

Study on the Re-use of Former Military Lands

Conducted on behalf of the

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Table of Contents

1. Overview and Methodology.....	2
1.1. Overview	2
1.2. Methodology.....	3
2. Description and Analysis.....	5
2.1. Factors influencing the base re-use process	5
2.1.1. Fixed factors in the base re-use process	6
2.1.1.1. Geographic location, type of military use, environmental condition	6
2.1.1.2. Economic situation in the region	6
2.1.1.3. “Soft” locational factors	7
2.1.2. Semi-variable factors in the base re-use process	7
2.1.2.1. Condition and quality of structures.....	7
2.1.2.2. Environmental contamination and unexploded ordnance	8
2.1.2.3. Infrastructure availability	8
2.1.3. Variable factors in the base re-use process.....	9
2.1.3.1. Planning and development.....	9
2.1.3.2. Project management and organizational structure.....	10
2.1.3.3. Ideas for re-use and feasibility study.....	12
2.1.3.4. Financing mechanisms and incentive programs	13
2.1.3.5. Acquisition of investors and marketing the site	14
2.1.3.6. Public outreach and communication	15
2.2. Assessment of the factors.....	16
2.2.1. Relative importance of the factors influencing the re-use process.....	16
2.2.2. Economic viability of re-use projects.....	17
3. Step-by-Step Process for the Re-Use of Former Military Lands.....	22
3.1. Redevelopment timeline.....	22
3.2. Phases of re-use	24
Phase I: Orientation	24
Phase II. Conceptualization	26
Phase III: Realization	32

1. Overview and Methodology

1.1. Overview

During the last seven years, the fundamental political changes in the countries of central and eastern Europe brought about a period of troop reduction and base closure more intense than at any period since the end of World War Two. More than 8,000 military installations worldwide (with a combined area of nearly 2.5 million acres / one million hectares) have been made available for civilian use. In Germany alone, this has led to the availability of 954,000 acres of former military land.

The former Warsaw Pact countries have also been affected. Thousands of military bases were closed in the region when the former Soviet Union withdrew over half a million of its soldiers. The sites left behind for civilian use cover the entire range of previous uses and locations, from isolated administrative or communication buildings to entire self-sufficient cities and from well-developed bases to training areas without any sort of infrastructure.

In the East and West alike, the transfer of such areas from military to civilian hands creates challenges for those responsible for the redevelopment. In addition to the remediation of environmental damage, other enormous hurdles need to be overcome in order to launch a successful – and sustainable – re-use project on a given site. These include unclear ownership/title as well as uncertainty concerning the administrative responsibility regarding the sale or lease of a given site. In eastern Europe, the closure of a military base had a nominal impact on the local economy because Soviet military installations were self-sufficient and virtually cut-off from the regional economy.

In comparison, base closures in western Europe have significant negative socio-economic implications through a direct impact on labor, purchasing power, and tax revenues. Government agencies are often called upon to take on the numerous and costly planning and management responsibilities in order to turn the closure of a military base into an opportunity for regional development. A series of difficult tasks must be fulfilled in order to develop the site, including:

- the remediation of contaminants and unexploded ordnance,
- an overall assessment and an evaluation of the re-use,
- value appraisal and price negotiations, and
- financing and acquisition of investors.

As one can see, base re-use and redevelopment is a complex process involving a great deal of planning. It involves a large number of actors, and can tax municipalities (financially as well as in terms of personnel) beyond their capability. Therefore, creativity and the willingness to communicate and cooperate are just as important for re-use projects as are the use of the correct feasibility study, organizational structure, marketing strategy, or innovative financing mechanism.

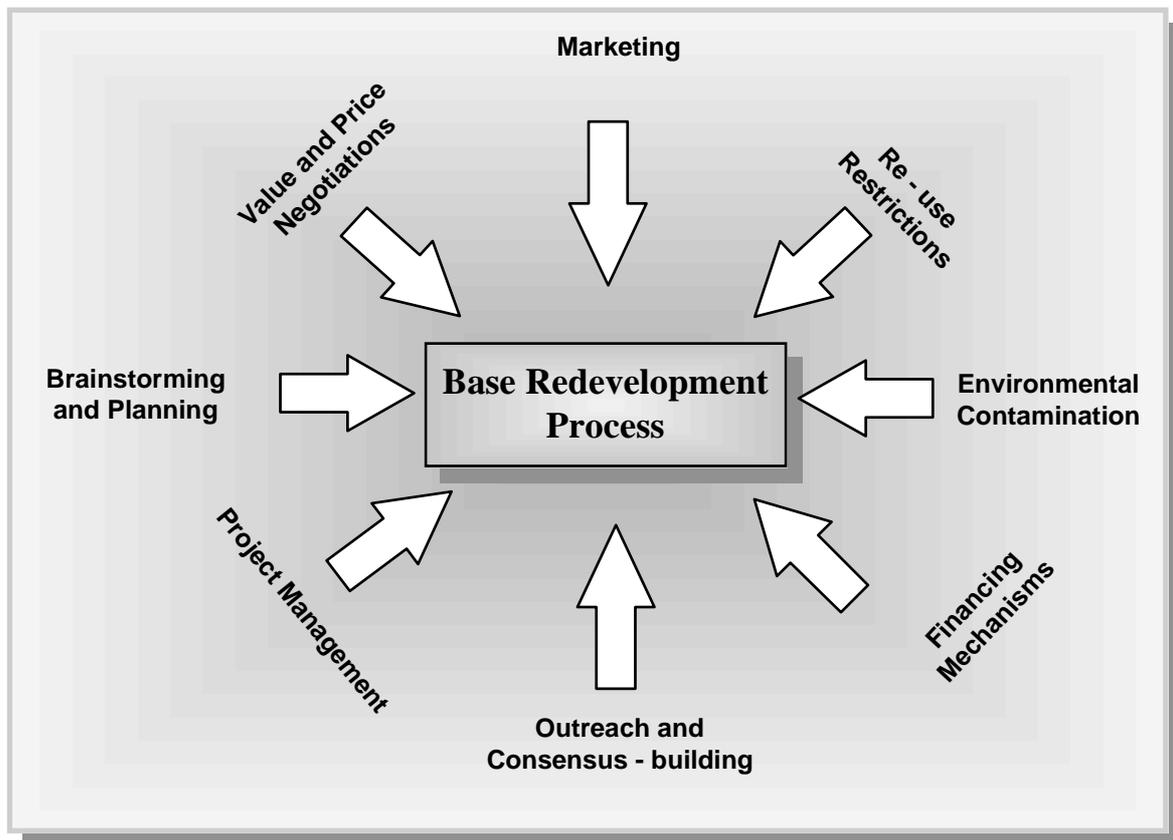
The re-use of former military sites is not easy. This is true for regions which require additional land – for housing or business development – as well as for structurally weak areas which are in need of a new impetus for development.

The heterogeneity of the sites makes it unlikely that there will ever be a patented method for the re-use of military lands. Nevertheless, the on-going exchange of ideas and experiences among practitioners makes it possible to learn from other redevelopment projects. This study attempts to go beyond this by identifying and presenting the key

elements for redevelopment, and by drafting a typical step-by-step process for re-use under ideal circumstances. Communities confronted with the multi-faceted challenge of conversion will be provided with alternative strategies for the revitalization of their sites.

The individual character of each site makes it necessary to take a range of issues into consideration, as indicated in Figure 1.

Figure 1: Factors influencing the base redevelopment process



Not only must one consider these issues, but one must do so according to a specific timeline – and in the context of specific regional factors. Only in this way can one develop a holistic concept for the redevelopment of a given site.

In this study suggestions will be made for such redevelopment. These recommendations are based primarily on German experiences, and have been generalized so that they may be universally applied (including to the specific situation in central and eastern Europe). The analysis has been limited to sites which have been put to renewed economic use (business, industry, housing, etc.), and does not include former military installations which are under-going renaturation.

1.2. Methodology

The study is divided into two main sections. The first part is a descriptive-analytical portion which identifies and evaluates a range of factors which need to be considered under the context of base closure and redevelopment. The authors from the IABG and BICC rely on their numerous years of combined experience analyzing environmental problems on former military sites and working on a range of re-use and redevelopment

issues through practical work with communities. The analysis of literature on these issues as well as information collected through the participation in conferences has also contributed to this work.

One of the objectives of this study is to identify which factors have a more positive impact on the redevelopment process and which have a nominal or even negative impact. In this way, one can determine where there is greater flexibility in creating a redevelopment strategy.

In a first step, the relevant factors are identified and described. Based on the detailed analysis of roughly 30 base redevelopment projects, these factors are assessed vis-a-vis their importance in the re-use process.¹ The factors can be categorized in three groups:

- **fixed factors**, which cannot (easily) be changed,
- **semi-variable factors**, which can be influenced – at least in part – through investment or technical innovation, and
- **variable factors**, which can be influenced through the active participation of the various actors in the redevelopment process.

The next step is the assessment of the factors according to two key points. The first point concerns the relative level of importance among various factors, which have been identified from looking at different measures applied during the conversion process. Each factor is analyzed according to whether it has had a positive or a negative impact on the redevelopment process. This assessment can lead to generalizations which are important for the formulation of an idealized step-by-step process for redevelopment. The aspect considers the way in which the profitability of re-development can be realistically evaluated prior to the launching of a re-use project. It is obvious that only economically viable solutions should be sought – and that those which may lead to a financial loss should be avoided. Instruments which can contribute to the quantitative cost-benefit analysis will be discussed in this section.

The results of this analysis will be presented in the form of a step-by-step redevelopment process in the second part of the study. This “checklist” is intended to serve as an aid for all actors in the conversion process. It is based on three distinct phases which correspond to a rough timeline for redevelopment: **orientation**, **conceptualization**, and **realization**. Activities which should be conducted within a given phase are presented briefly. However, one should bear in mind that there is no single model for the conversion process, which can be applied to every site. Alternatives are presented which can be adapted to suit the specific needs of a given redevelopment project. In this way, an optimal re-use strategy can be created.

This suggested procedure is intended as a first attempt to help those actors involved with the challenges of base redevelopment approach this complex task in a systematic way.

¹ A volume with detailed information on over 30 base closure and redevelopment projects in Germany has been supplied to the Berlin Office of the German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety.

