

Monarflex Business Strategy for Czech Radon Market

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Abstract: Cílem příspěvku je na základě tržní analýzy navrhnout obchodní strategii společnosti Monarflex pro produktovou skupinu fólií proti radonu pro Českou republiku. Z analýzy trhu plyne, že společnost vyrábí produkt novou technologií v porovnání se současně dostupnými fóliemi na trhu a že produkt zároveň svými vlastnostmi vyhovuje české legislativě, která problematiku radonu z podloží reguluje. Návrh strategie je strukturován do pěti klíčových oblastí – cílový segment trhu, cíloví zákazníci, konkurenční výhoda, marketingová a promo strategie a způsob vstupu na český trh – a je podložen finančním zhodnocením situace v horizontu 4 let.

1 OBJECTIVES

The main objective of the paper is to give a clear overview of the Czech market analysis and based on the analysis and knowledge of the market suggest the proposal on Monarflex business strategy for the anti-radon membranes product line for the Czech Republic.

The business strategy proposal is aimed at 5 key areas - target market segment, target customers, competitive advantage, marketing and promotional strategy and the way of entering the market.

2 STRUCTURE AND LOGICAL FLOW

The paper starts with Monarflex company characteristics which together with the description of the Czech approach to the soil radon create a good starting point for the Czech market conditions analysis. Market analysis is deployed to three closely-linked lines – assessing the environment, a nature of competition description and a picture of Monarflex future situation on the Czech market. The all above mentioned parts create an effective background for tailoring the final proposal on the Monarflex business strategy for the Czech radon market.

