Turning risks into opportunities

Strategic risk management in turbulent markets
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Executive summary

Strategic risk management enables companies to respond faster in turbulent markets

Increasingly fierce competition, at times even hypercompetition, and more volatile business cycles have brought greater turbulence to the world's markets. For the business community, this turbulence expresses itself in shorter innovation and production cycles, ever greater product diversity, shorter planning horizons, and more deep-seated uncertainty about strategy.

Turbulent markets mean that companies have to react ever faster to the opportunities and risks they face. It follows that professional risk and opportunity management is becoming a crucial factor of business success.

Such a bold statement is backed by our experience in numerous consulting projects – and by the results of our recent survey on how companies are dealing with turbulence. 73% of respondent managers admitted that growing volatility had indeed hit their businesses hard to moderately hard. They also confirmed that there are three areas that have a particular bearing on successful corporate management in times of turbulence and acute risk:

> Moves to shore up short-term earnings and corporate survival
> An active positioning within turbulent markets
> The need to adapt the organization to the turbulence around it

The majority of companies appear to have spotted the risks and have begun to adapt in response to the changed situation. Yet the greater risks and opportunities presented by turbulent markets demand more than just a reaction: they cry out for proactive, strategic risk management.

Roland Berger's approach to strategic risk management meets these challenges head-on. We sit down with you to assess the risks and opportunities specific to your company and work with you to formulate suitable concepts for professional risk management. Risks are quantified in terms of their effect on your cashflow. And the individual risk items for each unit and for the company as a whole are aggregated using Monte Carlo simulations.
The results of a strategic risk management project at a glance:
> A transparent overview of your company's entire risk position
> Concrete measures to minimize risk
> A professional risk management system tailored to the needs of your company

Our consulting strategy has proven itself where it matters most: in practice. The benefits begin to take effect in a matter of weeks. Why not find out for yourself?
Results of a survey by Roland Berger: Companies are bracing themselves for a bout of turbulence

"Crisis is a productive state – you only have to take away the flavor of catastrophe."

Max Frisch

The headlines in the business press lament one corporate crisis after another. Enron, Andersen, Kirch, WorldCom … and so the list goes on. Individual human failure and macroeconomic factors have conspired to precipitate these spectacular implosions. And both the net economy crisis and the terrorist attacks of September 11, 2001, have exacerbated the downturn.

Yet the structure of markets has changed, too. Innovation cycles and product lifecycles are growing ever shorter. At the same time, an ever greater diversity of products is flooding the market, with ever faster delivery times. The resultant uncertainties have a bearing on strategy development. There are two reasons for this turbulence:

> In many industries, competition has become much more intense as more and more international players crowd in and new rivals, with different business models from different industries, also make inroads.

> Business cycles have become more volatile. Regional economic developments today have a global impact. Conversely, the international capital markets magnify the expansion of regional markets during boom phases – and intensify their contraction when recession strikes.

Our survey of managers at over 100 companies in a wide range of industries reinforces our conviction that the markets have become more volatile and, hence, more risky. 41% of respondent managers said their companies were operating in turbulent markets. A further 32% rated the impact on their company as moderate, while 21% saw themselves as only mildly affected.1) Turbulent markets mean that companies have to react ever faster to the opportunities and risks they face. It follows that professional risk and opportunity management is becoming a crucial factor of business success. Amid all the doom-mongering, however, the opportunities should not be overlooked.

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1) Data derived from Roland Berger’s cross-industry survey, early 2002
To find out where companies see a need for action and what they are already doing, Roland Berger presented a number of hypotheses and asked decision-makers at the companies participating in the survey to evaluate them. The managers confirmed that there are three areas that have a particular bearing on successful corporate management in times of turbulence and acute risk:

> Moves to shore up short-term earnings and corporate survival
> An active positioning within turbulent markets
> The need to adapt the organization to the turbulence around it

**Shoring up short-term earnings and corporate survival**
To maintain a continued flow of earnings and ensure survival in the short term, our experience highlights three areas in which companies must act. They must:

> Cut costs and initiate measures to increase revenues. Positive cashflow effects will then preserve (or restore) their entrepreneurial room to maneuver
> Re-examine corporate planning to identify new opportunities, but also to revise planning assumptions that no longer apply
> Re-assess their risk position in order to respond appropriately to strategic and operational opportunities and risks

So how did the respondent companies rate these hypotheses? 90% of the companies that felt they were hardest hit by market turbulence agreed that action was most acutely needed in these areas. 60% of moderately affected companies shared the same view, while only 30% agreement among mildly affected companies showed that these issues were less relevant to this category of respondents.

