Manufacturing Network Concentration

Now Could Be the Time to Act

Manufacturing networks drive unnecessary costs, capital and obstruct service if not aligned with products, sales and production technology. Historic events and organizational heritage often lead to manufacturing networks that are not optimal from these perspectives. Although companies are often aware of the problems, many are hesitant to start restructuring activities in a good business climate. The current economic downturn accentuates the problems with overcapacity, high fixed cost or geographical imbalances. Arthur D. Little argues that now is a good time to review and restructure manufacturing networks. Arthur D. Little offers a pragmatic yet rigorous method to quickly come to the right decisions and put implementation plans and structures in place.

The downturn shifts the balance

Many companies have a long heritage that has resulted in an less than optimal manufacturing structure. This heritage can stem from M&A activities or can be a result of different phases in the company's growth. It is normal for a company to undergo several organizational transitions on its growth journey where different manufacturing set-ups are logical. For example, a national company expanding on the international scene may choose to acquire a local player active in the new geography. In such a situation a "one geography, one P&L, one plant" is a natural set-up. As the company grows, a regional organization may be preferable, then centralized manufacturing is a more efficient set-up.

Manufacturing network imbalances and structural overcapacity become more evident in a downturn. In the current market situation, with significantly reduced volumes in many industries, companies find themselves having poor utilization in factories and a high share of fixed costs. Changing the manufacturing set-up is, however, not the route to temporarily improve margins, but rather a longer term strategic action.

Great strategic accomplishment with decent payback

There are many aspects of the business that could be improved by manufacturing network concentration. Although specific cases differ greatly from one to another there are some areas where significant improvements could be expected.

For volumes moved from closing to remaining units:

- Direct manufacturing cost could often be reduced between 5-10% through relocation to a low cost country and from higher operating efficiency.
- Sales General and Administrative expenses (SG&A) could be reduced by as much as 50-70%.

Depending on the specific business and its pre-requisites the payback time for restructuring is normally between one and three years.

Is now the best time or the least bad? Perhaps a little bit of both

Significant benefits can be reaped from manufacturing network redesign and concentration. One of the main questions is: what will it take to realize these gains? The total costs, including effects on client relations, often make decision makers hesitant to take action. However several factors indicate that now is a good time for action:

- The ability to ramp up production and build buffers for the transition phase are good as volumes are low today. Better flexibility and lower cost are obvious advantages.
- Customers are faced with suppliers going out of business and are more likely to agree to efficiency improvement actions like relocation.

- The general labor market is weak and personnel are likely to be more flexible and loyal to the company.
- There is limited risk for extensive "bad press" as the media landscape is full of similar news.

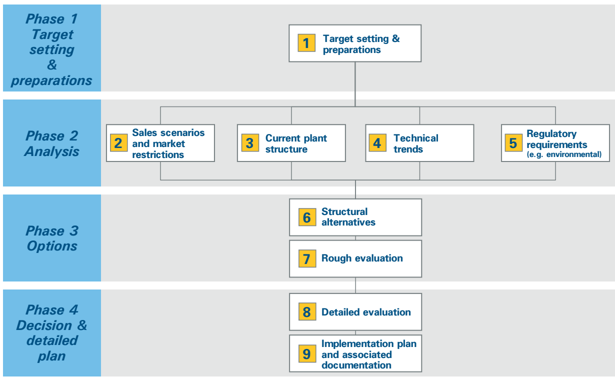
On the other side of the coin is the problem of financing the major investment in troubled economic times.

A confident approach ensures a holistic perspective

Approaching the issue of manufacturing network concentration and a possible close down is sensitive and needs to be treated with great respect. What is obvious from one perspective could be challenged from another. In many cases management has a good idea of what direction to strive for and which units to question, but lacks detailed decision material.

