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**МАЗМҰНЫ  
СОДЕРЖАНИЕ**

**ТЕОРИЯ ЖӘНЕ ӘДІСНАМА  
ТЕОРИЯ И МЕТОДОЛОГИЯ**

**Р. Т. ДУЛАМБАЕВА, А. А. БЕКСУЛТАНОВ**

Совершенствование методики проведения оценки деятельности органов государственного аудита  
Республики Казахстан ..... 9

**М. А. САҚЫПБЕК, А. С. АКТЫМБАЕВА, Н. Ж. СУЛЕЙМЕНОВА, А. Б. САРКУЖАЕВА**

Теоретические предпосылки устойчивого развития туризма в Казахстане ..... 20

**Г. Ж. ТАЯУОВА**

Исследование существующих концепций, подходов и принципов системы управления знаниями ..... 29

**ҚАРЖЫ ЖӘНЕ ТАЛДАУ  
ФИНАНСЫ И АНАЛИЗ**

**Б. Ж. ЕРМЕКБАЕВА, А. Н. МУСАБЕКОВА**

Пути совершенствования налогового менеджмента (опыт России) ..... 37

**У. М. ИСКАКОВ, Я. А. ЕРАЛИЕВА**

Оценка показателей эффективности обязательного социального страхования в Республике Казахстан ..... 46

**БИЗНЕС ЖӘНЕ КОРПОРАЦИЯЛЫҚ БАСҚАРУ  
БИЗНЕС И КОРПОРАТИВНОЕ УПРАВЛЕНИЕ**

**RIMMA SAGIYEVA, AZIZA ZHUPAROVA, DINARA ZHAISANOVA,**

Knowledge accounting - evaluate and control strategic communication processes ..... 56

**ASSYLBEK NURGABDESHOV, KADISHA NURGALIEVA, KOZHAKHMET SANAT,**

**DARKHAN SARSENOV**

The effect of human resource development on employee knowledge sharing behavior ..... 67

**ҒАЛАМДАНДЫРУ ЖӘНЕ ҚАЗАҚСТАН  
ГЛОБАЛИЗАЦИЯ И КАЗАХСТАН**

**I.V. ONYUSHEVA, R. DUGAR**

Problems of regional economic integration: the case of ASEAN ..... 83

**А. М. РАСУЛОВА**

Пути повышения конкурентоспособности отечественных предприятий в условиях импортзамещения ..... 93

**ZH. B. RAKHMETULINA, A. RAKHMETULINA**

Evaluation of impact of the mega-event on socio-economic development of the host region: case study the

7th winter Asian games ..... 104

**ЭКОНОМИКА УСТОЙЧИВОГО РАЗВИТИЯ  
ТҰРАҚТЫ ДАМУ ЭКОНОМИКАСЫ**

**HAIYAN XU**

What is the effective approach to Aral sea governance? Based on the philosophy of ecological protection ..... 117

**С. И. МИРГОРОДСКИЙ, М. У. РАХИМБЕРДИНОВА, О. К. ДЕНИСОВА**

Перспективы устойчивого развития предприятий нефтегазового сектора Республики Казахстан ..... 124

**А. У. ТЕКЕНОВ**

Қазақстан нарығындағы сүт өнімдеріне тұтынушылардың сұранысын маркетингтік зерттеу ..... 139

CONTENT

THEORY AND METHODOLOGY

**R. T. DULAMBAYEVA, A. A. BEXULTANOV**

Improvement of the method of evaluation of activities of state audit authorities of the Republic of Kazakhstan .....9

**MEREKE SAKYPBEK, ALIYA AKTYMBAYEVA, NAZIGUL SULEYMENOVA, AIGERIM SARKUZHAYEVA**

Theoretical preconditions of sustainable tourism development in Kazakhstan.....20

**GULZHANAT TAYAUOVA**

A study of current concepts, approaches and principles of knowledge management system.....29

FINANCE AND ANALYSIS

**BAYAN ERMEKBAEVA, ALUA MUSSABEKOVA**

Ways to improve the tax management system in the republic of Kazakhstan (the experience of Russia) .....37

**UZAN ISKAKOV, YANA YERALIYEVA**

Evaluation of indicators of the effectiveness of compulsory social insurance in the Republic of Kazakhstan.....46

BUSINESS AND CORPORATE MANAGEMENT

**RIMMA SAGIYEVA, AZIZA ZHUPAROVA, DINARA ZHAISANOVA**

Knowledge accounting - evaluate and control strategic communication processes .....56