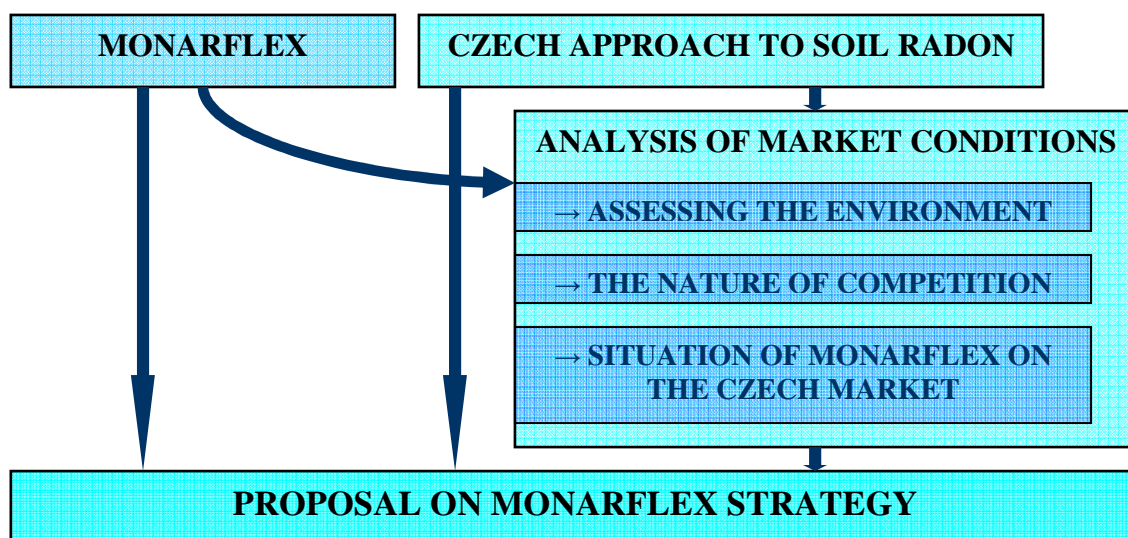


Fig. 1.1: Graphical description of a structure and a logical flow of the paper

3 MONARFLEX COMPANY

3.1 Introduction to Monarflex

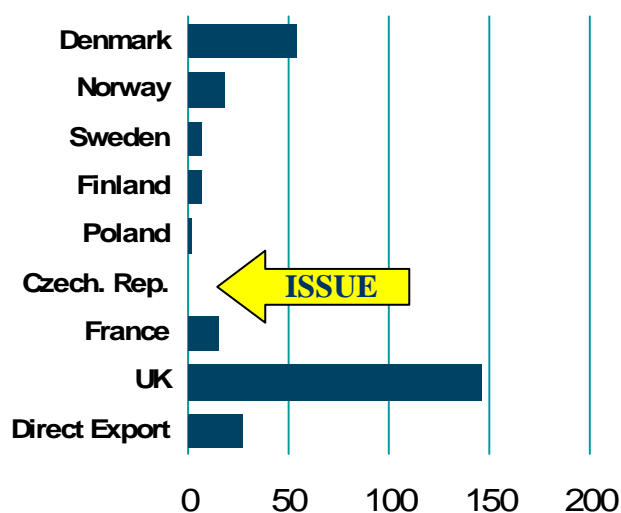
Monarflex a/s is a Danish company and one of Europe's leading manufacturers of reinforced and non-reinforced plastic sheeting and membranes, used in the building and the construction industry. The sheeting and membranes are made primarily from low-density polyethylene (LD PE), polyester (PET) yarn, non-woven polypropylene (PP NW), aluminium and additives. Furthermore Monarflex products are widely used for any type of covering, containment or weather protection purpose.

Its turnover in 2005 was 281 million DKK = EUR 38 mill. The highest turnover comes from roof underlay (36%), then from scaffold sheeting (18%) and radon and gas membranes (16%). Monarflex products can be characterized by high quality and strength combined with durability and flexibility. They are in the forefront of technological innovation within the plastic industry and have proven high ratio of newly developed products every year.

Monarflex is a member and a product division of Icopal Group. The Group has a turnover of approximately EUR 740 million and employs 3,500 people. Icopal, headquartered in Denmark, operates globally and has 35 manufacturing sites and 50 offices throughout Europe, North America and Asia, including SBU in the Czech Republic.

Monarflex has 2 factories, one in Herlev, DK and one in Neubrandenburg, DE. Recently the third production plant has been launched in Štúrovo, Slovakia. Certain products are bought from sub-suppliers to complement the range of products.

Distribution network varies from country to country. In some countries Monarflex sells its products solely through Icopal sales subsidiaries. In other countries, where Icopal has no sales office of their own, Monarflex depends on external distributors, and then it is Monarflex Direct Export.



In the Czech Republic Monarflex sells its products through an Icopal sales subsidiary. However, Monarflex current turnover in the Czech Republic is very low, as Icopal's employees seem to be very busy by selling Icopal's own products primarily. The key question to be solved is wheather to persuade the Icopal sales office in Prague to concentrate more on Monarflex products or to find another way to enter the Czech market. The better choice depends on further study of the target market.

Fig. 3.1: Monarflex Turnover 2005 in selected countries (in mill.DKK), total 281 mill. DKK [1]

3.2 Monarflex Anti-radon Membranes

The most efficient and cost effective way of reducing the radon level in a house is to reduce its initial entry into the building by installing a mechanical barrier. This type of protection is called passive system. The radon resisting membrane must be extended across the whole of the building, including the whole area of foundation. Monarflex has developed 4 special reinforced membranes that meet the high requirements for radon protection and at the same time ensure a problem-free installation:

- MONARFLEX® RMB 350
- MONARFLEX® RMB 400
- MONARFLEX® Reflex Super
- MONARFLEX® Blackline 1000.

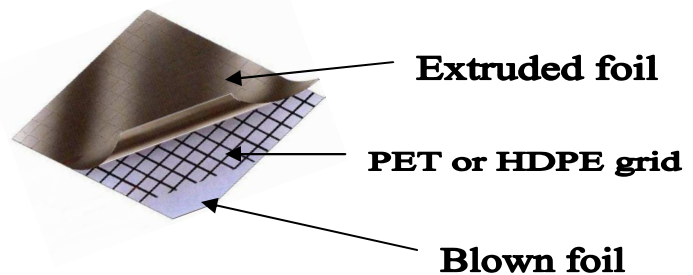


Figure 3.2: Product structure [1]

All membranes are produced from low density polyethylene (LD PE) ensuring flexibility and strength even at low temperatures. Monarflex uses its special reinforced technology so then the final membrane consists of three or more layers that ensure extra protection and no risk of cracking during the installation. See figure 3.2 above. Product composition is then like a sandwich consists of:

- Blown film “underlay”
- Reinforcement grid – open net of multifilament yarn or monofilaments
- Extrusion coated layer – lamination layer.

