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InCaS:
Intellectual Capital Statement

Made in Europe

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As a result of constant changes caused by globalisation, emerging technologies and shorter product life-cycles, knowledge and innovation have already become the main competitive advantages of many companies. Especially European small and medium-sized enterprises (SME) are highly dependent on the ability to identify changes in their global economic environment quickly and respond to these changes with suitable solutions. Since the EU aims to become the most competitive and dynamic knowledge-based market in the world by 2010, this effect is even expected to multiply.

Market-oriented innovation, transparent structures as well as a strategic development of core competencies are therefore essential preconditions for sustainable growth and future competitiveness. Intellectual Capital (IC) forms the basis for high quality products and services as well as for organisational innovations. So far, conventional management instruments and balance sheets do not cover the systematic management of IC.

In view of this background, the project "Intellectual Capital Statement – Made in Europe" (InCaS) has been aiming to:

- *Strengthen the competitiveness and innovation potential of European organisations by systematically activating their Intellectual Capital*
- *Establish the Intellectual Capital Statement (ICS) as an important and valuable management tool in a knowledge driven economy*
- *Integrate and consolidate individual national approaches on Intellectual Capital Statements on a European level*

The InCaS consortium comprises 25 enterprises in five European countries, several experts and research institutions and six company business associations. In three phases, the partners have drafted the ICS methodology, implemented and evaluated the ICS together with the companies, and optimised and enhanced the methodology according to the needs of the users. All of these project experiences have led to this final European ICS Guideline.

This document targets ICS Moderators who lead the ICS process as external or internal consultants and responsible ICS project managers of small and medium sized enterprises, providing a common ground for the implementation of ICS in European companies.

Further information material on the InCaS method, the project, the benefits as well as electronic versions of checklists and extra modules referred to in this guideline may be found at: www.incas-europe.org.

This website offers useful information and tools, showing various ways to explore the world of Intellectual Capital Statements in Europe

1. INTRODUCTION

Developing an Intellectual Capital report offers great chances for small and medium sized enterprises which are the backbone of the European economy. As the efficient and successful implementation of an IC report is not an easy task, organisations should be able to revert to professional support. This InCaS methodology is a practical guide to a comprehensive and trustworthy report and is based on the individual experiences of 25 European organisations. This InCaS management tool has been elaborated with the strong support of the European Commission over the last three years and is now ready to support companies throughout the EU.

InCaS has a proven record of enabling businesses to realize internal as well as external benefits. Internally the organisations manage their intangibles to realize their innovation potential and become more efficient and competitive. In external communications, an ICS is of great support when planning to improve access to finance and investment and communicating the business model to partners. Although the InCaS methodology is already a comprehensive instrument, the InCaS consortium aims to adapt the instrument continuously to the needs of the market. The business coordinators CEA-PME as well as the developing team under the lead of the Fraunhofer IPK are responsible for the future development and the construction of a quality system.

1.1 What is an ICS – Made in Europe?

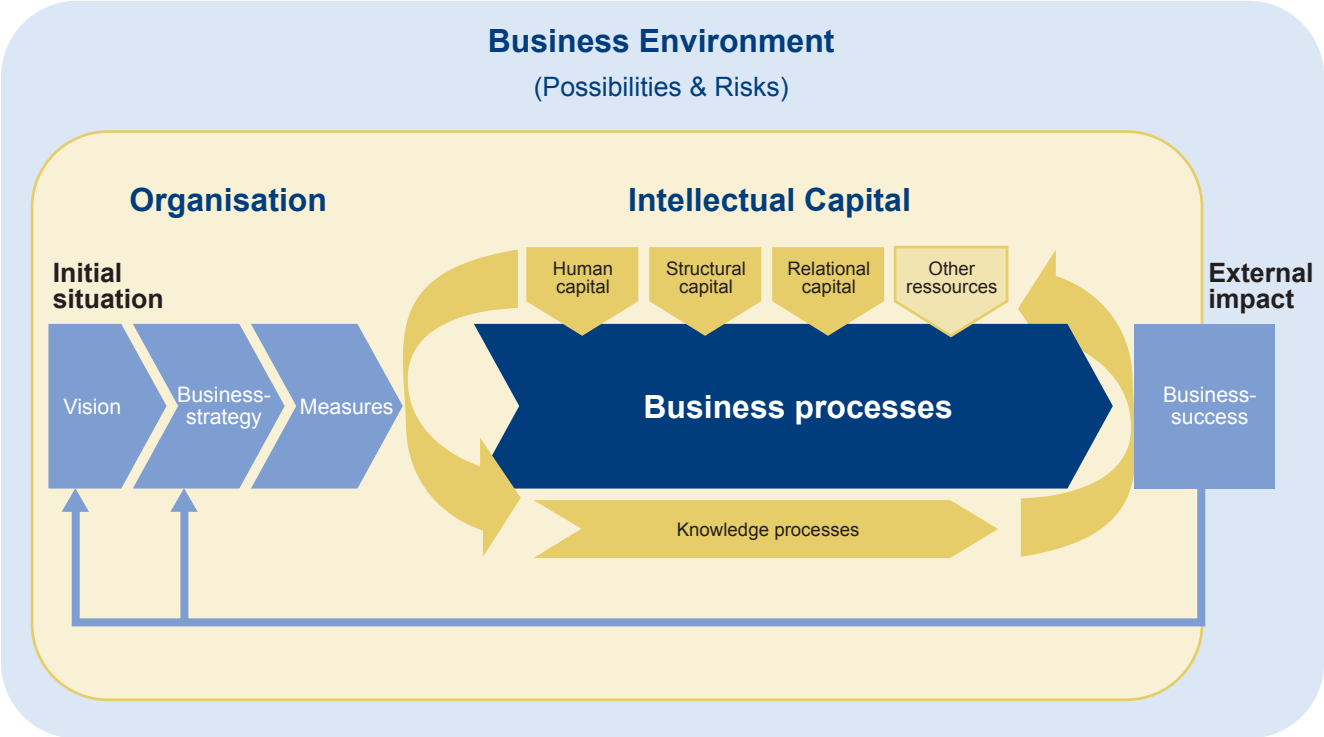
An Intellectual Capital Statement (hereafter referred to as ICS) is a strategic management instrument for assessing and developing the Intellectual Capital (IC) of an organisation. It shows how Intellectual Capital is linked to corporate goals, business processes and the business success of an organisation using indicators to measure these elements.