**ASSYLBEK NURGABDESHOV, KADISHA NURGALIEVA, KOZHAKHMET SANAT, DARKHAN SARSENOV**

The effect of human resource development on employee knowledge sharing behavior .....67

GLOBALISATION AND KAZAKHSTAN

**I.V. ONYUSHEVA, R. DUGAR**

Problems of regional economic integration: the case of ASEAN .....83

**A. M. RASULOVA**

Ways of increasing the competitiveness of national enterprises in the conditions of import substitution .....93

**ZH. B. RAKHMETULINA, A. RAKHMETULINA**

Evaluation of impact of the mega-event on socio-economic development of the host region: case study the 7th winter Asian games .....104

THE ECONOMY OF SUSTAINABLE DEVELOPMENT

**HAIYAN XU**

What is the effective approach to Aral sea governance? Based on the philosophy of ecological protection .....117

**S. I. MIRGORODSKIY, M. U. RAKHIMBERDINOVA, O. K. DENISSOVA**

Prospects of sustainable development of oil and gas sector enterprises of the Republic of Kazakhstan .....124

**A.Y. TEKENOV**

Marketing research on the consumer on milk products in the market of Kazakhstan .....139

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**Rimma Sagiyeva,**

Doctor of Economy Sciences, Professor,  
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**KNOWLEDGE ACCOUNTING - EVALUATE AND CONTROL STRATEGIC  
COMMUNICATION PROCESSES**

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**Abstract**

*Purpose* – Companies and their executive boards are challenged to develop and communicate knowledge economy strategies. A consistent business strategy must not only - in the sense of an integrated corporate communication - be presented and practiced in a uniform manner externally and internally. It must also address and consistently develop the company's specific intangible assets, knowledge resources and unique selling points.

*Methodology* – The basis and starting point of this study was the study of the interaction of strategic management and corporate communication. An empirical study of existing literature on effective accounting of intellectual capital was carried out. Kazakhstan's pilot project on knowledge accounting in small and medium-sized enterprises is also described and the main results of the process of measuring the knowledge-based economy are illustrated.

*Originality/value* – The document shows the relationship between the strategy process and integrated corporate communications in terms of intangible assets. In addition, for the first time the management tool "Declaration of intellectual capital" is presented for accounting of intellectual capital in the enterprise.

*Findings* – It has to be said that the method of knowledge accounting in SMEs is still in the (advanced) stage of development. The successes in creating internal transparency for the targeted management of strategic change must be supported in the next step by operational concepts for the successful implementation of measures. Also, individual successes in external disclosure of intangible assets to reduce credit costs cannot yet be interpreted as broad acceptance by banks and investors. It requires closer coordination with the needs of the financial market. The experiences gained so far with the use of the method as well as the currently existing limits of the instrument intellectual capital balance and the resulting need for further development are presented.

*Keywords* – measuring intellectual capital, knowledge economy, efficiency of intellectual capital.

**Introduction**

A recurring question of communication management is: how do strategic management and corporate communication relate to each other, and how should the interaction ideally work?

Not only new consulting concepts, which bring together strategy consulting and communication consulting, but also current entrepreneurial challenges show the need to put this question again - and above all to develop suitable tools.

This has several reasons:

1. Increasing competitive pressure is forcing companies to sharpen their strategic positioning in the marketplace. Here, knowledge as a central production factor and the so-called soft factors become the decisive differentiating features.

2. Strategic unique selling points must be developed in a targeted manner and communicated to the outside in order to convince both customers and investors of the particular efficiency of their own company.

3. This strategic orientation must not be limited to superficial advertising slogans, but must be expressed in terms of an integrated corporate communication in all (perceptible) actions of the employees.

Knowledge accounting is one way to meet these challenges. The intellectual capital statement is an instrument for structurally bringing together strategic management and internal and external communication.

It has long been demanded by various parties to integrate strategic management better with corporate communications. The (rather academic) question in this discussion was whether corporate communication is merely a one-sided "proclamation" of corporate strategy to the outside and inside, or whether a two-way communication process is needed. So is corporate communication a subordinate process to the strategy, or does it feed the strategy process with relevant topics from inside the company and its environment, and in turn extracts decisions from the strategy process in order to prepare them for different target groups?

Beyond this communication-scientific discussion, it can first be stated: Strategy is communication. Even if only one person in the company (the "boss") explicitly deals with "strategy", that person needs information about opportunities and risks in the environment and about strengths and weaknesses within the company (SWOT analysis). Regardless of how systematically this is done, it must then make decisions based on this, at least in its own actions. If these actions are visible to internal and / or external audiences, communication may already be available or spoken. But increasing complexity and ambiguity inside and outside the system "organization" makes this process more difficult. [1].