It is one thing to identify the need for action: actually doing something about it is another thing altogether. What have the respondent companies done so far? On the whole, considerable progress has been made in moves to secure short-term earnings and the survival of the company. Depending on how severely they have been affected, different firms have naturally reached different stages of implementation.

At the time of the survey, 20% of respondent companies had finished reviewing their planning data, 56% were in the middle of the task, and 16% had made a start. 80% of the companies surveyed had responded to the threat of a collapse in earnings by launching cost-cutting programs.
All respondent companies had set about re-evaluating their risk position. 72% saw market risks as very important, while 60% said the same of political risks. Half of the companies were in the process of evaluating their risks when the survey was conducted. A quarter claimed already to have completed the process, and the remaining 25% said they had only just begun to review their risk position – clear evidence of a gap that needs to be plugged. In light of today’s heightened risks, Roland Berger sees the need for more professional risk management – especially from a strategic point of view – as one crucial area where action is needed.

High priority is given to shoring up short-term earnings and corporate survival (Average result across all respondent companies)

<table>
<thead>
<tr>
<th>Agree entirely</th>
<th>Tend to agree</th>
<th>Tend to disagree</th>
<th>Disagree entirely</th>
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</thead>
<tbody>
<tr>
<td>Review existing planning to account for changed assumptions</td>
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<td></td>
</tr>
<tr>
<td>Combat threat of a collapse in earnings</td>
<td>&gt; Cut costs</td>
<td></td>
<td></td>
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<tr>
<td>Re-evaluate risk position</td>
<td>&gt; Increase sales</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completed</td>
<td>In progress</td>
<td>Started</td>
<td>No action planned</td>
</tr>
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</table>

Source: Roland Berger Strategy Consultants

Active positioning within turbulent markets
88% of the companies surveyed also see the current turbulence as an opportunity to grow and further develop their business, for instance by snapping up market share from less resilient rivals or replacing weaker cooperation partners.

Given the keen relevance of the issue, the majority of companies are actively working to improve their market and competitive position. 67% of those firms buffeted by a heavily turbulent environment have already completed this process. 64% of respondent companies are seeking to win market share from less robust competitors, and 60% are using the chance to
replace weak cooperation partners. All of which provides sufficient indication that the companies concerned are not merely aware of the risks but are perceiving and actively exploiting the related opportunities.

When it comes to the desirable future level of globalization, opinions differ. Around half of all respondents believed it made sense to establish a global value chain for themselves, even though this would leave them more vulnerable to crises. The other half tended to favor multiple, regional value chains with less pronounced international dependencies.

None of the companies had yet concluded their review of globalization strategy. 32% had no plans for such an exercise. 28% cited Europe as their main regional focus.

Many businesses are consciously examining their portfolio strategy. 28% have completed their appraisal while 44% are still working through the process. Differences emerge in the strategic direction of such portfolio appraisals, however, with about half of the respondents (55%) looking toward a tighter focus.

Opinions on the importance of conglomerates split along similar lines. Around 60% of respondents believed that the wider risk spread arising from a broader business portfolio makes conglomerates more crisis-proof.