2. Description and Analysis

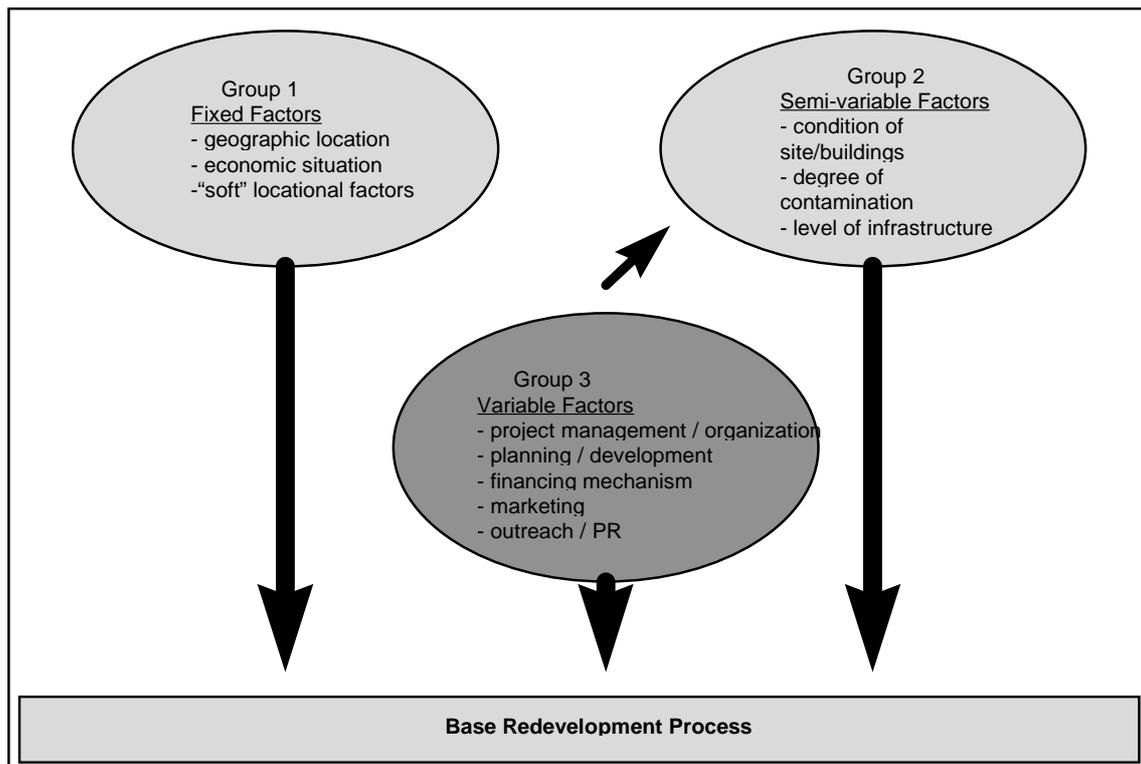
2.1. Factors influencing the base re-use process

The successful re-use of former military sites is shaped by a series of factors, which can themselves be influenced by the various actors involved in the base closure and redevelopment process. While some factors are more or less fixed – such as the geographic location, the economic situation in the region, and the “soft” locational factors (i.e., the beauty of the natural environment) – others can be changed through technical measures and/or construction. The improvement of the site’s condition and the quality of the buildings on it, the remediation of environmental damage, the clean-up of unexploded ordnance, and the repair and expansion of the site’s infrastructure are examples of activities which can be undertaken to improve the chances of redevelopment (semi-variable factors). A third set of factors can be influenced directly through certain actions (variable factors).

Although always important, funding actually plays less of a role in the consideration of these factors than does the personal involvement, creativity, and willingness to cooperate of those actors tasked with a site’s redevelopment. Actions which fall under this category include: management and coordination of the conversion process, assessment of re-use options, redevelopment and land-use planning, marketing of the site, development of suitable financing mechanisms, and public outreach.

Figure 2 provides an overview of the three types of factors. Here one can see how variable factors can influence the semi-variable factors. For example, a prudent form of project management may be able to come up with a cost-effective method for coping with environmental concerns. In comparison, the fixed factors cannot be influenced by the variable factors.

Figure 2: Types of factors influencing redevelopment



The most important factors influencing the re-use process will be discussed in greater detail below.

2.1.1. Fixed factors in the base re-use process

2.1.1.1. Geographic location, type of military use, environmental condition

The factors which are more or less fixed, are those which pertain to a given site's location or previous use, and can be regarded as natural locational advantages or disadvantages. There is often intense interest in former military sites located in more urban (or developed) areas for re-use projects. However, demand for sites in more rural areas is nominal. The major reason for this trend is that the most common types of re-use projects – business or housing – usually need to be located close to more densely populated areas. For example, over the years the civilian re-use of military housing complexes in urban areas has hindered urban development in many cities. The redevelopment of former military installations in proximity to urban areas is often hindered by restrictions concerning the site's re-use, and makes the reintegration of these sites into the overall "urban landscape" more difficult. The constraints to redevelopment may include regulations concerning emissions, zoning, or even historic preservation.

Former military installations in more rural areas are often subject to re-use restrictions as a result of environmental and/or natural preservation concerns. The environmental condition of these sites is frequently characterized through a single use over many years. Due to the special type of use through military activities – particularly on proving grounds – the damage to the natural environment is actually less than in other areas. Although some sectors of any given training facility were used intensely by the military, others were often declared off-limits over decades, for security reasons. This enabled the growth of valuable and diverse natural preserves, which should be maintained even after military withdrawal. As a result, many sites in rural areas are subject to re-use restrictions and regulated through strict environmental laws.

The type of military use must be regarded in the context of a given site's size and geographic location, and can have a tremendous influence on the kind of civilian re-use which is possible. Installations built for a specific military purpose (such as an airstrip) are more limited in their potential for civilian use than, for example, a barracks or a military housing unit – which has characteristics analogous to those of a civilian apartment building. Structures with a solely military purpose – bunkers and depots, for example – are seldom suitable for civilian use due to their secure construction, and their destruction can be both expensive and technically difficult.

2.1.1.2. Economic situation in the region

In western countries, the withdrawal of military forces and the resulting base closure is often tied to a direct economic impact, which can be expressed through the lay off of civilians employed on the base, a reduction in purchasing power in the region, and a drop in income for the municipality as a result of its reduced tax base. A slump in the regional economy can aggravate existing problems further. A drop in demand can be insurmountable for many small companies or traders, and leads directly to the closure of businesses and the migration of labor. Many communities are faced with challenges as a

direct result of the withdrawal of the military. It is difficult to meet the challenges without financial support from the federal or state level.

Research shows that rural areas with weak infrastructure are particularly hard hit economically through the military withdrawal. Communities which are faced with base closure, but are closer to more densely populated areas, are generally better able to find ways to fill the vacuum left by the fall in military demand. They may even profit from the availability of “new” land available for business or industrial purposes. The reduction in demand can sometimes be balanced out by the acquisition of new businesses in the region without any problems.

A difficult economic environment can block the successful redevelopment and re-use of a given site. It can bring about a situation where former military installations are left vacant for long periods of time, leading to a deterioration in the quality of the buildings and land. This can happen naturally through the general lack of use or even as a result of vandalism. Furthermore, existing environmental contamination can expand further and/or the site may become a location for an illegal dump. These kinds of decay can cause greater difficulties and higher costs if and when the site is redeveloped at a later time.

2.1.1.3. “Soft” locational factors

The likelihood of successful redevelopment is without doubt improved if the former military installation is located in an attractive environment. A high quality of life, a generous selection of cultural opportunities, the availability of education, sporting, and recreational facilities, or the landscape’s natural beauty and suitability for rest and relaxation can be helpful in attracting new businesses and labor. Such factors can be used as plus points in marketing a given site. For many businesses, the vicinity to universities or other higher education institutions can also be an important reason for settling at a given site – if, for example, the business requires specific professional skills or qualifications (as is the case in the computer or telecommunication fields). Such locational factors can be essential in acquiring new businesses, and their advantages in the competition between various locations should not be underestimated.

2.1.2. Semi-variable factors in the base re-use process

2.1.2.1. Condition and quality of structures

The buildings and structures on a former military base can facilitate the civilian re-use of the site, but they may also present a barrier to the site’s redevelopment – depending on the quality of the structures and the requirements of the new user. At first glance, the easiest buildings which can be re-used are barracks and housing facilities designed for the soldiers and their families. However, sometimes a high level of investment is required to bring the quality of the housing units to a level comparable to apartments available on the open economy. For example, it is often necessary to switch from a central supply of common utilities (water, electricity, gas, etc.) to a system which is divided according to use in each of the housing units.

In addition to being used for housing, many barracks lend themselves as office space, and can be used by public agencies. Often administrative offices, which were once distributed among different locations in a community, can be brought together under one

roof. This type of re-use by government agencies can also have the added benefits of simultaneously enabling an expansion in office space and also making relatively profitable urban locations available for private users. Furthermore, public agencies sometimes find that they have discovered an inexpensive way to fulfill their need for space.

Business and industrial needs can also sometimes be met through the buildings available. After the necessary renovation and retrofitting, barracks and halls are suitable for a range of uses. Companies are sometimes willing to accept design or quality weaknesses if the price is reasonable.

2.1.2.2. Environmental contamination and unexploded ordnance

The immediate civilian re-use of a military installation can be hindered by the presence of environmental contaminants and unexploded ordnance. The high cost of environmental risk assessments and the unearthing of ordnance, as well as the – in some situations necessary – clean-up and remediation of contaminants makes the re-use difficult. Even in cases where the legal responsibility for conducting and financing the clean-up and disposal is clear, there are disputes between buyer and seller concerning the level of remediation necessary. As long as these issues are not clarified, potential investors will remain reluctant to settle on a site, and may even choose to develop an uncontaminated “green field.” Therefore, it is in the interest of the site’s prompt re-use, that both the buyer and seller facilitate an environmental risk assessment of the site as early as possible, and that they agree on the level remediation to be carried out.

One problem is the relatively wide range of costs for the environmental clean-up – which can be influenced by a number of factors, such as the type of technology to be used in the remediation process, the type(s) of contaminant, the quality of the soil and the depth of the contaminant(s), the reintegration of the soil, as well as the transportation distance to dumps and soil-processing facilities. It is important to note that the level of clean-up necessary is in direct relation to the planned re-use, however, the type of re-use is often not clear this early in the conversion process.