Structured communication is necessary to reduce complexity so that meaningful and coordinated actions are possible, ultimately leading to the business success of a business.

The rapid development of markets and customer requirements, technologies and business models as a complexity in the corporate environment is a well-known fact. By contrast, the internal complexity of the "organization" system is not generally accepted in classical management concepts. Clearly structured organizational charts (organizational structure) and process models (process organization) suggest that everything runs smoothly and is "under control". However, considering the much cited "soft factors", such as Expertise, motivation, communication and cooperation or internal and external knowledge exchange, with one, becomes clear: reciprocal

Dependencies between these factors and their complex interrelationships with performance processes and business successes in no way allow a clear functioning of the organization to be assumed. If, in the context of strategic corporate development, one asks which of these intangible factors are of particular strategic importance and in which one should best invest in order to achieve the greatest possible success, the entrepreneur faces an almost unsolvable challenge, which has hitherto only been achieved through the famous "gut feeling" could be lifted.

Taking into account that the so-called intangible assets are increasingly being used by investors and lenders to determine enterprise value and investment risk, the need to systematize such networks and entrepreneurial decisions based thereon becomes apparent [2-4].

To summarize: Soft factors must be made as "hard facts" as possible in order to feed them into strategic management.

As already indicated, the solution is: communication. Subjective perceptions of individual intangible factors and their impact on the business result must be transformed into collective thought patterns and made verifiable by means of indicators. According to the old controlling wisdom, "only what can be measured can be managed", within the organization, a common understanding of the specific functioning of one's own organization and the nature of the relevant intangible factors has to be created in order to achieve coordinated actions to achieve strategic goals enable. And on the other hand, to communicate a coherent picture of the organization and its strategy to the outside world [5-6].

The decisive factor is - as with all communication measures of a company - which goal is pursued. If you want to impress only external stakeholders in the short term, you could probably leave this process to individual communication specialists. However, if the messages developed here are to be expressed in the day-to-day actions of employees, and if the development measures referred to deliver the desired results in the long term, it is essential for a sustainable strategy and credible communication that both the top management and the workforce are in an appropriate position To involve form in this communication process.

### **Methods and Research**

The goal of a consistent and credible external representation is thus directly related to the strategic orientation of the behavior within the company.

This is one of the essential aspects of integrated corporate communication [7]. However, a corresponding attitude and behavioral change of the employees can only be achieved through the already mentioned collective awareness raising. In other words [8], it is necessary to establish a common understanding of the relationships in the company in order to develop the intangible success factors in a targeted manner. Because these factors include the knowledge and skills of the employees as well as the type of cooperation and necessary communication structures.

How can this "big picture" be established and anchored in the mind? And how can concrete measures be deduced from this?

A participatory approach serves two purposes: The management gains insights into the employees' view of their own organization in order to obtain valid knowledge about the strengths and weaknesses of intellectual capital, which otherwise remains hidden. On the other hand, employees gain insights into higher-level objectives and jointly construct a coherent picture of the complex relationships between the organization's intangible resources. Only in this way can targeted, strategic changes be sustainably implemented [9-10].

In this respect, the intellectual capital statement is to be understood as an instrument that integrates the strategy process and internal and external communication management. It serves both as a structured basis for decision-making for management and transparency about intangible value drivers for employees and external stakeholders such as owners, investors or banks. As part of the intangible resources, the daily internal and external communication processes are examined with regard to their strengths and weaknesses as well as their relevance for future business success (see section 4).

The following section outlines the approach to knowledge accounting in small and medium-sized enterprises (SMEs), which was developed and tested as part of the pilot project «Business incubator». Funded by the National Agency of Technological Development, over 50 SMEs are already creating their own intellectual capital statements on this basis. Under the scientific leadership the working group Knowledge Balance accompanies the pilot companies

### **Results**

#### *Intellectual Capital Model*

The basis of knowledge-based accounting is a structural model that sees the organization as a social system in which business processes take place, the results of which have a specific effect on the organizational environment (see Figure 1):

The starting point is the vision and strategy of the organization with regard to the opportunities and risks in the business environment. The organization derives a series of measures on how to position itself according to its intellectual capital. By capturing the interactions between the individual types of intellectual capital (knowledge processes), it becomes clear what significance the individual intangible factors have for the organization, which are particularly good and which are rather weak. Their interaction with the business processes together with the other resources leads to business success (or failure). From this result, the organization derives consequences for the future, which can lead to a change of vision and strategies. The knowledge gained about the knowledge processes and the relevant resources facilitates the derivation of measures in a new cycle and thus the sustainable orientation of the organization to the specified strategy [11].