### All respondents gave high priority to an active positioning on the market
(Average result across all respondent companies)

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<thead>
<tr>
<th></th>
<th>Agree entirely</th>
<th>Tend to agree</th>
<th>Tend to disagree</th>
<th>Disagree entirely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actively seek and exploit opportunities for growth</td>
<td></td>
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<tr>
<td>Reduce level of globalization in favor of a stronger regional approach</td>
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<tr>
<td>Review orientation of portfolio</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Relevance of issues</th>
<th>Degree of implementation</th>
<th>Implementation gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed</td>
<td>In progress</td>
<td>Started</td>
</tr>
</tbody>
</table>

Source: Roland Berger Strategy Consultants
Adapting the organization to the turbulence around it
We believe that a turbulent market environment demands adjustments to corporate organizations, especially in the following areas:

> Creating smaller entrepreneurial units to increase the speed at which companies can (re)act; and accelerating the process of strategy development and implementation
> Reinforcing and promoting entrepreneurial thinking and behavior among internal staff
> Transforming (still more) of a company’s fixed costs into variable costs, for instance through alliances and outsourcing

90% of the managers of respondent companies agreed with these hypotheses.

Having confirmed that these issues are relevant, however, how are they doing on implementation? Work to adapt organizational structures has begun, but much still remains to be done. Although making companies more responsive to changes in the market is especially important, only 44% of the firms surveyed have completed such measures. 67% have accelerated their strategy development and implementation process. 60% have set up smaller entrepreneurial units.

Almost all of the companies surveyed have taken additional actions to encourage entrepreneurial thinking and behavior within their ranks. They do this by permitting employees to participate in company profits, for example, by involving them more closely in strategy development or by introducing value-based management systems.

Virtually all businesses also saw it as essential to transform fixed costs into variable costs and were already acting on this need. 60% were focusing such measures on fixed production costs, whereas 40% were primarily targeting administrative aspects.

Adapting an organization to changed market conditions is a medium-term process. Accordingly, the target/actual gap for this third area is still wide.
Organizations must be adapted to turbulent market conditions
(Average result across all respondent companies)

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<thead>
<tr>
<th>Area</th>
<th>Agree entirely</th>
<th>Tend to agree</th>
<th>Tend to disagree</th>
<th>Disagree entirely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable company to respond faster (management processes and organization)</td>
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<td></td>
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<td></td>
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<tr>
<td>Encourage employees to act as entrepreneurs</td>
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<td></td>
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<tr>
<td>Transform more fixed costs into variable costs</td>
<td></td>
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</table>

Source: Roland Berger Strategy Consultants

To summarize: The bulk of the companies surveyed have recognized the demands of turbulent market conditions and begun to adapt accordingly. The extent to which progress has been made in the three areas cited depends partially on the degree to which companies feel affected by the prevailing turbulence. Even so, it is important neither to rest on the laurels of short-term earnings stability (once this has been achieved), nor to just "sit out" the downturn and hope for better days ahead. The greater risks – and opportunities – presented by turbulent markets demand a proactive, strategic approach to risk management.
The Roland Berger approach: Strategic risk management enables companies to respond faster

"...Because the future is never entirely predictable, risk in any business action committed to the future – that is, virtually all business actions – can be reduced but never eliminated."

Alan Greenspan

Traditional risk monitoring is usually an ex post affair based on monthly or annual financial statements prepared by Controlling or Finance. In most companies, these controls are merely budget-driven and only detect deviations from prescribed targets when it is already too late. Even advanced management information systems (MIS) supply nothing more than standardized reports indicating changes in market share, declining sales or under-used capacity. Liquidity problems and the capital-to-assets ratio – which, if the worst comes to the worst, can plunge a company in overindebtedness or even bankruptcy – are not recorded.

The more modern interpretation of opportunity and risk management is applied by many companies only in a qualitative form, if at all, and then only for isolated operating functions such as quality management and foreign exchange/financial management. Yet actively managing strategic opportunities and risks is a strict imperative in the interests of lasting business success, especially in turbulent times.

Strategic risk management is a comprehensive approach to responsible entrepreneurial behavior. It seeks an optimal balance between the need for security and the need to sustainably increase the value of the company. Roland Berger’s approach to strategic risk management is rooted in the quantitative risk management methods used in the financial sector and the qualitative methods used in industry. By permitting all key operating risks to be quantified and aggregated, it helps managers to identify and leverage both the critical success factors and the risk factors to which a company is exposed.