4 CZECH APPROACH TO SOIL RADON

4.1 Radon Gas

Radon is a colourless and odourless radioactive gas generated by the radioactive decay of radium (Ra226) which in turn derives from the radioactive decay of uranium (U238). Uranium is found in minute quantities in all soils and rocks, and it decays by emitting alpha particles. Radon in soils and rocks mixes with air and rises to the surface where it quickly dilutes in the atmosphere. As a consequence, radon concentrations in open air and well ventilated habitations are very low. However, when radon moves through openings, cracks and fissures into the buildings, it can reach relatively high concentrations to constitute a health hazard for the inhabitants.

Radon is known to be a human carcinogen. When radon and its decay products are inhaled, radon itself is mostly exhaled immediately. However, its short-lived progeny, which are solid, tend to be deposited on the bronchial epithelium and, as a result, sensitive cells may be exposed to alpha radiation. By far the largest radiation amount is delivered to the lungs: alpha particles cause damage to the lining of the lungs which brings changes in cells and may eventually lead to lung cancer. Health studies show that radon is the second largest cause of lung cancer after smoking and the worst effects occur as a consequence of synergistic effect

with smoking. Radon causes as much as 9% of all lung cancers, that is 2% of all cancers in the population, worldwide [8].

According to the recent (2006) medical studies [2] there is a strong evidence of an association between residential radon and the risk of lung cancer after adjustment for smoking history. The dose-response relationship was linear with no evidence of a threshold. The cumulative risks of death from lung cancer by the age of 75 years in the absence of radon exposure were estimated to be 0.41% for lifelong nonsmokers and 10.11% for continuing smokers of 15-24 cigarettes per day. These cumulative risks increased with increasing radon concentration, reaching 0.67% for lifelong nonsmokers and 16.03% for continuing cigarette smokers at 400 Bq/m³. This newest collaborative analysis shows that the lung cancer risk caused by radon remains significant even under the action level.

4.2 Radon Mapping

National Radiation Protection Institute [10] presents radon maps of the Czech Republic. As it could be seen in the figure below (fig.4.1), there are large areas in the Czech Republic with high and middle concentrations of radon and only very small areas with low concentrations.

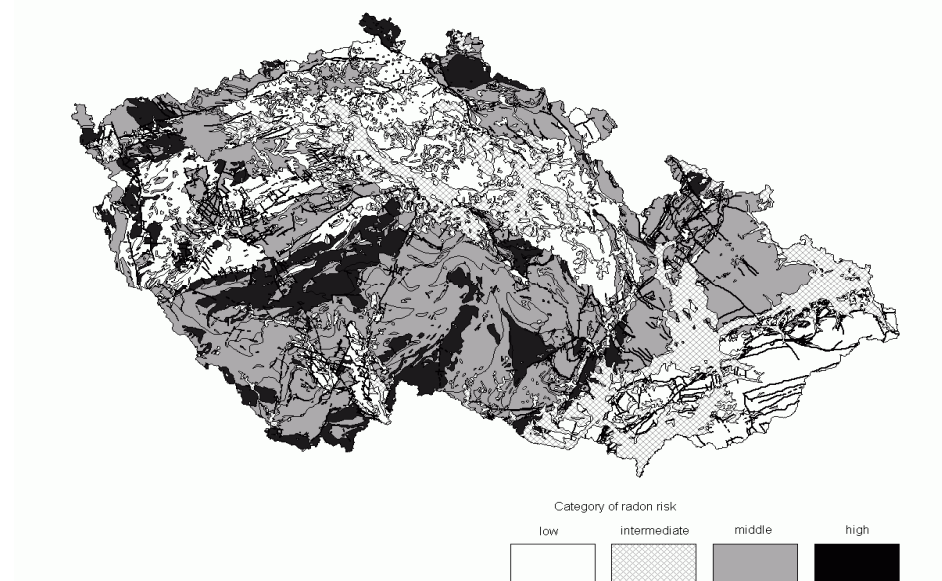


Fig. 4.1: Geological Radon Risk Map [10]