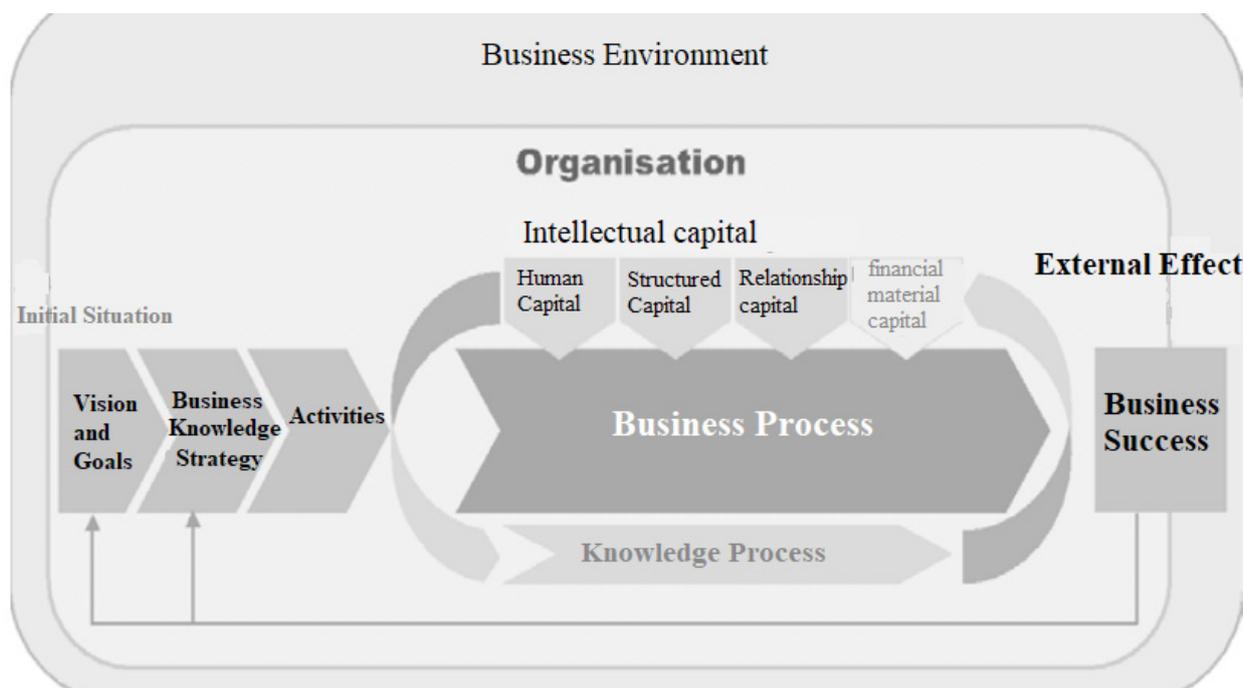


Figure 1 – Intellectual Capital Model of the Knowledge Base Working Group [11]

Intellectual capital represents all relevant intangible resources of an organization and is divided into three types:

- Human capital (HC) characterizes the competences, skills, motivation and learning abilities of employees.
- Structured Capital (SC) encompasses all the structures, processes and processes that employees need to be productive and innovative in their entirety, i.e. all the intelligent structures that persist when employees leave the company.
- The relationship capital (RC) represents the external relations with customers and suppliers as well as with other partners and the public.

*Knowledge accounting as a structured communication process*

As an integrated strategy and communication process, the knowledge balance project in the respective company must first be prepared conscientiously in order to ensure the desired quality of the results. There are some principles to be followed, which are presented in the following section [12].

1 Project preparation

The framework and starting point for the entire knowledge balance project are the project objectives. These are determined in initial discussions with the overall supervisor. In medium-sized organizations, these are usually the CEO and the first management level. In order to define the project goals, different methods can be used. Workshop methods have proven to be useful in which the most important decision-makers jointly discuss benefits, opportunities and risks as well as expenses and weigh them up against each other. The result is a prioritized list of project objectives that answer the following questions for knowledge accounting [13]:

- Is the entire organization in focus or just parts?
- Is the knowledge balance aimed at improving internal management or external communication of intellectual capital?
- What are the target groups: management, employees, the knowledge balance team, banks, customers, owners, the public or others?
- What benefits are expected in detail?
- Is a complete intellectual capital statement prepared or should only individual modules be developed?
- Are the required resources available?