The issue of contamination is tied closely to the appraisal of a given site’s value because the true value of site can only be fully determined when the remediation costs are known. This aspect is often left separate from an overall appraisal, and the site is assessed based on the assumption that it is not contaminated. The environmental clean-up cost can then be subtracted from the site’s estimated value.

2.1.2.3. Infrastructure availability

Military installations are often isolated and lack access to the regional infrastructure. Furthermore, due to their former use, they were sometimes outside of the planning capacity of local and regional agencies. Therefore, the reintegration of such sites in the regional structure requires a high degree of regional planning as well as substantial technical and financial resources.

Local and regional agencies are called upon to take action early, because they are faced with a real dilemma: On the one hand, infrastructure development activities can rarely be financed through either the budgets of such institutions or loans at the municipal level.

Yet, on the other hand, infrastructure is a prerequisite for investors before they decide where to invest – and the reintegration of a site in the region often depends on investment. This situation forces local and regional actors to find unconventional solutions. It also enables collaboration between local actors and investors, as they work with federal and/or state agencies to develop innovative organizational concepts and financing strategies.

2.1.3. Variable factors in the base re-use process

It is especially important to analyze those factors which influence the base redevelopment process, and which can be shaped through the actions taken by the various actors involved with the base closure and re-use process.

2.1.3.1. Planning and development

At many sites, the ultimate objective of planning activities and the prerequisite for investment is the legal ruling that construction may take place on the site (zoning). Generally, the community concerned needs to commit to the prospective use of the site through specific regional plans or other measures. However, before this can take place, questions concerning the site's availability must be answered – and this is usually only possible after the matter of ownership of the site has been cleared. This does not, however, mean that the planning preparations cannot be undertaken prior to the passage of the site from military to civilian hands.

The basic premise for the planning is an initial site assessment, which should include the following aspects:

- **Surveying**

In many cases, the civil authorities have only limited knowledge of the former military site and any structures which may be located on it. Therefore, the entire site needs to be surveyed in the traditional sense. In this process as much data as possible should be collected starting with the statistics of the area, and including information on buildings, roads, tunnels, trees, and their respective heights/depths. This information is a prerequisite for any thoughts concerning new uses.

- **Building quality and condition**

Existing buildings should be subject to a technical evaluation of both their quality and the condition of the construction with regard to their potential for re-use. This enables informed decision-making concerning which buildings are suited for industrial – or other – uses. It also provides information early on, concerning which structures may be integrated in the overall redevelopment concept for the site. One further aspect to be taken into consideration is that buildings under historic preservation must be integrated into re-use plans.

- **Available infrastructure**

The assessment of the infrastructure available on the site should include the identification and mapping of utility networks and pipelines (gas, water, electricity, etc.) as well as an initial evaluation of their quality. Roads, tracks, and waterways should also be assessed concerning both their potential for re-use and their quality.

Since it can have a tremendous impact on the possible re-use concepts, the environmental risk assessment should be conducted parallel to this initial collection of data on the site.

The overall re-use concept for a given site is made up of a series of specific plans. Normally, an informal structural plan is drafted to help establish a rough framework for the proposed re-use and as a means of reintegrating the site in its regional or urban context. Following this, specific zoning plans can be hammered out. For larger former bases relatively close to more densely populated areas, those responsible for redevelopment often initiate a design/planning competition which can serve as a basis for zoning proposals. In order to do this, however, both the opportunities and constraints for future use must be clear. The search for potential investors can be conducted parallel to this planning. In many cases, this can actually harmonize the conception of sustainable re-use strategies. The urban or regional planning should be flexible enough to respond to the demands of new users or situations.

The basis described above needs to be developed before the first steps can be undertaken to turn the plans into reality. Activities and measures such as regional planning, zoning, and infrastructure development (such as transportation and utilities) are all dependent on the initial site assessment. Although not mentioned in detail, the following planning measures for its development are also important:

- demolition, reconstruction, or renovation of existing buildings,
- environmental remediation, and
- land-use planning.

2.1.3.2. Project management and organizational structure

The management and coordination of any re-use project is a central component which needs to be integrated in an efficient organizational structure. Successful management strategies rely on the collaboration among decision-makers from different public and private institutions. The successful conversion of a site from military to civilian use is greatly facilitated through cooperation among the various actors and their consensus concerning the ultimate objectives.

The base closure and re-use process often forces municipalities to facet new responsibilities and challenges which must be dealt with in addition to their normal duties – but are seldom to be carried out or overcome using standard administrative measures. Therefore, a suitable organizational structure needs to be developed. Unfortunately, this structure cannot be generally applied because the tasks facing the actors can differ in size and difficulty. Since flexible – sometimes unconventional – action can be required, organizational structures separate from the standard administrative hierarchy are

recommended. The creation of a private “development agency” has proven to be valuable – particularly in cases involving very complex base closure and re-development procedures.

There are several reasons why a private development agency can be advantageous as the cornerstone of the organizational structure for the site’s redevelopment. For example, measures which need to be financed up-front do not cut into municipal budgets. Furthermore, different sources of funding may be available for certain measures (such as, through capital markets which are reluctant to work with government agencies). It is also important to recognize that the preparation and carrying out of re-use measures require specific knowledge/skills, which may not be available at existing organizations. No matter how the organizational structure is laid out, it is often necessary to receive external professional advice – either through the expansion of staff in certain areas or by sub-contracting outside experts.

In some cases in Germany, an “open” urban/regional planning advisory process is conducted (Offenes Städtebauliches Gutachterverfahren, OSGA), whereby a planning concept is developed for the future role/use of the site within the context of the immediate environment. Different professionals (city planners, transportation planners, land-use planners, etc.) are solicited by the municipality to develop an overarching concept for the region. This advisory process has several interesting characteristics:

- free development of ideas by the professional involved with the project,
- high degree of flexibility due to different work stages which can be conducted parallel to one another,
- open exchange of ideas, experiences, assessments, and results as an integral part of the collaboration,
- ability to react quickly to new developments in the planning process, as well as
- transparent and substantive preparation for political and administrative decision-makers.

The inclusion of private institutions (such as private development agencies) has proven beneficial in the process whereby re-use plans are taken from a theoretical phase into reality. Public-private-partnerships can be especially useful in this regard. During the past few years, the number of public-private-partnerships has increased radically in areas normally under the municipal domain – such as public transportation or waste management. In some cases, initiatives initially launched as public-private-partnerships were privatized at a later stage. The trend of government cut-backs and the resulting shortage of public funds has actually helped push cooperation between the public and private sectors.

Cooperation can take on different forms in practice, yet all forms of cooperation between the public and private sectors share one key element: While the public sector can offer its special role (with regard to things like decision-making concerning the planning process, access to incentive programs/funding, or political and administrative decisions), the private sector is expected to contribute by fulfilling specific tasks, providing capital, or taking on management tasks. It is important to note, however, that in such forms of cooperation, the use of private capital gives the private investor the means to influence the type of re-use. This may create the potential for conflict, if public and private interests diverge.

In essence, the municipality must decide whether it wishes to purchase the former military site – on its own or through a development agency – or whether it wants to promote the re-use of the site without buying it. In the event that the municipality chooses not to buy the site, it can work with the owner and the federal or state government institutions to see that the site is developed. The decision to take on the responsibility of ownership depends on the financial capabilities of the municipality and its willingness to take on risk. Nevertheless, the purchase of the site offers the municipality more freedom to shape the site's development as it likes.

Negotiations between the federal government and the municipalities concerning the price of the site are often difficult. (This may be a direct result of the federal structure in the Federal Republic of Germany.) Although both sides are public institutions – which should be interested in achieving the highest degree of common good – the issue of price is one which can rarely be overcome without major dispute. Disagreements over the value and appropriate price can lead to long delays in the re-use process, or even hinder redevelopment completely. Countries with a stronger central government may not face this problem to this degree.

Cases show that it is possible to reach consent concerning the value/price of a given site by either conducting the analysis of the site together or by composing a team of outside experts (with representatives chosen by both sides) to assess the value of the site.

For many municipalities in Germany, the opportunity to enter a formal agreement with the federal government to jointly promote the re-use of the site is an interesting alternative to the direct purchase of the site. While the federal government remains the legal owner of the former military installation and must fulfill agreed-upon marketing objectives, the municipality is responsible for carrying out preliminary development measures. The federal government contributes to the payment of these costs inasmuch as it provides a portion of its profits from the sale of the site (as agreed upon through a contract). The amount provided by the federal government may not exceed its net income through the sale of the site. Prerequisites for this type of an agreement are good marketing potential and the expectation of high earnings. The advantage of this type of arrangement is that the municipality does not need to finance the preliminary development measures.

2.1.3.3. Ideas for re-use and feasibility study

A key question emerges early on in the process whereby ideas for the re-use of a former military installation are considered: How should the availability of this site – with its distinct advantages and disadvantages – be regarded vis-a-vis both demand and the availability of other similar sites in the region?

Before asking this question, however, the collection of ideas concerning possible re-use options ("brainstorming") must take place – or at least be in process. Many municipalities attempt a strategy aimed at identifying a wide range of possibilities. This can be done through written surveys of specific interest groups (i.e., political parties, associations, chambers of commerce, universities) as well as public events such as open meeting and discussion roundtables. Even though the participation of local residents is welcome, this type of activity can be problematic because it may awaken unrealistic expectations or demands. It is therefore necessary to both analyze the feasibility of different ideas and to

communicate the findings to the general population. The feasibility study should be based on at least the following three issues:

- restrictions to re-use as determined by law (i.e. zoning, environmental, or historic preservation regulations),
- level of use by the site's prospective user, and
- cost and financing considerations.

One should not forget that the public sector can also be a prospective user of the site, for example as offices or educational facilities.

Taken together with the initial site assessment, the analysis of the feasibility of the suggested forms of re-use should lead to an overall re-use concept which outlines the structure of the site's planned future use. For larger sites which are slated for mixed-use, initial decisions should be made concerning the partitioning of the site into areas for industrial use, housing, office space, sport and recreation, and other uses.

2.1.3.4. Financing mechanisms and incentive programs

An analysis of the anticipated costs and income is a necessary first step in the search for solid funding for the measures to be conducted through the base re-use project. In the financial analysis, particular attention should be paid to each of the areas where funding is required – and to the timeline of activities which lead to expenditures. The careful and realistic assessment of a project's economic viability (or profitability) is a prerequisite for access to both private capital and funds available through public sector incentive programs.