4.3 Czech Legislation and Action Levels

The subject of protection houses against the soil radon has been regulated since the 1990's by the Regulation of the Ministry of Health no. 76/1991 Coll. and by Government Resolution on Radon Problems no. 150/1990 Coll. and no. 709/1993 Coll. The basic problems are now regulated by "Atomic" Law no. 18/1997 Coll. and National Radiation Protection Institute's Regulation no. 307/2002 Coll. and Czech Standard ČSN 73 0601.

According to the Article 95 of Regulation no. 307/2002 Coll. the action level for houses protection against soil radon should be taken starting from 400 Bq/m³ for old houses and 200 Bq/m³ for new ones. Only radon foils certified according to the Czech Standard ČSN 73 0601 and with acceptable radon diffusion coefficient can be properly used in the Czech Republic.

5 ANALYSIS OF CZECH MARKET CONDITIONS

5.1 Assessing the Environment of the Target Market

In respect of the company's environment, it is necessary to understand the requirements of customers and users to fulfill, even exceed their needs and at the same time to be alert of economic circumstances or changing technology to be able to react quickly. The environment is not stable any more and needs to be regularly evaluated by the company to get a new advantage when arises.

The tools and areas used and analyzed for this chapter¹:

- PEST ANALYSIS
- PRODUCT LIFE CYCLE
- CONSTRUCTION INDUSTRY
- RADON DIFFUSION MEASUREMENT

The Czech construction market has continuously experienced a rapid growth since 1989. The construction industry hand in hand with the radon insulation product can be found in a growing phase now. However, the market is likely to move to a more stable phase soon, as the long-lasting low interest rates are expected to increase as well as the VAT. A public awareness of radon risk from the soil is still very low, but slowly increasing. The target market is price-sensitive and conservative. The traditional technology of the insulation is bitumen-based membrane. The newer technology on the market is a one-layer thick plastic foil without reinforcement.

According to the Czech Standard ČSN 73 0601 radon-proof insulation foil require a certification by the FCE of CTU in Prague. The comparison of Czech and Swedish radon measuring principles shows high similarities. When applying the Monarflex data from SP Swedish National Testing and Research Institute to the Czech methodology, the effective usage of the thin several-layered reinforced membranes was proved under the Czech conditions. Similarly to Scandinavia, Monarflex products will be usable only for cellar-less buildings in the Czech Republic.

5.2 Competitor Analysis

Every organisation needs to be alert to the activities of competitors, both existing and potential ones. It is important to know how fierce the competition is, and wheather it is based on price, command of particular technology or other factors. Then, it needs to look forward, to understand how competition may evolve as the environment changes. This understanding creates a background for tailoring the strategies for the particular market.

The areas analyzed and tool used for this chapter:

- COMPETITORS & THEIR PRODUCTS
- COMPARISON OF TECHNICAL CHARACTERISTICS OF PLASTIC PRODUCTS
- PRICE COMPARISON
- PORTER'S FIVE FORCES

¹ The further details at [11], see References below.

In the Czech Republic, there are a lot of radon-proof insulation products from different plastic materials available. All plastic radon-proof insulations are made from one layer of material and are without reinforcement. On the other hand, reinforcement is well-known and often used for roof membranes. Monarflex products represent new technology of wide and thin several-layered reinforced radon insulation product.

Not only the geographical position right in the middle of Europe, but also low entering barriers, the presence of substitute products and high power of customers contributes to the fact, that Czech market is characterized by fierce competitive rivalry. Monarflex products will have good prices, which together with its quality are able to successfully compete with comparable solutions. The price is a very important characteristic that gives Monarflex high chances even at the highly competitive culture.

5.3 Situation of Monarflex on the Market

To portray the future situation of the company on the market the following areas were analyzed and completed with tools:

- ANSOFF MATRIX
- MARKET SIZE & MARKET SHARE
- FINANCIAL EVALUATION
- SWOT

Monarflex is entering existing markets with existing products. This is the least risky strategy since it leverages many of the firm's existing resources and capabilities. The company has to penetrate the current market in order to increase its market share - win customers from the competitors. To make the best of this kind of situation the company should use its strengths and opportunities for creating a competitive advantage.