- Who is responsible for the project management?

The knowledge balance team, representative of the entire organization, carries out much of the work. The team must therefore reflect the different views on the organization. Representatives of all parts of the company and hierarchy levels have to be integrated. Both senior management and operational staff should be represented on the intellectual capital statement team to balance strategic view and operational business [14].

The representatives from the different functional areas of the organization bring the subject-specific perspectives from sales, production, marketing, controlling and research and development. Their task is to show the special requirements, opportunities and risks of their area. They have the opportunity to openly address difficulties in cooperation and to discuss with representatives from other areas.

This can help to foster understanding of one's own view and situation in others and to build an understanding of the problem contexts. All participants have to represent a whole group of employees and perspectives. It is their task to bring in as many well-known arguments as possible without reservations. According to her deputy role, this also applies to arguments that she personally does not represent, but they are aware of. This places not insignificant requirements on the social competence and communication ability of the individual team members. The following basic principles support the workshop:

- For the time of the workshops, the hierarchical authority to issue instructions is suspended.
- All unfounded statements are not considered and discussed further.
- All participants seek a consensus based on the argumentation.

In principle, it is important that it is comprehensible to all employees at all times who is involved in the knowledge accounting and what is discussed and worked out in the individual workshops. The project manager therefore has the function of informing the other employees, in which e.g. the intermediate results and protocols are visible to everyone. What is important is that it becomes transparent to all employees how the team composition has come about. This promotes the acceptance of the results among those who are not involved and is therefore an important component in the implementation of knowledge-based measures [15-16].

A suitably trained moderator has the task to strive for the equal distribution of the speech parts and to adhere to the principles of the workshop work. If an external consultant takes on this function, the greatest possible neutrality and unconditional control of the group process can be guaranteed.

## 2. The eight steps of knowledge accounting

The actual creation of the intellectual capital statement takes place in eight steps, which subdivide the project into clearly defined work units. This ensures that meaningful intermediate results are achieved and that the process can be interrupted after each step, without endangering the overall result or causing duplication. This tool can also automate the most important evaluations and the final document "Intellectual Capital Report" can be generated.

### Step 1: Describe Business Model

In order to set the framework for all subsequent steps, the following questions about the initial situation of the company must be answered:

- Accounting area. Which parts of your organization do we want to look at with the knowledge balance?
- Business environment. What opportunities and risks influence our business? What current developments in the business environment (new competitors, new technologies, new laws, ...) are there? What opportunities are seen to improve the market? What are the risks in the business environment that can negatively impact the business? What does the market look like for prospective and prospective employees?
- Vision. How do we want to position ourselves in the long term? Which overall goals are we pursuing?
- Strategy. What has made us strong in the past? Which medium-term goals are we striving for to achieve the vision? What are new products or business areas that are to be expanded or expanded in the future? What knowledge do we specifically need to be able to provide our services and implement the business strategy? What of our knowledge is unique and absolutely necessary to succeed in the market? How should it be developed in terms of customers and competitiveness? The most important reference points for the analysis of intangible factors remain

Defining business processes as well as the desired business results:

– Business Success (GE). What business results do we need to secure in the medium term to achieve our vision and fulfill our strategy? How is the success of our company measured?

– Business Processes (GP). Which central service processes are used to create our business results? What are the key products or product groups (services) that make the money? What are the main processes necessary to create and market the products and services?

#### Step 2: Define Intellectual Capital

In the second step, the company-specific intangible resources are defined and defined as precisely as influencing factors as precisely as possible and delimited against each other. As part of the first workshop, each team member submits suggestions on moderation cards, which are then combined into clusters, creating a maximum of 5-6 influencing factors per type of capital. After evaluation of the first 14 pilot companies, the following typical influencing factors for the three types of capital result [8]:

– Human capital. Employee qualification, employee experience, social competence, employee motivation, leadership skills.

– Structural capital. Corporate culture, cooperation and communication within the organization, management process, information technology and explicit knowledge, knowledge transfer and quality assurance, product innovation, process and process innovation customer relations, supplier relations, public relations, relations with investors, investors and owners, relations with partners.