It is fair to say that a company’s overall risk position is an important basis for decisions about strategic development. Risk metrics such as ‘value at risk’ (VAR) and ‘free cashflow at risk’ (FCFAR) are used to calculate and monitor this overall risk position, using mathematical and statistical methods to attach a figure to potential losses from current business activities.
When markets are turbulent, the following strategic risk management issues are of considerable importance to every company:

> **An active positioning on the market:** How can the company exploit the opportunities presented by changes in the market while minimizing the risks?

> **A review of the portfolio of products and companies:** What is likely to bring greater success (or reduce the risks): diversification into growth markets or a focus on profitable core markets?

> **Optimization of the company size:** Are potential economies of scale being used to the full?

> **Adjustments to the value chain:** Does the company occupy the most profitable level in the value chain? Is the same expertise being used in other industries?

> **Financial engineering:** Is there sufficient leeway to exploit opportunities? Is a low cost of capital helping to add value?

In an operational management context, an integrated risk management system enables a financial link to be established between the different factors that influence the company throughout all its various processes and subprocesses.

Only strategic risk management enables a company's risk position to be assessed comprehensively and in quantitative terms, thereby giving the company:

> Transparency with regard to existing and potential risks

> The ability to aggregate individual risks – to paint the 'bigger picture' of its overall risk position

> The ability to compare risks in different business units

> A keener sense of risk awareness throughout the company

> A tool to accurately evaluate the measures introduced to minimize risks
Case study: Risk management as a management and controlling tool for top executives

Centerpulse AG implemented a strategic risk management system with the support of Roland Berger. Centerpulse AG (formerly SulzerMedica AG) is one of the world’s biggest medical implant technology firms. During the out-of-court settlement of a class action suit in the USA, the financial community was just one of the voices demanding the introduction of a comprehensive system of risk management. The company’s Chief Risk Officer and Head of the Legal Division, Dr. Gabor-P. Ondo, recounts his experience of the project:

“The aim of the Guardian project was to develop a best-practice risk management concept for Centerpulse in just four months. The outcome surpassed all our expectations. The objective of building a tailor-made risk management system that meets the specific requirements of our company, rather than using a standardized approach, was fulfilled.

In the preliminary stages of the project, we created a vision of what risk management needed to look like at Centerpulse. We identified the benefits we wanted to derive from the system. We knew from the very beginning that we needed a group-wide system that would enable us to quantify all risks and business inefficiencies, along the same lines as the operational risk management methods applied by insurance companies and banks.

The Centerpulse management team collaborated closely with the team from Roland Berger Strategy Consultants on a day-to-day basis. Every step of the project was planned in great detail. The project team informed the steering committee of the current status on a monthly basis. Development of the analysis tool and the methodology was handled mainly by the consultants, while the industry and company specifics came from our senior management.

2) Dr. Ondo has been CRO of Centerpulse since 2001. He obtained a doctoral degree in law and attorney at law from the University of Zurich and a master’s degree in European business law from the University of St. Gallen. Prior to joining Centerpulse, Dr. Ondo held various management positions in the area of Corporate Risk Management, including Executive Director at Group Compliance Services of UBS Financial Services Group (2000-2001), Chief Claims Officer & General Counsel and Member of the Extended Executive Board at Winterthur International, Winterthur (1998-2000).
While the risk management system was still being developed, it already became apparent that focused workshops in all business units and a policy of proactive reporting, involving staff on many different levels, would make people more sensitive to and aware of possible risks and opportunities. To maintain this momentum, the Board decided to work closely with Roland Berger Strategy Consultants to implement the group risk management system. Today, risk management also helps Centerpulse identify new opportunities – opportunities the company has already started using."

The purpose of strategic risk management is to identify both the risks and opportunities facing a company and (in the case of risks) to define, implement, and monitor compliance with the necessary countermeasures.