Over the years, Arthur D. Little has gained vast experience of how to approach these issues. The approach often used (see figure 1) gives a holistic perspective. Throughout the process one of the key challenges is to link the technical and logistical considerations with the strategic and financial ambitions and constraints outlined by the company or the market. Failing to do so could lead to poor liquidity and poor decisions. Central is that all stakeholders are identified and handled throughout the process.

Figure 1. Approach framework



Source: Arthur D. Little analysis

A proper fact base ensures coverage of all key aspects

Arthur D. Little's experience is that time and quality is improved if the starting point is to develop a comprehensive fact base. At this stage, only the boundaries should be decided and many options should be open.

In many cases the trigger for action is weakening sales volumes in the short term. However, as a restructuring decision is long term, **sales scenarios (2)** must be developed over at least five years. This can be a major undertaking as sales forecasts with enough detail are seldom present for horizons over 12 months.

Of obvious importance is to understand the **current plant structure (3)**. To get a firm basis for decision one must analyze operational data in the current structure on a highly detailed level. Mapping the operation on an article level, operation by operation gives the required level of detail.

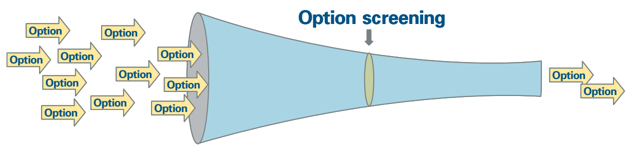
Technological trends (4) could play a significant role. Companies need to identify which operations and technologies are promising for the future. If these are already present in the company they should be retained. If not, companies need to consider investing in new technology instead of moving what is available in closing plants.

Understanding and correctly interpreting the **regulatory requirements (5)**, which often differ greatly from country to country, is also crucial as they can have a large impact on the business case. For example, HR related regulations are one of the elements which could restrict the redesign and influence the practicalities of handling staff in closing plants. Other relevant areas are, for example, contract terminations and environmental responsibilities which, if not identified and handled in a correct manner, could cause unpleasant and costly surprises during implementation.

Making the hard decision easy

Although many options may be on the table at first, a thorough analysis will highlight the most viable ones (see figure 2). Screening criteria are often project specific but also include a set of general criteria. Based on the available options a financial and practical evaluation is carried out in order to identify the best alternative.

Figure 2. Screening of options



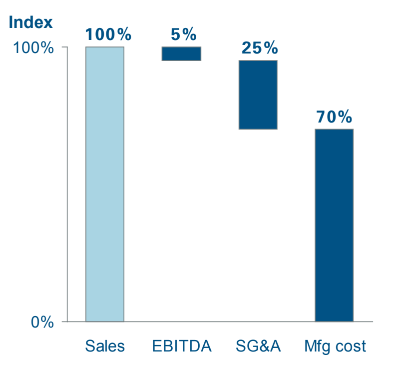
Source: Arthur D. Little analysis

Case study – Contract manufacturer

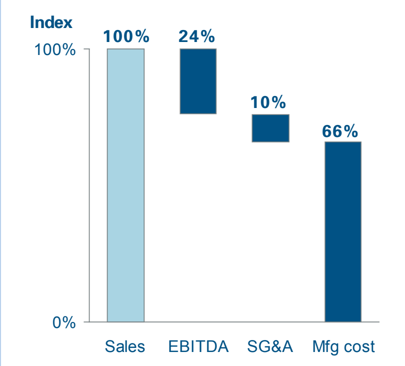
The example below shows the business case for a contract manufacturer closing down a medium sized factory in Western Europe and concentrating production on two other factories, one in a low cost country and the other in the same region as the plant to be closed. The company's heritage put it in an unfavorable position, which the current downturn accentuated. The case study illustrates a typical example of network concentration and its financial effects across major cost elements.