The future situation was evaluated along with a four-year discounted cash-flow calculation. When concerning the company enters the market with other product lines as well, it gave a very satisfactory result. Details find in [11].

6 PROPOSAL ON MONARFLEX STRATEGY FOR CZECH RADON MARKET

The Czech construction industry as well as a product life-cycle is in a growing phase now. The construction industry is likely to move into a more stable phase, that is why Monarflex should decide about the Czech market quickly in order to take advantage of the good conditions in a still growing market.

6.1 Target Market Segment

The company's products are targeted for the new buildings without cellars. Monarflex membranes are ideal for residential construction as well as for non-residential construction. To be most effective, Monarflex should target both residential and non-residential buildings without cellars and focus mainly on those built in areas with higher radon concentrations. The

market for buildings without cellars is estimated at 10-20 %² of the whole new construction market within the Czech Republic and the radon market is estimated to 10 %³. The intersection of these two markets, i.e. the market of houses without cellars and with higher radon concentrations, means only several percentage of the new construction. Such a market is not that large. That is why the whole market for cellar-less buildings should be targeted and membranes promoted as high-quality water-proof insulation extra effective against radon.

6.2 Target Customers

To select the best penetration strategy, the relevant customer segments must be figured out. Customers needs should drive the company for developing the best approach.

First of all, the architectural and design offices prepare the first version of the future building project and suggest the characteristics of water-proof and radon-proof insulation. They are not allowed to promote any brand in such a project, though they describe the best technical solution that meets the economical criteria as well.

The next customer segment is created by construction companies that realize construction according to projects. They select exact materials in a way to meet both the characteristics stated in a project and economical criteria in order not to go over budget.

The installation companies create the next important segment and participate in many projects with different companies. They prefer easy installation and competitive prices for material.

Last but not least, trading companies with construction material are mostly both wholesaler and retailer in one and create significant interlink in the supply chain. For the case of anti-radon membranes the focus should be especially on the branch offices presented in the areas with higher radon concentrations according to the radon map. The trading companies are in close contact with end-customer, that is either the construction company, the specialized installation company or the individual, and usually they offer a consultancy service as well.

6.3 Creating Competitive Advantage

The segment of water-proof and radon-proof insulations in new buildings without cellars is currently occupied by many companies. Monarflex needs to penetrate existing market in order to get its market share.

As shown deeper in [11], due to its new technology, Monarflex offers better prices than its competitors and so can reach the price leadership. This is a very important fact and strong tool for persuading the Czech conservative market. By moving the production to Štúrovo, the costs are expected to be even lower, so the prices will be even more attractive. Focus on better prices is very important particularly in the introductory phase, as everything new is usually accepted earlier when the prices are appropriate. To make the most of its price advantage, Monarflex should highlight the quality of its polyethylene products by using its own references.

² Based on discussions with civil engineering experts, e.g. Ing. Ivan Misar, CSc., technical manager of Siplast-Icopal, s.r.o., Prague.

³ Based on consultation with Doc.Ing. Martin Jiránek, CSc., FCE CTU in Prague.

Within the continuous improvement, Monarflex should also focus on finding solutions for anti-radon protection of houses with cellars and for older houses. It would mean for a company a much larger market segment and an another competitive advantage of differentiation in complex solution in the future.

6.4 Marketing & Promotional Strategy

It is very important to introduce Monarflex membranes in a proper and suitable way, because memorable first impression is a strong advantage in arena of marketing.

First of all, the Czech market for construction insulation is based on personal contacts and relationships. Personal selling means a solid base for successful business. The prices and discounts are agreed on by both sides through personal contacts as well.

Monarflex anti-radon membranes should be introduced primarily to trading companies with construction materials. The trading companies should get sufficient information about the product and its characteristics. Monarflex can take advantage of trading companies with their numerous branch offices throughout the Czech Republic and focus more on those, situated in areas with higher radon concentrations according to the radon map (see fig. 4.1).