#### Step 3: Valuation of Intellectual Capital

In the so-called QQS assessment, the knowledge balance team discusses the current manifestation of all influencing factors of intellectual capital according to the three evaluation dimensions: quantity, quality and systematics. It tries to reach a consensus on the status quo, which is documented with justifications from the discussion. Importantly, the frame of reference is always clear, i.e. the nature of the respective influencing factor must refer to the strategic framework established in step 1.

The self-assessment in the workshop begins by asking the following questions for each influencing factor:

– Quantity / Quantity: How much do we have from it?  
– Quality: What is the quality of what we have?  
– Systematics: How systematically do we deal with the influencing factor in order to maintain it and develop it in a targeted manner?

The benchmark is a percentage scale of 0-120%, divided into five rating levels:

- 0% = the quantity / quality / classification is not sufficient.
- 30% = ... partially sufficient.
- 60% = ... mostly / mostly sufficient.
- 90% = ... completely sufficient.
- 120% = ... better or more than necessary.

The 120 percent rating enables factors with rationalization potential to be identified, ie areas that are more pronounced than operationally and strategically required. They may have been caused by changes in the direction of the organization or by the fact that they have received a lot of attention in the past.

The result of this step is a strength-weakness profile of the most important intangible value drivers of the organization.

#### Step 4: Measuring Intellectual Capital

In order to put the self-assessment from step 3 on a sounder footing, indicators should be defined for the most important influencing factors. Thus, the valuation of intellectual capital can be made quantitatively verifiable, which increases the significance of an intellectual capital account, especially for external communication to investors and banks.

An indicator is composed of a key figure that is always calculated in the same way and an interpretation framework that determines the significance of the key figure in relation to the matter to be measured. Ideally, the knowledge-based team will find at least one indicator for each of the three assessment dimensions of the QQS assessment.

The following questions help with the collection of indicators:

Which indicators are suitable for describing the individual influencing factors and evaluation criteria? Which indicators do we already use that can be used? How do we define the indicators and what is the exact measurement procedure for calculating the values? How are the indicators collected and from which data source do they come from? How should the indicators be interpreted in their respective meaning context (when is a value "good", when "bad")? What values do the indicators have? Are there already time series?

Step 5: Capturing effects

In order to grasp the complex interactions of intangible resources in the business processes in a structured way, the so-called impact analysis can be carried out in the next step [9]. In this case, the effect of one influencing factor on all other influencing factors is recorded in a matrix. In the workshop, the knowledge balance team agrees on the strength of each individual connection in 4 stages:

0 = no effect, 1 = weak effect (less than proportional influence), 2 = mean effect (proportional influence), 3 = strong effect (disproportionate influence)

Step 6: Evaluation and Interpretation of Results The analysis of intellectual capital from steps 3 to 5 can now be evaluated in different diagrams and reports in order to interpret the analysis results.

The aim is to identify those influencing factors of intellectual capital that have the greatest potential for development. For this purpose, the QQS assessment from step 3 is combined with the influence analysis from step 5 in order to filter out influencing factors with the greatest potential for improvement (low QQS rating) and the greatest influence (many and powerful effects are derived from the influencing factor). From both aspects, the "development potential" of each influencing factor results.

Once the best levers have been identified for the development of intellectual capital, it is now possible to examine in detail how changes in the affected influencing factors will affect the overall system of the company. Through so-called networks of action, the relationships between the factors influencing intellectual capital in business processes and their influence on business success can be deduced. This also makes it possible to identify generators - self-reinforcing control circuits that can be expected to have particularly effective developments (see Figure 2).