For many municipalities the planning and redevelopment activities which need to be conducted relatively quickly for the “new” piece of land are financially overwhelming. Even if a community does not purchase the site, costs are incurred as a result of planning and coordinating activities, and through the integration of the site in the local infrastructure. As a result, it is necessary to develop new financing mechanisms, and to try to include private investors. In this way, an overall finance plan can be developed.

The re-use of former military lands should not be left to the municipal level alone. This is because the conversion of military resources to civilian use is of political importance at the national level. Furthermore, in some countries the high degree of defense dependency over decades, makes conversion an important issue. In Germany, both the *Länder* (states) and the federal government have taken on the issue, and support the re-use process through a range of incentive programs. One example of how the national government can provide an incentive is through the reduction of the price of a site it owns. In addition to funding programs available to municipalities or businesses willing to (re)locate on a former military site, there are a range of other funding or incentive programs which primarily have other objectives, but can also be used for base redevelopment projects. These can include measures directed toward job creation and labor market stability, structural development, and the promotion of innovative technologies, or even programs for the support of business development and/or technology centers.

The European Union also has programs which can facilitate the re-use process, including a special program for conversion, KONVER II. The following activities are funded out of this program:

- making former military lands available for civilian use (including the initial site assessment, the environmental risk assessment, preliminary development measures, activities aimed at re-using the site and buildings, advisory support from outside experts, and tourism promotion),
- diversification of the regional economic structure through support to small and medium sized firms (through incentives directed at the promotion of technology and modern communication/technological infrastructure), and
- improving the skills and qualifications of the labor force in the region.

Under certain circumstances, funds from the European Union's program for regional and structural development can also be used for base re-use projects.

2.1.3.5. Acquisition of investors and marketing the site

The search for suitable new users of the site needs to be conducted in tandem with the preparation and carrying out of planning activities.

If it is obvious that the site – or portions of it – will not be used for a longer period of time, then the site's limited re-use for a fixed period of time may be an option worth considering. For example, it may be possible to rent housing units, large halls, sports facilities, infrastructure, or land suited for agriculture or forestry to interested parties. Whether the income generated through renting the site or individual buildings will be enough to cover the costs of repair, renovation, and administration must be determined on a case-by-case basis. The legal liability and accountability must also be checked carefully so that shortcomings and deficiencies in the rented property do not lead to claims for compensation by the tenant.

Several measures facilitate the search for potential investors/purchasers. These can include, but are not limited to, the following:

- production and distribution of brochures,
- placement of advertisements,
- undertaking of public relations activities, for example through the media as well as events open to the public,
- developing contacts with potential investors such as industrial or service companies, housing agencies, public utilities, government agencies, etc., and
- conducting sales negotiations with the potential investors.

In Germany, experience has shown that the majority of interested potential investors come from the region where the redevelopment site is located. This is particularly true of business and trade representatives. Often companies want to expand, and do not have the space to do so at their current location, or there are disadvantages to their urban location (such as a high level of traffic or environmental laws regulating emissions). This movement from industrial sites located in urban areas to less densely populated areas usually coincides with urban planning interests. For the most part, it is relatively easy to find new uses for the sites left behind.

Larger former military installations pose a special challenge: Those responsible for finding a suitable re-use for the site are faced with the question of whether they should wait for a major investor who requires such a large site or whether it is better to divide the site into lots for mixed-use. This is not a question which can be answered generally because it depends on a range of regional factors. Nevertheless, the likelihood that a single investor wishes to purchase a large site in its entirety is limited.

For investors interested in locating at a specific site, the means of financing the redevelopment can be an important factor in their final decision. One relatively new financing instrument, which may appeal to some investors, is *public leasing*. In this model, a municipal economic development agency, for example, finances and organizes the purchase of the site as well as its preparation for the specific use as determined by the prospective user. The new user then leases the site for a given period of time, and the monthly “rental” payment is made up of installment payments and interest. The purchase of the site by the new user after the leasing period is agreed upon through a contract laid out at the beginning. This method provides the prospective user with certain tax advantages and does not force the commitment of capital in a lump-sum. Furthermore, the new user does not need to concern itself with the coordination of (re)construction and development on the site. It can concentrate on its business own activities.

Before searching for investors, a municipality must consider which types of business/industry are desired. The industrial sector, as well as its size and demands vis-a-vis space and infrastructure, must be considered carefully. Factors such as access, noise, emissions, transportation should play a role in these deliberations – as should the local and regional labor potential and the education level.

2.1.3.6. Public outreach and communication

The re-use of a former military installation can have a direct impact on the people living in a community. Therefore, they should be informed concerning redevelopment plans and actively involved in the re-use process if possible. It is important to win acceptance at the local level for a planned re-use because this makes it easier to find solutions to potential problems. A framework should exist where concerns can be expressed openly and consensus can be reached.

The use of the media – particularly the local and regional press – and the organization of informational events disclosing the development intentions have proven to be important for public outreach. Opportunities to visit the site also help citizens get a better sense of what is planned and why.

In addition to outreach to the general public, it is essential that a well-functioning means of communication among the various actors involved with the re-use project is developed. This is particularly true for the various administrative levels and agencies involved with the process. Since the interdisciplinary collaboration from different institutions is required, traditional hierarchies and disputes between different agencies concerning responsibility for certain tasks can hinder the re-use project. The willingness to put certain interests aside in order to achieve the common goal needs to be promoted.

In Germany, many state and federal ministries have specific departments to deal with defense conversion issues. Good relationships and excellent lines of communication

should be established with the state and federal actors so that – in the event of unanticipated problems – a flexible response is possible. Furthermore, the overall coordination of re-use projects in a given region is necessary in order to make sure that the various re-use projects can be integrated in regional and supra-regional plans.

2.2. Assessment of the factors

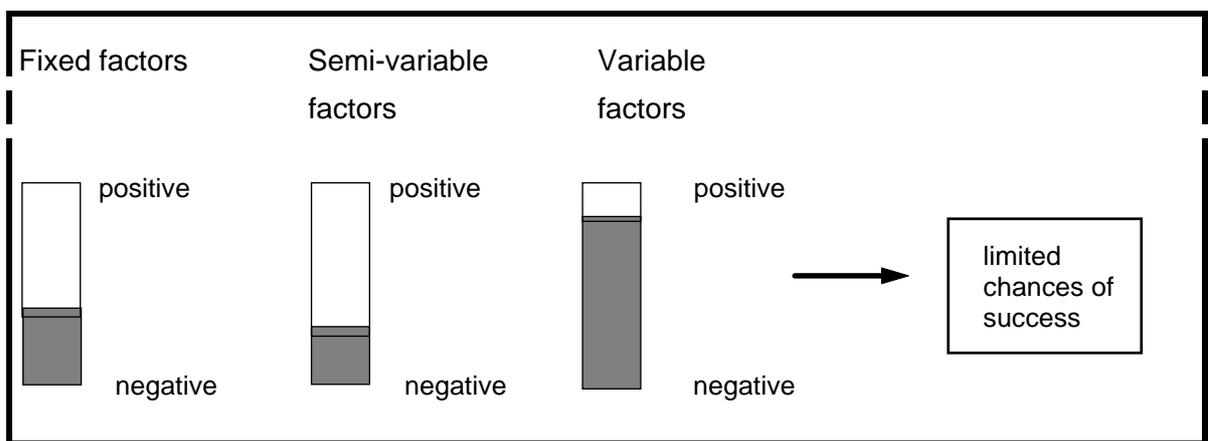
2.2.1. Relative importance of the factors influencing the re-use process

Taken together, the analysis of the three categories of factors which have an impact on the re-use process, can indicate some general tendencies regarding the chances for successful redevelopment of a site.

The individual factors can be analyzed on a case by case basis at any given site. This type of analysis is often referred to as a multiple criteria or use-value analysis, and the factors may be weighted according to their importance so that the points can be aggregated such that a total number of points can be calculated. Such an analysis can be useful on several levels: On the micro-level, it enables the comparative analysis of different re-use options on a single site. On the macro-level, it can help set priorities when the redevelopment of several former military sites is possible and limited finances make it impossible to work on all of the sites at once.

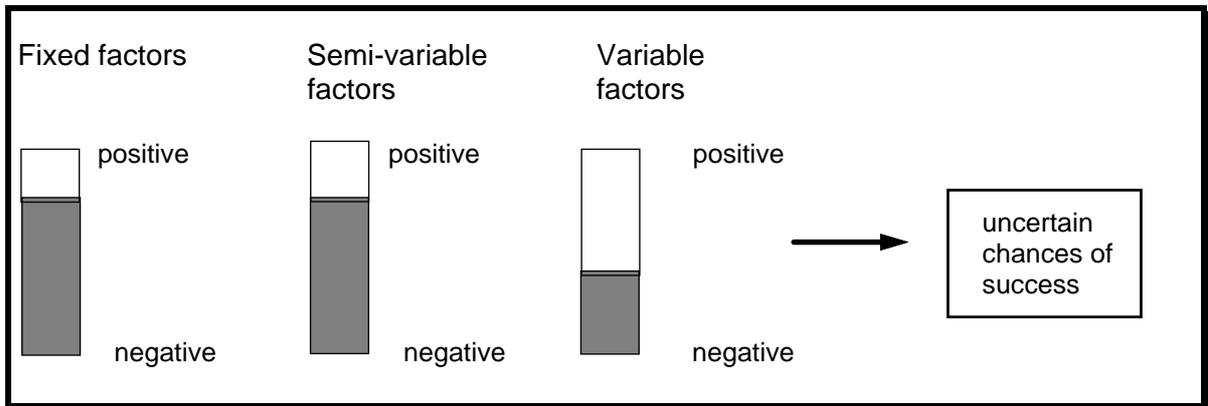
Generally, one can argue that in a situation where both the fixed and semi-variable factors are not conducive to a given site's redevelopment, then – no matter how much effort is put into shaping the variable factors – it will be difficult to achieve the revitalization of the site in the short-term. This can clearly be seen in the figure below:

Figure 3: Limited chances of successful re-use



It cannot be taken for granted that the opposite is true, namely that if the fixed and semi-variable factors support a given site's redevelopment, then the revitalization will automatically take place. Positive fixed and semi-variable factors provide a good framework for development but they are not enough in and of themselves to assure development (as can be seen in Figure 4).