Annual improvement of EBITDA

Cost structure "today"



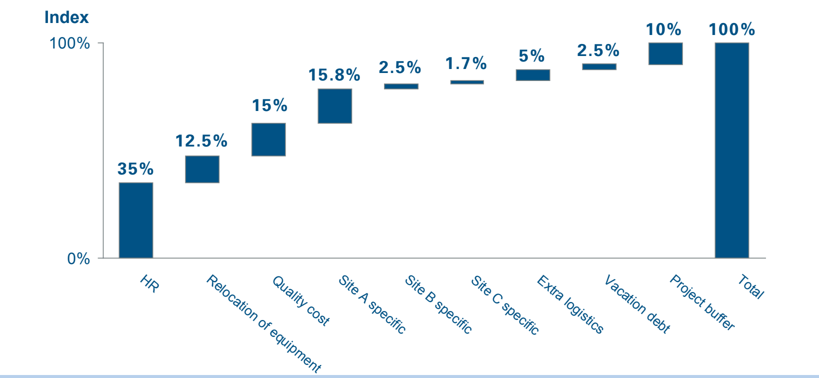
Cost structure "tomorrow"



Comments

- Half of the volume is transferred to a factory with similar cost level and half is transferred to a factory in LCC
- 15% of manufacturing cost is direct labor
- Cost level in LCC assumed to be 1/3 of the "today" situation
- SG&A reduction is largely enabled through reduction of white collar staff and indirect personnel as well as fixed indirect production cost, rent etc.

Total negative cash effect from restructuring

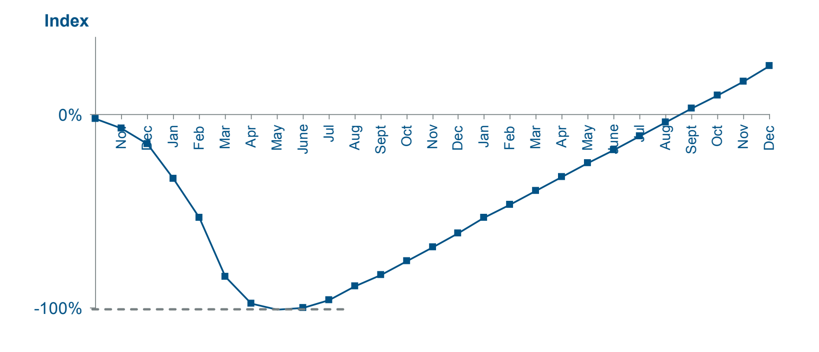


Comments

- If HR regulation is extensive the HR cost item often will become a significant/the largest share of the negative relocation cash effect since motivational programs, termination periods etc. must be considered
- Logistics and quality costs can become much larger if implementation is poorly managed
- It is wise to include a "project cost buffer"

Payback: 1.3 years

Accumulated cash flow projection



Comments

- In the case example 90% of the savings could be realized after six months with a gradually increasing effect over the next 12 months
- Project cash flow break even in approximately two years

Successful implementation rests upon careful planning

Much of the success in implementation is founded in the planning phase. A realistic plan that causes an even stress to the organization is sought. Many fail to accomplish this, in most cases due to a reluctance to acquire the right level of details. By building on operational data gathered in the analysis phase, an implementation plan with sufficient detail can be developed. Special attention needs to be given to the communication plan and announcement day preparations. When the time comes for public announcement, management must be well prepared to handle the turmoil connected with a factory downsizing or closure.

Managing implementation is managing success

What was carefully planned needs to be carefully managed. Poor implementation could quickly kill the business case as well as cause problems for customers and suppliers. Arthur D. Little sees a number of key success factors:

- Run the implementation as a project.
- Assign a strong project leader and competent resources with clear roles and responsibilities.
- Create a realistic time plan. If the plan includes closing of plants the close phase should be as short as possible. Manage risk by use of product buffers if possible.
- Put high emphasis on the communication plan.
- Involve customers and put a priority on quality and delivery precision to avoid being penalized by the customer in forthcoming contract negotiations.
- Put a generous bonus scheme in place for employees in downsized plants – in most cases you will be highly dependent on their cooperation througout the project.

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Arthur D. Little

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