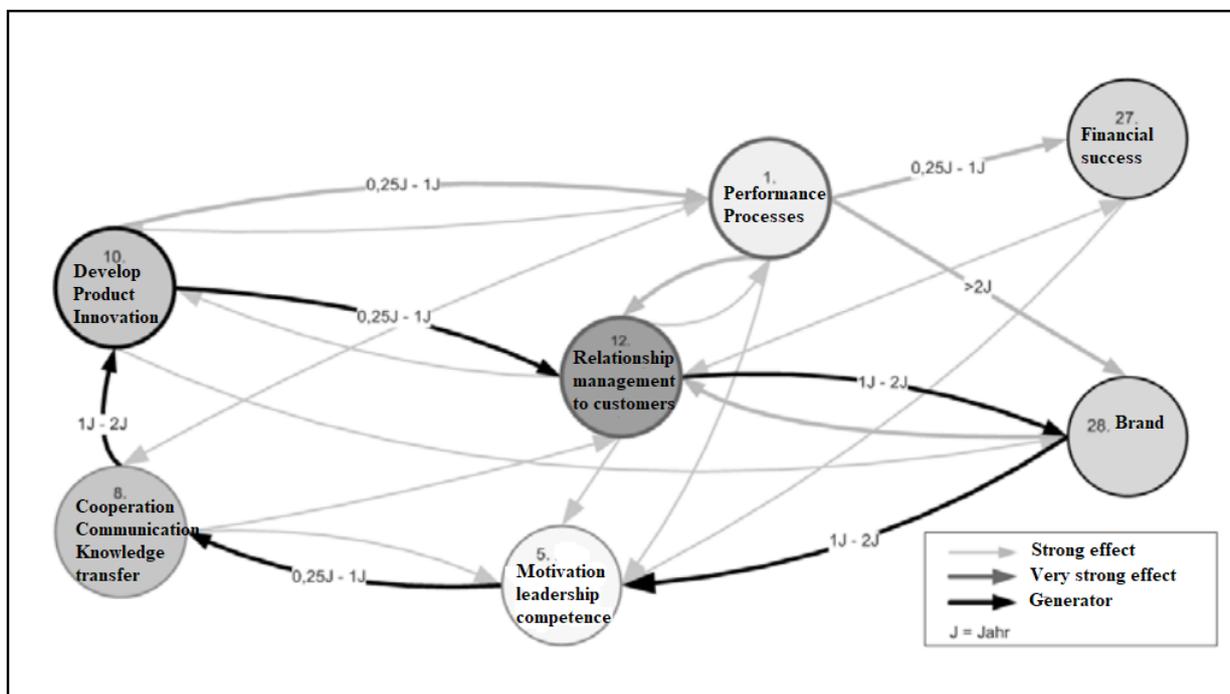


Figure 2 – Extract of a network of effects [6]

Step 7: Derive measures

The influencing factors with the greatest potential for development should now be used to plan and implement targeted measures for the strategic development of intellectual capital. Target values can be defined for the affected influencing factors and the indicators assigned to them in order to monitor the measure progress in the next balancing cycle by means of a target / actual comparison. Thus, the intellectual capital statement also helps as a controlling tool to validate the effectiveness of knowledge management measures and other development projects in the company.

**Step 8: Create Intellectual Capital Report**

In the final step, the actual intellectual capital statement is compiled as a document. It can consist of all the elements of the previously described steps, lists of the assessed influencing factors and indicators, different visualizations and diagrams, interpretations of the analysis results and the consequences and measures derived from them. Anecdotes can help to fill the quantitative assessments with life and make them vivid. The content that should be included ultimately depends on the audience and their expectations. It may be useful to create a more detailed version for internal communication, which above all highlights weaknesses and potential for development, and to create an external version for investors and / or customers, which contains above all measurable indicators and in a corresponding layout as a supplement of the classic annual report can be used.

*Evaluate and control communication processes with the knowledge balance*

From the point of view of corporate communication, one can understand the two types of capital, structural capital and relational capital, also as the results of previous communication processes, which in turn are used as resources ("assets") in future value creation.

Structural capital includes, among other things, how employees share important information and knowledge with one another, how decisions are made, and what information channels are used to make decisions. Thus, structural capital represents the internal communication processes in the company.

The relationship capital refers to the external communication processes. This refers to the management of external relationships and the way in which the company communicates with customers, suppliers, lenders, as well as with other partners and the public (see Figure 3).