Figure 4: Uncertain chances of successful re-use



Figures 3 and 4 indicate that the variable factors can have a significant weight in the success of a re-use project. In some cases, they are the single most important factors because they can be influenced most easily. As a result of the flexibility of these factors, mistakes, incompetence, or the failure to take action can hinder the redevelopment process.

2.2.2. Economic viability of re-use projects

In most cases, the development and re-use of a former military installation requires investment before profits can be earned. As a result, one must look at the economic viability and profitability of re-use projects, and distinguish between different viewpoints. This is important because the assessment of the viability of a site’s re-use can vary greatly depending on who is asking the questions.

In Germany, former military lands are often purchased by the municipality. A municipality which wishes to buy a site frequently asks which portion of the costs for the site’s redevelopment are the purchasing price. Additional costs for planning, outside experts, infrastructure development, and – in some cases – environmental remediation must also be considered when thinking about a site’s economic viability.

The municipality can earn through the sale of the site (as a whole or in sections) or buildings and facilities located on the site. It may also be able to levy taxes at a later date. Through the re-use of formerly military land, the municipality benefits because it avoids the development of “green fields.” The costs and possible income, from a municipal perspective, are outlined in Table 1.

Table 1: Costs and possible income (municipal perspective)

Costs	Possible income
Purchasing price	Sales price
Cost of initial development/infrastructure	Increase in tax base
Environmental remediation (partial cost)	Reduction in welfare support
Planning costs	

If one only looks at the conversion of military lands for civilian use solely from the municipal perspective, then not all cost and benefit factors can be taken into consideration. Therefore, it is important to take a macro-economic perspective by analyzing all of the costs and benefits to society resulting from certain actions. The best instrument for this is a cost-benefit analysis, in which all of the costs and benefits of a specific project or activity are systematically identified, assigned a realistic monetary value, and compared with one another. Costs are defined as opportunity costs inasmuch as the use of resources for a specific project means that the resources cannot be used elsewhere. Benefits are defined as the value of goods and services as a result of the specific project. ("Goods" should be regarded in the broadest sense possible. They include, for example, benefits such as better air quality or reduced noise levels.) In this sense, a cost-benefit analysis goes beyond pure business economic terms because it includes the calculation of the total economic cost and benefit to society.

In the cost-benefit analysis of a base re-use project, the situation involving re-use (i.e., demolition, remediation, and infrastructure development followed by civilian use) must be juxtaposed to the situation without any activity. Inactivity can also incur costs – through the securing of the site, the natural deterioration of the quality of its structures, and possibly the additional expansion of contamination. One, therefore, needs to consider when the optimal period for activity and investment is.

Carrying out redevelopment activities can be costly, but such actions make later use of the site possible. This future use benefits society. In comparison, inactivity rarely benefits society. It only has costs – even though the costs may be well below those of redevelopment. The result of a cost-benefit analysis – and the decision which alternative is better – depends on the actual amount of the costs and benefits in each case. The decision can be calculated as follows:

Redevelopment initiatives should be undertaken if and when the difference between the cost and benefit of action is greater than the cost of taking no action whatsoever.

The following formula for making decisions summarizes the differences between the costs and the benefits:

$$B_{\text{con}} - C_{\text{con}} > -C_{\text{no-con}} \quad \text{or} \quad B_{\text{con}} - C_{\text{con}} + C_{\text{no-con}} > 0$$

with

B_{con} = Benefits through re-use activities

C_{con} = Costs incurred through re-use activities

$C_{\text{no-con}}$ = Costs incurred as a result of inactivity

The costs for the preparation of a site for redevelopment are relatively easy to calculate, however, one must be certain to take the characteristics at the site and in the region into consideration (such as the degree of environmental contamination or the quality of the buildings) as well as the planned re-use. These characteristics can lead to a wide margin of variability from site to site.

It is almost more difficult to calculate which benefits result from the remediation and initial redevelopment of a site. Generally, the benefit is that more land is made available for civilian use. As with all limited resources, this land has a given price. Through the sale of

this land, the owner often tries to get a price which reflects the value of the land, however, if one takes a macro-economic perspective, a number of additional external factors must be considered.

The aspects which need to be considered in a cost-benefit analysis include:

Costs

- **Monitoring costs**

Sites which are contaminated must be monitored even if they are not slated for re-use so that an expansion of the contaminant can be avoided. Therefore, it is recommended that a regular monitoring and analysis is conducted.

- **Safety and costs**

Immediate action must be taken to avoid the expansion of contaminants and further damage to the site, regardless of what type of re-use is planned.

- **Surveillance costs**

The site needs to be secured so that it is only accessible to those allowed on the site. Walls and/or fences need to be erected and suitable surveillance measures introduced so that no additional damage (i.e., through illegal dumping) can occur.

- **Environmental remediation costs**

If the site is to be redeveloped, environmental contaminants need to be removed. Measures need to be carried out depending on the type and amount of contaminant and the availability of remediation technology. Furthermore, the level of clean-up required is dependent on the type of re-use intended on the site.

- **Removal and disposal costs**

Buildings, structures, and infrastructure on the site may be in such poor condition that their re-use is not possible – or their re-use may not be allowed or desired. In such cases, they are to be demolished and materials are to be removed and disposed of in an environmentally-friendly manner. Waste found on the site is also to be removed and disposed of.

- **Infrastructure development costs**

Depending on the type of re-use and the quality of the infrastructure, investment may be required to improve transportation ways, utility networks, and telecommunication lines.

- **Administrative/marketing costs**

The cost of the following activities must also be calculated: administration of the site and coordination of activities on the site, assessments regarding contamination or building quality, infrastructure planning, economic viability studies, marketing, and other measures which are necessary for the revitalization of a site.

Benefits

- **Sale/Lease**

After the investment in making the former military site available for civilian use, the owner can usually reckon with a reasonable price for the sale or lease of the site. The price should reflect the location's productivity factors.

- **Job creation**

The development of new sites or the revitalization of sites formerly used for other purposes requires input by labor. If the employment of this labor force is dependent on investment in the site, then there are no economic costs (in terms of the principle of opportunity costs) because there is not a loss in production elsewhere in the economy. This is true for workers involved with the (re)construction as well as those who are employed in later stages of the site's use.

- **Regional economic development**

Measures for the re-use of sites can improve the attractiveness of a given region and the quality-of-life. This reduces migratory pressures, and fulfills an important political and regional objective. The measurement of this – and its economic value – is difficult to capture statistically.

- **Preservation of “green fields”**

The re-use of former military lands can mean that other sites in the region do not need to be developed. This helps preserve “green field” sites. In the analysis, if the site was previously used, it can be calculated and factored in. In the case of undeveloped sites, they can be assessed as land available for construction. The (saved) cost of infrastructure development needs to be calculated as well.

- **Increase in value of neighboring sites**

Research shows that properties close to re-used land sometimes also enjoy an increase in value as a result of their location. This can also be calculated as a net gain through the conversion project.

- **Environmental benefits**

Depending on the previous use, former military lands are often graced with a diverse collection of flora and fauna – which should be preserved. In addition, some sites lend themselves for recreational or tourism purposes. There are economic calculations which can provide at least a general indication of the value of such usage.

The following table summarizes the costs and benefits described above:

Table 2: Costs and benefits (macro-economic perspective)

Costs	Benefits
Monitoring costs	Sale/Lease
Safety and costs	Job creation
Surveillance costs	Regional economic development
Environmental remediation costs	Preservation of "green fields"
Removal and disposal costs	Increase in value of neighboring sites
Infrastructure development costs	Environmental benefits
Administrative/marketing costs	

The macro-economic cost-benefit analysis is based on the assumption that the State is the owner **and** the developer of the site. However, the national or state government – or for that matter, any institution chartered with the responsibility of developing the site – is reluctant to take on the task of converting the site from military to civilian use alone. They usually try to find ways to sell the site to municipalities or private investors, and the macro-economic evaluation of the advantages and disadvantages to the development of a specific site usually does not take place.

As the owner, the national government usually looks at the cost of the administration of the site in relation to the possible income generated through its sale. This is, however, too limited. (In Germany, at least, the federal government is responsible for helping finance the site's environmental clean-up.) In the national calculation of the cost and benefit of the re-use of resources previously slated for military use, the fact that conversion is a national task is often forgotten. The impact of re-use projects frequently reach beyond the immediate region. Therefore, it makes sense to take a macro-economic approach to the benefits of the civilian use of former military lands.

A municipality which analyzes the costs and benefits of the re-use project from a local perspective will also find it difficult to capture all of the positive and negative aspects of the redevelopment. Therefore, the primary actors – namely the State as the owner and the municipality as the potential buyer and developer – should reach consensus concerning the basis for determining the value of a re-use project. This goes beyond determining a purchasing price for a given site.

The authors of this study have developed a method – based on the principle of cost-benefit analysis – which enables a calculation of the benefits of re-use from a macro perspective. By looking at the costs and benefits it is possible to determine whether or not the redevelopment of a specific site is beneficial or not. If faced with more than one site available for re-use, this analysis can help the decision-makers set priorities for redevelopment. Furthermore, this tool can also be used to determine which re-use idea makes the most sense on a given site. This optimizes the re-use potential.

State and municipal decision-makers can be provided with important information as a result of this analysis, which will allow them to determine the overall benefit of re-use. By including factors outside of those considered by a private investor (such as the regional economic development impact or the preservation of "green fields"), sites which show greater benefits overall can be developed first. Development on other sites may be postponed as a result of this. The trend that emerges is that by taking a micro-perspective even sites in structurally weak regions can be suitable for development.