At the same time, architectural and design offices should be informed about the membranes as well. Architects are interested mainly in solutions that are easy to implement and have already solved all complicated details, as pipe penetrations and so on. The complex solution of radon-proof insulation, including technical drawing, the specified conditions under which the solution is usable, the conditions of safety installations and the possible penetrations problems solutions, is very welcome by architects. If such a complex solution is delivered to architects they do not have any barriers and are more likely to start to use such systems in their projects.

Last but not least, companies installing insulation should be contacted as well and their employees should undergo specialized training.

New technology can be introduced quickly to professionals through the articles in the specialized technical journals and magazines which inform them about news and R&D and are usually focused on the Czech market. Monarflex should create Czech references as soon as possible and show that high-quality thinner membranes can work on the Czech market as well as abroad.

People who are responsible for purchase and design of insulation systems usually have their own procedures that they prefer to use and which they are familiar with. Promotion factor during university studies can be quite important, because what future construction professionals learn at university, it influences their habits in the future.

7 The Way of Entering the Czech Radon Market

The company is currently producing anti-radon membranes in Denmark and is planning to move the production to Slovakia soon, the third country, close to the target Czech Republic market. The company already has the knowledge of the Czech radon market, but still low level of experience. The characteristics of the Czech market are very different than the characteristic features of Scandinavian markets.

For the complex situation of Monarflex, the cooperative export entry mode seems to be the most suitable initial phase of entering the Czech radon market. In this first phase the company could be introduced to the market through specialized trading company on the market, use its experience and knowledge for overcoming the first obstacles and due its contacts gain the market share faster. The first phase does not usually mean any higher profits. Such a trading company might naturally be already existed Siplast-Icopal s.r.o., which has a very good reputation on the Czech market as a high quality brand.

After the introduction, Monarflex should concentrate more on developing complex solutions for every possible case of radon protection, including houses with cellars and ventilation systems for existing houses. The complex solution could contribute to the decision of establishing Monarflex own Strategic Business Unit focused on complex radon programme. In several years the public awareness of radon will increase and such a specialized SBU could become very strong and competitive and gain higher profits.

8 SUMMARY

Monarflex anti-radon membranes are a new multi-layered technology with a reinforcement grid for the Czech radon market. The membranes can effectively meet the requirements to be both radon-proof and water-proof insulation for the segment of houses without cellars. Due to the new technology, membranes can be thinner and still strong enough. Thinner membranes have a lot of advantages. They are flexible, easier and faster to install, and the multi-layered reinforced structure guarantee strength and toughness. The new thinner technology naturally leads to the cost advantage.

However, as a new technology, the membranes will face up many obstacles on the Czech market, such as the traditional conservative barriers, that a thin membrane cannot be safe enough, although the calculation [11] shows that Monarflex membranes meet the Czech Standard's criteria. The next obstacle is put up by Czech construction conditions. Nobody can guarantee that only specialized workers will be in direct contact with the membrane and that every worker will behave properly on the building site. Therefore the process of safe installation and the following actions, such as immediate covering the membrane by the concrete layer, should be developed and clearly explained.

The possible market is created by the buildings without cellar. The construction market as well as the life-cycle of anti-radon membranes are in a growing phase at the moment which creates a big opportunity.

Monarflex can also benefit from a dynamic and cost-effective supply chain when having a production factory in nearby Slovakia. Decisions concerning the distribution channel arrangement should be based on customer needs, minimal investment on unnecessary inventory, and overall functionality of the channel itself.

There are several possible ways to enter the Czech market. Due to lack of contacts and experience on the market, Monarflex should enter the market in cooperation with an already established company. A trading company with insulation materials can provide the necessary experience and faster introduction of Monarflex technology to the professionals and thus, the company could gain the market share faster.

Success of the market penetration was evaluated along with profitability calculations. A price-sensitive Czech Republic market, combined with fierce competition and conservative approach, means that profits are likely to be minimal, particularly in the initial phase. In respect of the small size of the Czech radon market for houses without cellars, Monarflex should expand into other product lines as well. If this is done, the company's profit prospects over the next four years look very good and the financial evaluation gives very satisfactory results indeed.

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