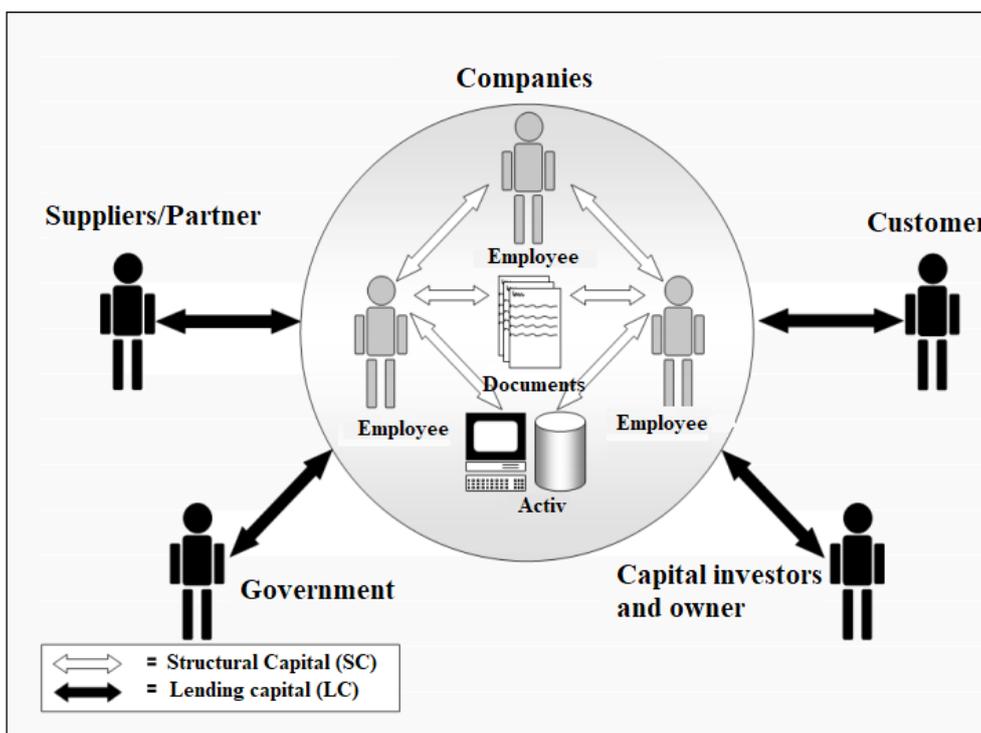


Figure 3 – Internal and external communication processes as the object of analysis of the intellectual capital report

In the QQS score (see steps 3), the status quo is detected, i.e. which results the daily running internal and external communication processes have brought. Here, a structured analysis is made of the intangible resources in which the company is well positioned quantitatively, qualitatively and systematically, and where there is potential for improvement.

Underpinned by verifiable key figures (step 4) and weighted according to power of influence (step 5), the strategically important communication processes in the context of the entire intellectual capital can be evaluated.

In addition, the entire knowledge-sharing process, in particular the workshops, should be understood as an internal communication process that promotes engagement with the critical factors that are critical to success and establishes a common understanding of the functioning of one's own organization. In particular, the strengths and weaknesses analysis in the QQS assessment promotes the involvement and involvement of workshop participants through structured reflection on their own knowledge, corporate structures, strategies and goals. Ideally, each workshop participant should bring the results of the workshop back into the different areas and get feedback, ensuring the widest possible inclusion and integration of the different (internal) target groups and viewpoints. Thus, the knowledge balance can be understood as an internal communication tool that supports the development and implementation of knowledge strategies to secure future business success.

### **Conclusions**

The previous pilot companies, which have created their own intellectual capital statement according to the procedure described here, consistently emphasize the effects that have been achieved through the structured communication and creation process. The participants of the knowledge balance teams benefited from the joint development of a coherent picture of the functioning of their own organization. The management thus received a valid basis for the strategic development of the most important intangible factors in the company. Almost more important was the further development and clarification of the corporate strategy, which can be further adapted to changes in the business environment and in intellectual capital with the help of the knowledge balance in the following fiscal years and accounting cycles.

At the same time, however, it has to be said that the method of knowledge accounting in SMEs is still in the (advanced) stage of development. The successes in creating internal transparency for the targeted management of strategic change must be supported in the next step by operational concepts for the successful implementation of measures. Also, individual successes in external disclosure of intangible assets to reduce credit costs cannot yet be interpreted as broad acceptance by banks and investors. It requires closer coordination with the needs of the financial market.

The external communication of intangible assets, which are not included in the annual financial statements or other traditional accounting reports, is becoming increasingly important. For example, financial market regulators and accounting authorities in Europe and North America have issued recommendations to report on a qualitative report on intangible assets and their development in addition to the financial statements.

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### Резюме

Основой и отправной точкой настоящего исследования выступило изучение взаимодействия стратегического управления и корпоративного общения. Проведено эмпирическое исследование существующей литературы по эффективному учету интеллектуального капитала. Также описан казахстанский пилотного проекта по учету знаний на малых и средних предприятиях и иллюстрируются основные результаты процесса измерения экономики, основанной на знаниях.

### Түйін

Зерттеудің негізі және бастамасы стратегиялық менеджменттің және корпоративтік қарым-қатынастың өзара әрекеттесуін зерттеу болды. Зияткерлік капиталды тиімді есепке алу бойынша қолданыстағы әдебиеттерді эмпирикалық зерттеу жүргізілді. Шағын және орта кәсіпорындардағы білімді есепке алу жөніндегі Қазақстанның пилоттық жобасы да сипатталған және білімге негізделген экономиканы өлшеу үдерісінің негізгі нәтижелері бейнеленген.

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