3. Step-by-Step Process for the Re-Use of Former Military Lands

3.1. Redevelopment timeline

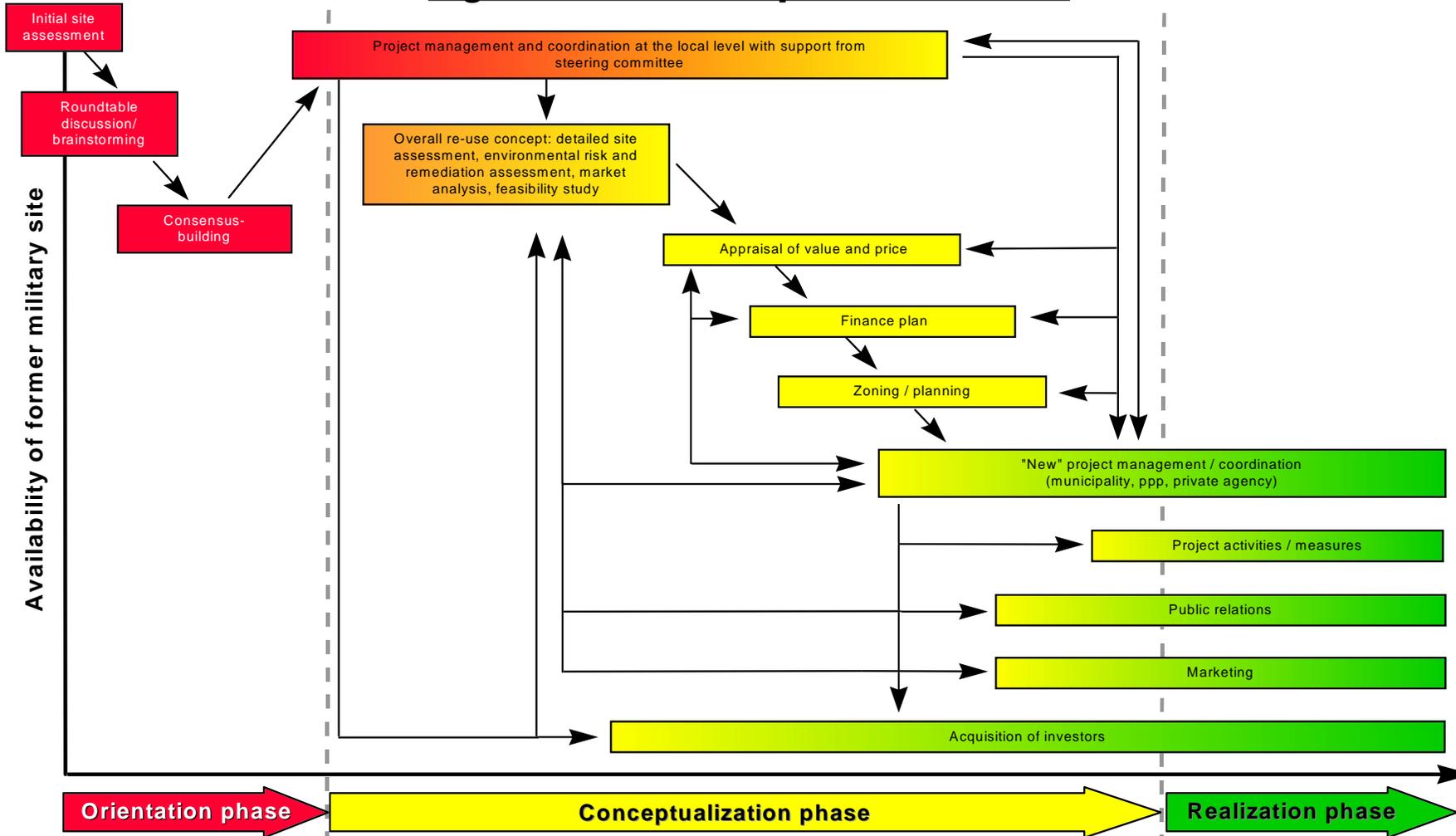
The civilian re-use of former military installations is an extremely complicated process. It involves a range of different actors (from national, state, regional, and local levels) who work toward the achievement of immediate goals – but share the collective objective of achieving the sustainable civilian use of a former military site. In order to accomplish this overall goal, numerous activities need to be taken and a range of measures need to be introduced. The content of these activities and measures – as well as their timing – need to be coordinated **and** adapted for the regional context. In this study, the entire process whereby a site is converted from military to civilian use has been divided into three phases – **orientation**, **conceptualization**, and **realization** – in order to make the complex relationship between cause, activity or measure, and impact as transparent as possible. Each of the three phases is analyzed below in the context of three key questions:

- **What** is supposed to be achieved? (**immediate goals of this phase of development**)
- **Who** needs to be involved? (**key actors**)
- **How** will the key actors achieve their immediate goals? (**activities or measures**)

The answers to these questions must always be seen in the context of the overall objective, namely the successful re-use of the site in the medium-term.

Through the analysis of numerous base closure and re-use projects, an idealized redevelopment timeline was developed, as shown in Figure 5. The different colors as well as the different sizes of the boxes for each activity or measure symbolize the dynamic of the process in which many steps are often taken parallel to one another. The arrows indicate both the development process and the interdependency of the various activities which need to be undertaken.

Figure 5: Redevelopment Timeline



3.2. Phases of re-use

Phase I: Orientation

After it is made public that the former military installation is to be made available for civilian use, the various actors involved in the re-use process meet to collect information and ideas concerning the site's future use and establish basic consensus concerning the next steps to be taken.

Immediate goals

- A preliminary site assessment should be carried out, in which all available data concerning the site and its possible civilian use are collected.
- The various actors from the national, state, regional, and local levels who need to be incorporated in the re-use process should be brought together for a discussion roundtable on the site's redevelopment. This meeting provides the foundation for the long-term communication and cooperation.
- After considering the opportunities and risks of the site's civilian revitalization, a fundamental political decision must be made in favor of the ultimate objective, namely the ultimate civilian use of the former military site. An initial agreement can be reached concerning the activities and measures which need to be undertaken.
- The first substantive ideas concerning the potential civilian re-use of the site should be collected in a structured brainstorming session.

The orientation phase should focus on achieving initial consensus regarding the next activities and measures necessary for the site's redevelopment. Achieving consensus among the various actors is the main prerequisite for moving from the orientation phase to the conceptualization phase.

Actors

The key actors in this phase of the re-use process include:

1. the municipality,
2. the current owner of the site (usually the national government),
3. representatives from other levels of government (state and region),
4. representatives from regional interest groups (including disciplines such as the economy, environment, labor, and welfare), and
5. potential investors.

Activities and measures

It is important to bring together all of the actors involved with the base closure and re-use process as soon as possible after the announcement that a military installation will be closed. Ideally, the **roundtable discussion concerning redevelopment** should be held before the soldiers actually withdraw from the base. The initiative should come from the municipality, as it is most affected by the closure. Furthermore, by taking such a step, the local level shows its willingness to take on the combined challenge of economic and structural transition in a very pragmatic way. This can be important in later obtaining funding for redevelopment from national and supranational institutions.

A series of key questions need to be considered during this phase, the answers to which will help determine the next steps in the conversion process. The questions include:

- **Who may be interested in the site?**

It is not given that after the withdrawal of the military a private investor must take over the site. Even if the military no longer requires the site, there are other uses by national government agencies which are imaginable. This type of use has priority over the desires of either the municipality or the private sector. If there is no national-level interest in the site, then it must be determined who is sincerely interested in using the site. Often the municipality has ideas concerning the civilian revitalization of the site. Private sector interests are also possible. Through public-private-partnerships, local government interests can be coupled with those of the private sector.

- **Which re-use options are open?**

The initial site assessment provides the basis for the identification of the potential re-use options because it includes the relevant initial facts and details about the specific site slated for redevelopment. This assessment is conducted by the municipality – often with support from the military itself. Even during this phase, the site should not be regarded in a vacuum. It should be seen in the context of its environment – namely the regional economic structure and the labor market. Attention should also be paid to the potential demand in the region.

If there are no concepts or ideas for the site's redevelopment at this time, then the organization of a roundtable discussion with the objective of coming up with ideas for the site's re-use makes sense. A brainstorming session should be organized, and the resulting ideas should be pooled. Experience shows that as the re-use process moves forward, even ideas which initially appear to be unrealistic may actually be possible in one form or another.

- **What kind of government support is available?**

Decision-makers and actors in the re-use process from the national and state levels play a particularly important role here. It must be determined in which way municipal agencies can count on support from these levels if they approach the site's redevelopment as a catalyst for structural and economic change in their region. Options for support include financial support through incentive programs, reduced sale prices, or specific forms of expert advice.

The roundtable discussion can be used to clarify these matters – and others. Such meetings of the various actors early on in the redevelopment process are important because they provide the basis for communication and cooperation among the actors throughout the entire process. The opinions, interests, and even specific demands of any

potential investors already interested in the site at this time should be integrated, and not go ignored.

A well-functioning framework for communication and cooperation has proven to be particularly valuable when disagreements emerge during the course of the re-use process. If the basis for communicating and cooperating is not available, conflicts can hinder the further development of the site. With a framework facilitating the collaboration, many disputes can be solved.

Basic consensus among the relevant actors concerning the method for proceeding is a prerequisite for collaboration among the actors. This is true from the outset -- i.e., at the first roundtable discussion and during the orientation phase -- but continues through this phase to the next one. The basic consensus achieved during the first phase must be developed further and put into practice during the conceptualization phase.

Phase II. Conceptualization

During this phase, a form of project management must be established, an overall redevelopment concept – as well as a financing concept – need to be developed, formalized planning steps need to be introduced, and the first steps toward both turning the project idea into reality and active marketing need to be taken.

Immediate goals

- establishment of structure for project management and coordination at the municipality
- development of a re-use concept for the former military site
- political decision at the local level concerning the practical application of the re-use concept
- negotiations and agreement concerning the price of the former base
- establishment of a financing concept
- zoning

Actors

The following are the primary actors during this phase of development:

1. the municipality,
2. the current owner of the site (usually the national government),
3. an informal steering committee – which may not yet be formed – to advise political decision-makers,
4. external experts/consultants, and
5. potential investors.

Activities and measures

Using the fundamental consensus achieved during the orientation phase as the basis from which to work, the conceptualization phase is intended to formalize the informal form of communication and cooperation concerning the further development of the site.

In order to have better control over the process, the municipality should be the actor at the core of the project's management and coordination. The central project management tasks include the following:

- informal re-use planning (including zoning aspects), value assessment and price considerations, conceptualization of a finance plan, substantive support regarding redevelopment possibilities;
- organization, promotion, and support of the focused professional collaboration among the actors involved with the conversion process (including representatives from the national, state, regional, and local levels); and
- serving as the "hub" for the conversion process, by collecting information and acting as a clearinghouse for those involved with the re-use project, political decision-makers, and the general public.

This last point deserves special mention, because it is never too early to begin informing the public about possible re-use plans. Providing good clear information can help promote acceptance within the community concerning the site's redevelopment – and it may awaken the interest of potential investors (indirect acquisition of investors).