Two conditions must be met if a risk management system is to be implemented. One is that the risks must be comparable, so that events that pose a threat to earnings can be usefully aggregated. This is the only way to ensure that the risk management system does not degenerate into a loose assortment of isolated potential threats and packages of countermeasures, but that real dangers to the enterprise can be identified. The other condition is that problem areas must be prioritized to enable scarce corporate resources to be deployed efficiently.

A risk management system is made up of a risk management process and a risk management organization. The process itself consists of four steps that can be visualized as a constant, iterative cycle (see figure):

> Risk identification
> Risk assessment
> Risk control
> Risk monitoring (an early-warning system)
Permanent risk management and the associated process steps

**Risk identification**
During this process, a comprehensive approach to risk identification ensures that no risks are overlooked. Risks are identified and positioned in collaboration with the managers responsible.

Risks are identified:

> By interviewing operational managers and in the context of workshops. Drawing on past experience, risks are identified systematically all along the value chain (bottom-up analysis)

> By comparison with generic lists of potential risks to companies, to ensure that the list is complete even after changes have been made to the process or business system (top-down check)

The risks identified for the company are assigned to distinct categories. For most manufacturing companies, a four-way split is advisable (see figure).
### Manufacturing companies can split their risks into four categories

<table>
<thead>
<tr>
<th>Subcategory</th>
<th>Strategic risks</th>
<th>Overhead/support risks</th>
<th>Front-end risks</th>
<th>Back-end risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main risks</td>
<td>Reputation, M&amp;As, business development, hazards, legal</td>
<td>Financial, HR, tax, IT, insurance, risk management process</td>
<td>Sales, marketing, service, competition</td>
<td>R&amp;D, procurement, production, logistics</td>
</tr>
<tr>
<td></td>
<td>&gt; Inappropriate business model</td>
<td>&gt; Financial resource risk</td>
<td>&gt; Loss of sales/customers</td>
<td>&gt; Inefficient production</td>
</tr>
<tr>
<td></td>
<td>&gt; Litigation/settlement payments</td>
<td>&gt; People management</td>
<td>&gt; Decrease in market price</td>
<td>&gt; Development project delays</td>
</tr>
<tr>
<td></td>
<td>&gt; Loss/lack of corporate reputation</td>
<td>&gt; Loss of IT operations</td>
<td>&gt; Decrease in market demand</td>
<td>&gt; Inefficient research</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; Insufficient group risk management</td>
<td></td>
<td>&gt; Facility out of use</td>
</tr>
</tbody>
</table>

**Source:** Roland Berger Strategy Consultants

The next step is to break these risks down into cause-and-effect chains. In the sense used here, a risk is said to exist if an event would have a direct impact on the company's free cashflow. The causes of such an event – i.e. events that contribute to the emergence of risk – are referred to as drivers, the causes of drivers as sub-drivers. The risk itself is thus the final link in a causal chain of events. Since each risk has multiple drivers and each of these has multiple sub-drivers, such chains can also be portrayed as what are known as 'risk pyramids' (see figure).
This risk pyramid illustrates the drivers of front-end risks

Risk assessment
The assessment of risks and their drivers then drills down to the required level of detail. The method of assessment can be adapted to the needs of each company.

Risks are positioned on a 'risk map' which indicates the probability and financial impact of risks (see figure). This form of presentation allows different risks to be compared with each other. Logically, necessary countermeasures are focused on those risks that pose the greatest threat to the value of the company.
The risk map highlights those risks to which a company must pay special attention

One problem when quantifying risks is that very few of the relevant factors are classical risks (or 'hazards') in the sense that they will either happen or they won’t – and that they will have serious financial consequences if they do. Most risks are what are termed 'business risks' – events that can recur again and again and whose impact may vary. Such business risks can jeopardize a company's profitability or liquidity by causing deviations from budget.

To solve this problem, the risk management system monitors complete probability spreads. In other words, different probability levels are assigned to different damage amounts. These spreads are in turn translated into risk maps.
The principal difficulty when quantifying operational business risks, however, is establishing the link between measurable key risk indicators (KRIs) and the risk probability spread. KRIs are business parameters that correlate strongly with the risks identified, can themselves readily be quantified, and have, at least in part, already been tracked by the company (the fluctuation rate for high performers, for instance, or delays in development projects).

