Teaching ability
- 110. Telling stories
- 111. Sales training
- 112. Use of downtime
- 113. Networking
- 114. Professional titles
- 115. Affiliate marketing
- 116. Media contacts
- 117. "A"-List customers
- 118. Core story
- 119. A sense of urgency
- 120. Limited time or quantity offers
- 121. A call to action
- 122. Satisfied customers

Non-media marketing

123. A benefits list
124. Competitive advantage
125. Gifts
126. Client service
127. Public relations
128. Fusion marketing
129. Barter
130. Word-of-mouth
131. Buzz
132. Community involvement
133. Club and association memberships
134. Free directory listings
135. A tradeshow booth
136. Special events
137. A name tag at events
138. Luxury box at events
139. Gift certificates
140. Audio-visual aids
141. Flip charts
142. Reprints and blowups
143. Coupons
144. A free trial offer
145. Guarantees
146. Contests and sweepstakes
147. Baking or crafts ability
148. Lead buying
149. Follow-up
150. A tracking plan
151. Marketing-on-hold
152. Branded entertainment
153. Product placement
154. Being a radio talk show guest
155. Being a TV talk show guest
156. Subliminal marketing

Company attributes

157. A proper view of marketing
158. Brand name awareness



- 159. Positioning
- 160. A name
- 161. A meme
- 162. A theme line
- 163. Writing ability
- 164. Copywriting ability
- 165. Headline copy talent
- 166. Location
- 167. Hours of operation
- 168. Days of operation
- 169. Credit card acceptance
- 170. Payment systems
- 171. Credibility
- 172. Reputation
- 173. Efficiency
- 174. Quality
- 175. Service
- 176. Selection
- 177. Price
- 178. Upgrade opportunities
- 179. Referral program
- 180. Spying
- 181. Testimonials
- 182. Extra value
- 183. Adopting a noble cause

Company's attitude

- 184. Easy to do business with
- 185. Honest interest in people
- 186. Good telephone demeanour
- 187. Passion and enthusiasm
- 188. Sensitivity
- 189. Patience
- 190. Flexibility
- 191. Generosity
- 192. Self-confidence
- 193. Neatness
- 194. Aggressiveness
- 195. Competitiveness
- 196. High energy
- 197. Speed
- 198. Focus

- 199. Attention to details
- 200. Ability to take action

To paraphrase the words of Warren Buffett: building marketing strategy is like climbing a ladder, everyone knows how to do it, but not everyone knows how to put up a ladder.