In practice, different forms of project administration – or project management – are possible at the municipal level:

- **Creation of a base re-use department**

In this case, professionals from different municipal offices/agencies are pulled together to form a new base re-use department. Staff may be included from the planning office, the development office, and the economic promotion agency, etc.. If freed of their usual responsibilities, these staff members can concentrate primarily on the base closure and redevelopment project. The advantages of this type of organizational structure are fairly obvious: It is possible to work effectively if a good communication network exists and if there is a solid framework for collaboration between the various specialists involved with the project. The director of this department should be a senior staff member from the municipal government who can inform political bodies concerning developments in the re-use project.

The creation of a base re-use department cannot be recommended for all municipalities – even if the right team can be formed. Realistically, this is only an option for well-staffed and active government agencies.

- **Commissioning of a base re-use expert**

The commissioning of a base re-use expert is an option – particularly for smaller communities. In this case, it is a specific individual who primarily directs and controls the redevelopment project. This person needs to have the freedom and authority to make decisions concerning the project, and (ideally) has management skills. In many cases, this person is a senior local government official. It is rare that

this person has special knowledge/expertise concerning base closure and redevelopment. He/She will need to work with people from the municipal level – within limits – and rely on outside support and advice from experts.

The activities at the municipal level can be complemented by those of a multilateral **steering committee**. The committee should provide the essence of the cooperation and communication among the various actors, and is one of the key elements in the ideal base closure and re-use process.

In principle, the steering committee is a natural outgrowth – and institutionalization – of the roundtable discussion concerning redevelopment during the orientation phase. However, the ultimate decision concerning the make-up of the steering committee is left to the municipality, and should be based on which group of people can best carry out the re-use project. In many cases the committee is made up as follows:

- municipal representatives,
- representatives from other political levels involved with the redevelopment project (i.e., state or local agencies/ministries involved with regional development, economic development, planning and land-use, environmental affairs, housing, etc.),
- representatives from regional interest groups and associations, and
- representatives of the site's owner (often the State).

Although the steering committee may be made up of all of the key actors in the re-use process, it does not actually have any authority to take action or make decisions. It has other tasks, the importance of which should not be underestimated. These include:

- **advising and supporting the municipal agencies**

The group embodies a collection of competent and experienced practitioners.

- **moderating disputes and other problems which might delay the redevelopment**

One of the typical conflicts concerns the purchasing price for the site. The owner and the potential purchaser often have radically different ideas concerning the appropriate price for the site, and it frequently appears as though consensus is not achievable. Under such circumstances, it can be helpful to discuss the situation with a neutral third party, defuse the potential for conflict, and remove hurdles to the site's ultimate re-use.

- **inclusion of representatives from national and state agencies**

Particularly with regard to financing, the inclusion of representatives from the relevant state and national agencies can be important because they usually have access to funds which can be used to support redevelopment projects.

In addition, the members of the steering committee advise the municipal actors as they consider various re-use options. Experience at various sites has shown that based on the

detailed professional analysis of the former military installation and its immediate environment, an **overall re-use concept** for the future civilian use can be developed. Relatively few municipalities are in a position to conduct such a thorough analysis of the site or the potential re-use options alone. It is helpful to include external experts (from planning agencies and consulting firms) in the process, and to commission specific studies/assessments by outside specialists.

Both the initial site assessment and the brainstorming from the orientation phase provide the basis for the overall re-use concept. The objectives laid out in the concept must be based on a **detailed assessment of site within the regional context**. In some cases, the initial redevelopment ideas need to be modified as a result of the more specific analysis of the facts. This assessment should include the following components:

- **detailed environmental risk and remediation assessment**

This assessment concentrates on the identification of possible sources of soil contamination resulting from the site's military use, and attempts to determine the necessary steps to be taken in cleaning-up the contamination.

One possible result of this detailed environmental risk assessment can be that it reveals that the level of contamination is so great and the remediation and disposal costs so high that the cost of re-use is much higher than the actual benefit which can be gained. As a result, the ultimate objective may be modified drastically.

- **analysis of the structures and buildings**

Both the buildings built for military use and the site infrastructure (transportation and utilities, etc.) need to be analyzed to see if they can be modified for civilian use.

Unfortunately, this assessment usually reveals that the quality of the various structures is so poor that the only option is demolition and reconstruction in order to re-use the site in a meaningful way. In such cases, a critical cost-benefit analysis is necessary. Similarly, the design and shape of some structures corresponds to the specific demands of the military user, and is problematic because it does not offer a civilian re-use option. For older buildings, the issue of historic preservation can also be a factor inasmuch as the maintenance of valuable construction styles and material is tied to numerous regulations and restrictions (which make the building's re-use even more difficult).

- **market analysis**

The market analysis is oriented on the civilian re-use objectives for the former military site – such as the creation of a business park for high tech firms – and places them in the context of the economic framework and actual supply and demand relationship in the region. The key question to be answered through a market analysis is: Does the intended re-use objective for the site fit into the region?

In this context, one important measure is a survey of potential investors concerning their specific prerequisites for a location. The results of such a survey should be incorporated into the further planning and development of the site.

Taking up contact with potential investors under the auspices of a market analysis, can have a beneficial side-effect because the foundation for the ultimate

redevelopment goal can be prepared at an early phase. Even before the active search for investors has begun (through public relations and marketing), the interest of prospective investors can be considered.

- **feasibility study**

A feasibility study in essence combines the results of the site assessment and the market analysis by weighing the results of both and providing a basis for further actions. It also can serve as the preparation for the final municipal decision concerning the further development of the site – which can be complemented through a macro-economic analysis of the project.

If the external advisors are doubtful concerning the viability of the redevelopment ideas and measures, it is possible to reassess and redirect the project during this phase of the re-use process. In other words, the concept for the site's revitalization may need to be redefined to fit in the regional context.

Should the external advisors come to the conclusion that the redevelopment goals fit closely within the framework of possible re-use, then it is important to take further action relatively quickly – based on the overall re-use concept. The most important prerequisite for this is the **necessary political decision** at the local level, because this step alone can clear the way for the necessary activities and measures.

The first step is the **appraisal of the site's value and purchase price**. This can be an extremely difficult and arduous process because the price expectations of the owner (usually the State) and the buyer (often the municipality and/or private investors) rarely converge. Therefore, it is necessary to establish agreement concerning the price through a structured negotiation. At least two methods for achieving consensus are possible:

- The steering committee – which includes representatives from the owner and buyer sides – has proven to be useful in moderating disputes in the negotiation over the sale of the site.
- Both parties can agree to have the site's value appraised by a neutral expert. The purchaser and the seller should, however, agree to follow the suggestion of the appraiser.

One further key step in the base closure and redevelopment process – which must be regarded in the context of the site's appraised value and the purchase price – is the development of a **finance plan**. In addition to the capital necessary to purchase the site, the municipality needs to spend money preparing the site for redevelopment, and these costs can rarely be covered by the municipality. The situation is sometimes better when a private investor works with the municipality – or alone – to develop the site. Yet, experience shows that even in such cases it is virtually impossible to finance the project without outside funding. Two groups can potentially provide additional capital:

- In Germany, the states – represented in the conversion process through the ministries and agencies – have access to incentive funding for base redevelopment projects. In order to successfully apply for this funding it is

important to (a) have a clearly defined concept for the re-use and a plan for carrying out the site's redevelopment and (b) good contacts to the decision-making bodies at the state level. Therefore, it is advised that the key actors from the respective ministries and agencies (including regional development, economic development, planning and land-use, environmental affairs, housing, etc.) be informed of developments at the site – and perhaps even included in the steering committee.

- Private banks have access to large amounts of capital. The difficult challenge is to convince them to use a portion of it as venture capital in the development of a former military base. As opposed to public funders, private banks are usually only willing to provide capital if they have positive expectations concerning the profitability of the project in question – and can expect a high rate of return on their investment. Here, the steering group and the project managers must work hard to convince the banks of the benefits of their project. A detailed concept for the viable re-use which is supported through the results of the marketing and feasibility studies as well as the availability of potential investors facilitates the participation of the banking community.

Only after a viable financial plan is in place are the three objectives of the conceptualization phase fulfilled:

- **The overall re-use concept has been developed.**
- **Consensus has been reached concerning the site's purchasing price.**
- **A financial plan has been drafted which will enable both the purchase and the development of the site.**

In order to move from the conceptualization to the realization phase of redevelopment, one last measure must be taken: Private investors must be provided with the **binding legal framework for planning, zoning, and construction**. Only with this information can they make their final decision concerning involvement in the redevelopment project. The legal basis – and zoning decisions – must be provided by the municipality (because it is responsible for planning decisions). National legal guidelines and other regulations should be factored into the binding legal framework so that no legal matters can conflict with the further development of the former military site.

Phase III: Realization

The re-use concept is carried out on the site, and the site is reintegrated into the regional economy and marketed.

Immediate goals

- establishment of an institutional structure to put the re-use concept into practice
- preparation for (re)construction and development on the site
- utilization and marketing of the site

Actors

The key actors during this phase of re-use include:

1. representatives from the institutional structure charged with carrying out the sites (re)development
2. private investors

Activities and measures

With the beginning of the realization phase, it is important to reconsider the form of project management of the re-use project. During the conceptualization phase, the project is managed/coordinated by the base re-use department or expert – with support from the steering committee – but, with the beginning of the new phase, there are different priorities.

The purchase, preparation for development, and marketing of the site are the core of the realization phase. Given the changed demands and tasks, it is prudent to introduce a more suitable form of project management. Several different project management structures are possible:

- municipal government,
- development agency as subsidiary of the municipality,
- development agency as a public-private-partnership, and
- purely private development and management entity.

Each of these models has distinct advantages and disadvantages. The most important of these are briefly outlined below.

Management through the municipal government (base re-use department) has a number of positive components:

- The municipality can achieve its planning and construction objectives without outside influence.
- The municipal government has both a well-functioning internal infrastructure and access to professional expertise.

- Since it has jurisdiction over planning, the municipal government administration usually is involved with the planning and development of the site from very early on, and has a detailed knowledge of the strengths and weaknesses of the site.
- Many decisions can be made more quickly because they are made at the local level (i.e., planning, financing, level of input). By keeping the process at the municipality, information can be shared and consensus achieved relatively easily.
- The municipality has good contacts to opinion leaders and decision-makers (political level and private sector).
- Since it is located at the center of the site redevelopment process, the municipality can serve as the key contact for other actors interested in the site (including investors).