This problem is overcome by defining individual, incremental algorithms that link information together and are themselves integrated in the risk management system by means of Monte Carlo simulations. These algorithms enable free cashflow at risk to be computed at different levels of aggregation.

Monte Carlo simulations use mathematical and statistical methods to calculate free cashflow (FCF) spreads, taking full account of the information collated (plus additional data about correlations between risk drivers). FCF spreads give a clear idea of the relative probability with which what amounts of free cashflow will be lost. Top management can then define risk thresholds below which no risk exists or above which a critical risk exists, for example.

**Impact spread for free cashflow at risk**

![Impact spread for free cashflow at risk](source: Roland Berger Strategy Consultants)
The threshold on the right (the one matching the higher FCF figure) indicates the critical risk threshold at which (for instance) free cashflow of over USD 100 million would be at stake. The chart shows the probability with which such an event will occur. If the probability figure is higher than the corresponding opportunities would justify, top management can take specific measures to eliminate or at least contain the risk.

Controlling risk means taking appropriate measures to combat the risks that have been identified and assessed. Four basic possibilities lend themselves to application here and can be used in isolation or in combination depending on the company’s risk strategy and the nature of the risk. They are:

> Acceptance
> Prevention
> Reduction
> Financing/transfer

The effect of these control measures can be plotted on the risk map. Measures that work move the points on the map to the left (diminishing their impact) or downward (diminishing their probability; see the ‘risk map’ figure).

The risk management system thus enables close control of the causes of risks (risk drivers) and their contribution to the overall monetary risk to the company. Just how important it is to be able to apply finely-tuned measures became apparent in the course of the Centerpulse project as the availability and effectiveness of measures varies constantly. The fourth measure, financing and/or transfer, generally means taking out insurance against risks, for instance. However, current uncertainties with regard to rising insurance premiums and, in some cases, uninsurable risks, increasingly mean that companies need to take recourse to one of the other three measures. One of the more popular options is ‘reduction’, whereby business processes are adapted in a way that minimizes the future risk.

**Risk monitoring**

Risk monitoring ensures that the people who need it have a clear, transparent overview of the company’s risk position at all times. The tools monitor the trend in risks and the way planned measures are implemented and new measures initialized. The risk map and the free cashflow at risk view can be used to monitor the various risks faced by the company as a whole or by individual business units.
To improve the efficiency of risk monitoring practices, an early-warning system based on key risk indicators (KRIs) is also established. A KRI that is pointing up indicates that the corresponding risk has increased or will increase. It is then up to the company to define suitable thresholds for KRIs. When these thresholds are exceeded, countermeasures must be taken without delay (see figure).

There are different ways of monitoring a KRI. One is to track a floating average. Besides monitoring absolute thresholds, another option is to keep watch on relative changes in KRIs over time.

**Key risk indicators: The early-warning system alerts managers when thresholds are exceeded**

![Diagram showing an early-warning system based on key risk indicators alerts managers when risk thresholds are exceeded.](Source: Roland Berger Strategy Consultants)
Risk management organization
An appropriate risk management organization must be set up to run the entire risk management system. Three principles should be borne in mind when creating this organization:

> It must be integrated in existing structures (it should not be a parallel organization)
> A lean, flexible planning and control process must be defined
> An institutionalized review process must be established to deal with new risks

These organizational measures create several new functions: that of Chief Risk Officer (CRO), who should be a member of the board; a Vice President Operational Risk Management; and (where appropriate) one Risk Controller per business unit. Clearly defined responsibilities are attached to each of these positions:

> In the person of the CRO, top management defines the risk thresholds for the whole company, imposes limits on business units, and decides on measures for cross-segment risks and risks inherent in overall corporate strategy.
> The group risk management organization defines, maintains, and improves the risk management process. It is headed up by the CRO. Operational responsibility is entrusted to the VP Operational Risk Management.
> Responsibility for risk in the business units is in the hands of each Business Unit President. The Risk Controller in each unit supports the President in the area of day-to-day risk management. One of the Risk Controller’s key tasks is to handle the monthly reporting process, condensing all key information and supplying it to the relevant people and departments.
> The business unit management teams are responsible for assessing risks and contributing their expertise in each unit.
> Finally, the Supervisory Board must approve the overall risk thresholds and monitor the activities of the group risk management organization by means of internal audits.
Project procedure

The risk management process and the associated organization are usually set up in three phases. Within a short space of time, the management team gains a comprehensive overview of the company’s current risk position.

Company-specific combinations of risk drivers and the thresholds for risk categories are defined in Phase 1. The risk management organization is also adapted to company-specific conditions in this phase. At the end of phase 1, the adjusted pyramid is in place for the pilot business unit and serves as the basis for further discussion of risks. The risk position of this business unit is described in quantitative terms on a risk map.

In Phase 2, the adjustments made in the pilot phase – most of which concern the organizational structure and reporting procedures – can be mapped onto and implemented in the other business units. The quantitative risk analysis is calibrated and the correlation between key risk indicators is defined.

At the same time, strategies to optimize the risk portfolio in each business unit are drawn up by processing the input data from the workshops and identifying strategic areas where action is needed. The additional processes needed for the various business units are defined and initial measures are derived.

The overall risk to the company can be displayed as an FCFAR graph. This graph facilitates a detailed understanding of the ‘problem areas’ that exist in the company and enables suitable measures to be adopted to adjust the risk portfolio.

In Phase 3, the risk management concept for the company is formulated in close collaboration with the people who will be responsible for risk management. The concept must include the organizational structure, processes, IT requirements, budget issues, and an implementation manual. Strategic areas where action is needed for the company as a whole are identified; and the relevant data is edited to create the transparency needed to take strategic decisions at group level.

The final result of the project is a comprehensive risk management concept that is ready to run, a quantitative overview of the risk position for the group as a whole and its individual business units, and an outline of individual risks. Strategic areas where action is needed can be determined on this basis. Ultimately, repositioning the risk portfolio will increase shareholder value.
Lessons learned:
Success factors in implementation

Having implemented this group risk management system in practice, Roland Berger has identified the following factors as crucial to successful implementation:

> Risk management is an issue for top management
A strategic risk management system can only be implemented successfully with the full backing of top management, including the business unit managers.

> Internal and external communication is crucial
All stakeholders must understand and support the implementation of the system and must play a part in integrating it in the company's day-to-day business. Employees on all levels, as well as outside suppliers, must be sensitized to risk. Given the nature of the data to be retrieved and the project procedure, internal communication is especially important at the start of the project. External communication must also involve stakeholders outside the company and must be actively managed as the project unfolds: it may, for example, have a significant impact on recently agreed insurance premiums.

> The risk management system must be tailored to the individual company
Adaptation to the risks inherent in a specific business model is a key success factor when a strategic risk management system is implemented. Conducting a pilot phase in a representative unit of the company ensures that the proposed concept can be deployed to maximum effect and rolled out successfully across the company.

> The risk management system must be based on existing systems and structures
Integrating the risk management system in an existing management information system (MIS) makes it more efficient by enabling the data in both systems to be exploited. Care must also be taken to ensure that redundant structures do not emerge. The risk management system should be an integrated management tool – and should not mutate into a controlling body.
> **A comprehensive view of risks is required**
To ensure that due account is taken of all business processes and of subsequent changes, comprehensive risk pyramids must be constructed. Processes to ensure that these are continually updated must also be put in place.

> **Risk assessment expertise must be integrated**
It is important for interdisciplinary teams of experts to collaborate on the project right from the outset. These teams should naturally include members of the risk management organization and the external consultants; but they must also include people from a variety of functions and business units. This is the only way to ensure that the risk drivers peculiar to each part of the company are taken into account from the ground up.
Who to contact

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