Generally, the municipal government takes on the project management if it can successfully conduct the activities to be carried out (purchase, marketing, sale, etc.). However, the combination of complex tasks often overwhelms the municipality, and external know-how is required. Independent development agencies can be useful in the practical application of the re-use project. In addition to coordinating the project's development, the agency can take over the purchase negotiations and later marketing of the site.

In Germany, there are two basic types of development agency: a wholly subsidiary of the municipality or a public-private-partnership. In either case, the agency is a private limited liability corporation. Through the creation of a small private firm, the efficient redevelopment is attempted. Several factors favor **management through an independent development agency**:

- The private agency has more independence to act, and can take action more quickly.
- It has an efficient organizational structure and limited bureaucracy.
- Such a private development form is more goal-oriented and has a sense of the overall relationship between costs and benefits.
- Additional entities – both public and private – can become shareholders in the development agency.

On the one hand, a completely private development and management entity (such as a private developer or investor) reduces the level of involvement required by the municipality. Yet, on the other hand, it also removes the municipality's ability to shape the development of the site. In the final analysis, the local actors must decide which type of management structure is the most suited for the project and the region. Perhaps some of the reasons listed above can help local decision-makers with this decision.

The re-use concept can be turned from theory into practice by undertaking a series of activities and measures within a specific timeframe and according to a step-by-step process (brainstorming, planning, expansion and development of infrastructure, environmental remediation, demolition or (re)construction of buildings and structures,

etc.). Parallel to these activities, the **marketing** effort which was launched during the conceptualization phase needs to be continued. The objective is to improve the site's chances for development by seeking investors. The market analysis conducted during the conceptualization phase serves as a basis for trying to acquire specific investors – or investors from specific branches.

In some cases, marketing strategies designed to present the site, or location, as a product in and of itself have been successful. This type of marketing can be tailored to the specific requirements of the potential investor by placing emphasis on the “hard” locational factors (level of technical infrastructure, size and quality of existing structures, size and shape of the site, access to transportation infrastructure, etc.) and/or “soft” locational factors (such as certain consulting or financing services). With regard to financing, public leasing might be one way to win new companies as investors. Through this form of leasing, the municipality or development agency helps finance and organize the purchase of the site and construction as desired by the private company.

In addition to marketing, **public outreach** and **advertising** are important tools for finding investors. Modern forms of communication (such as Internet) should be used in conjunction with the more traditional forms of outreach when looking for investors worldwide:

- work with local and regional media (by inviting them to events or giving interviews),
- advertising measures (through advertisements, brochures, information booths at conferences and trade shows, production of a video),
- hosting outreach events (conferences, workshops, etc.).

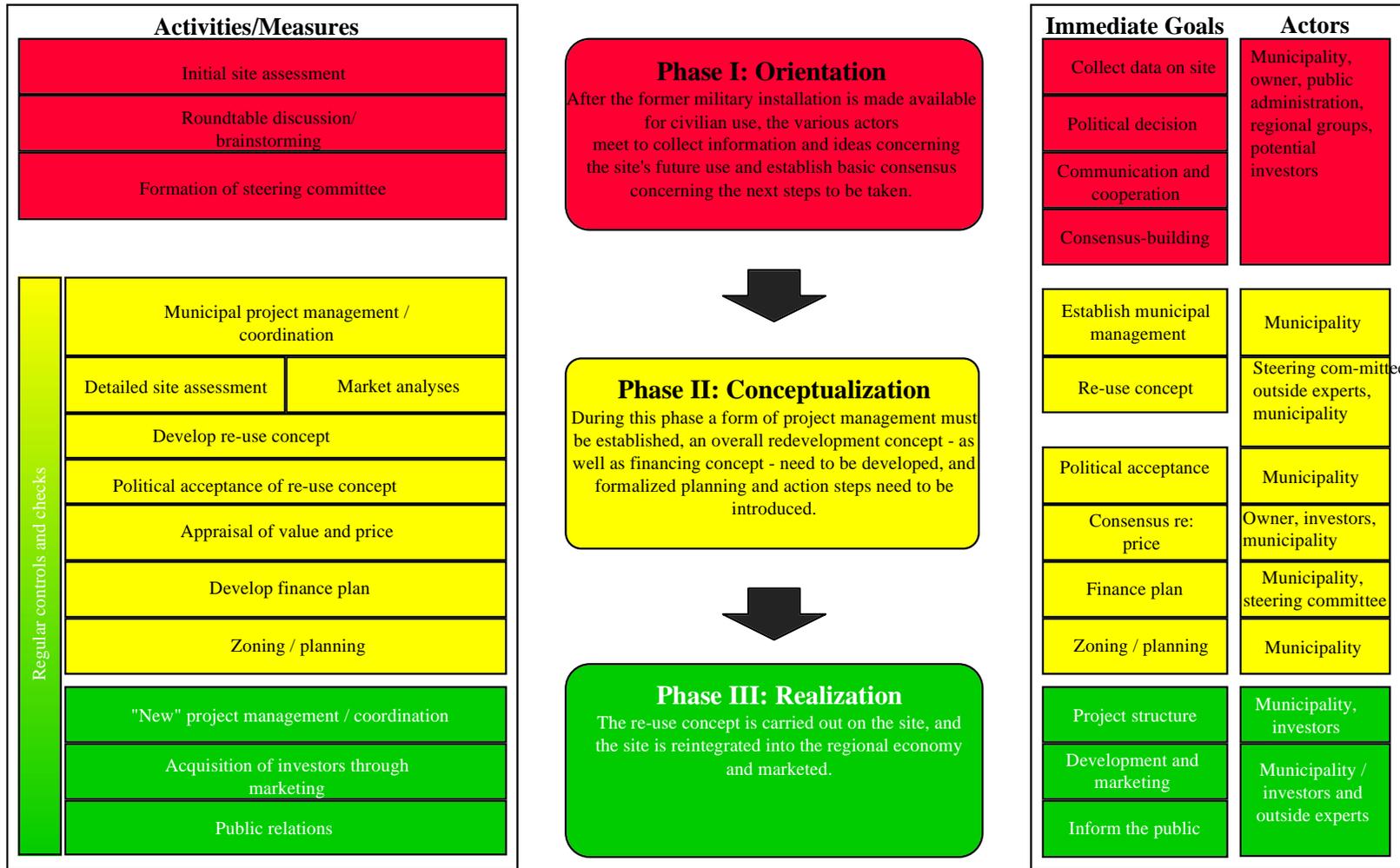
One can also contact potential investors (industries, businesses, and service companies) directly or trade associations and other umbrella organizations.

The objective of this type of work is to increase the level of interest in a specific site. Therefore, it is important that through all outreach measures a positive image of the site and activities at the site is developed among the general public and potential investors.

Throughout the entire base closure and re-use process, regular **checks and assessments** need to be conducted to ensure that the immediate goals are reached by specific people – and within set timeframes. This is the only way to ensure that mistakes in or deviations from the intended development can be corrected and taken into consideration in further plans. One way to ensure progress on a step-by-step basis is by regularly informing the general public both at the end of each development stage concerning the achievement of goals and about the overall progress of the project.

The following figure presents an overview of the three phases of re-use for former military lands. It includes the activities and measures, (immediate) goals, and the actors involved, and can provide general guidelines for the redevelopment of a specific site.

Figure 6: Guidelines for Site Redevelopment



Site redevelopment

Key Words

B

brainstorming, 12; 24; 25; 29; 33

C

communication, 2; 7; 14; 15; 19; 24; 25; 26; 27; 28
conceptualization phase, 22; 24; 26; 27; 31; 32; 34
consensus, 10; 15; 21; 24; 26; 27; 28; 30; 33
cost-benefit analysis, 4; 18; 19; 21; 29

D

development agency, 11; 12; 15; 32; 33; 34

E

environmental risk assessment, 8; 10; 14; 29

B

brainstorming 12; 24; 25; 29; 33

C

communication 2; 7; 14; 15; 19; 24; 25; 26; 27; 28; 34
conceptualization 22; 24; 26; 27; 31; 32; 34
consensus 10; 15; 21; 24; 26; 27; 28; 30; 33
cost-benefit analysis 4; 18; 19; 21; 29

D

development agency 11; 12; 15; 32; 33; 34

E

environmental risk assessment 8; 10; 14; 29

F

feasibility study 2; 12; 13; 30
finance plan 13; 27; 30
fixed factors 4; 5
funding 5; 11; 13; 25; 30

I

incentive 11; 13; 14; 25; 30
initial site assessment 9; 10; 13; 14; 25; 29
investor 2; 8; 9; 10; 11; 13; 14; 15; 21; 24; 25; 26; 27;
29; 30; 31; 32; 33; 34

L

labor 2; 6; 7; 9; 10; 11; 13; 14; 15; 20; 24; 25; 26; 27
locational factors 5; 7; 34

M

market analysis 29; 30; 34

F

feasibility study, 2; 12; 13; 30
finance plan, 13; 27; 30
fixed factors, 4; 5
funding, 5; 11; 13; 25; 30

I

incentive, 11; 13; 14; 25; 30
initial site assessment, 9; 10; 13; 14; 25; 29
investor, 2; 8; 9; 10; 11; 13; 14; 15; 21; 24; 25; 26; 27;
29; 30; 31; 32; 33; 34

L

labor, 2; 6; 7; 9; 10; 11; 13; 14; 15; 20; 24; 25; 26; 27
locational factors, 5; 7; 34

marketing 2; 5; 7; 12; 14; 19; 21; 26; 30; 31; 32; 33;
34
municipality 6; 11; 12; 15; 17; 21; 24; 25; 26; 27; 28;
30; 31; 32; 33; 34

O

orientation 4; 22; 24; 26; 27; 28; 29
outreach 5; 15; 34
overall re-use concept 10; 13; 29; 30; 31

P

price 2; 8; 12; 13; 17; 18; 20; 21; 25; 26; 27; 28; 30;
31
private investor 11; 13; 21; 25; 30; 32
Private investors 31
project management 5; 26; 27; 32; 33
public leasing 15; 34
public outreach 5; 15; 34
public-private-partnership 11; 25; 32; 33

R

realization 4; 22; 31; 32
remediation 2; 5; 8; 10; 17; 18; 19; 21; 29; 33
re-use concept 10; 13; 26; 29; 30; 31; 32; 33
roundtable discussion 25; 26; 28

S

semi-variable factors 4; 5; 16
steering committee 26; 28; 30; 31; 32

V

variable factors 4; 5; 9; 16; 17

Z

zoning 6; 9; 10; 13; 26; 27; 31