The structural model describes the main elements of the ICS as well as their interrelations:

- **Human Capital (HC)** is defined as "what the single employee brings into the value adding processes".
- **Structural Capital (SC)** is defined as "what happens between people, how people are connected within the company, and what remains when the employee leaves the company"
- **Relational Capital (RC)** is defined as "the relations of the company to external stakeholders".

Business Processes (BP) are chains of activities within an organisation and their network-like contexts. They provide the output of the organisation which is useful to the customers. BP describe the interaction of people, operating resources,

Figure 1: ICS Structural Model



The organisation is embedded in the **business environment**. Regularly, a vision of the founders and owners serves as general guiding principle for major decisions and strategic positioning. Depending on the **business strategy**, managerial decisions lead to operational measures. These measures serve to improve business processes and the utilisation of Intellectual Capital in those processes.

Intellectual Capital (IC) is divided into three categories: Human Capital (HC), Structural Capital (SC), and Relational Capital (RC). It describes the intangible resources of an organisation.

knowledge and information in cohesive steps. In doing so, they cover a multitude of functions. The value creating business processes or core processes are supported by all others.

Business Success (BS) is the operating result, which is achieved through the employment of corporate (intangible) resources in the business processes. Business success comprises tangible (e.g. growth, revenue) and intangible (e.g. image, customer loyalty) business results.

1.2 Why Intellectual Capital Statements (ICS)?

To obtain competitive advantage in Europe, it is crucial for small and medium sized enterprises to utilise knowledge efficiently and to enhance their innovation potential. Furthermore, reporting these intangible assets systematically to customers, partners and investors, as well as creditors has become a critical success factor. Managing their specific "Intellectual Capital" (IC) is therefore becoming increasingly important for future-oriented organisations. Conventional balance sheets and controlling instruments are not sufficient any more, because intangible assets are not considered so far. The Intellectual Capital Statement (ICS) is the instrument for assessing, reporting and developing the Intellectual Capital of an organisation.

Drawing up an Intellectual Capital Statement in a company ...

- helps you determine strengths and weaknesses of strategic IC factors (diagnosis)
- prioritises improvement opportunities with the highest impact (decision support)
- supports the implementation of actions for organisational development (optimisation and innovation)
- enhances transparency and the involvement of employees (internal communication)
- diminishes strategic risks and controls the success of actions (monitoring)
- facilitates the communication of corporate value towards stakeholders (reporting)

and facilitated by involving key people in the company, raising awareness for intangible resources and their influence on the company's business model, as well as building a common understanding of specific weaknesses and the need for improvement. Third, the ICS allows changes to be monitored continuously over time in order to measure the success of certain action items and to control risks of critical resources.

In particular, the InCaS methodology solves a dilemma of former ICS approaches. For internal management purposes, it is important to use an individualised approach, i.e. to define the specific elements of strategy and IC according to the specific business model of the company. For external reporting purposes, on the other hand, standardised approaches are needed allowing external stakeholders, such as customers, investors and other partners to compare the IC Statements of different companies. The latter will result in minor value for management purposes where detailed information on individual strengths and weaknesses is needed. Using highly individualised ICS approaches, on the contrary, will make it very difficult for external readers to assess the quality of an ICS and to compare one company with the other.

This conceptual conflict of "individualisation vs. standardisation" is solved by the InCaS approach in two steps: The standardised procedure described in this guideline leads to a basic comparability of different ICS documents, while the specific content remains individual. Minimum quality requirements (cf. ICS Extra Module 7) define a common structure and must-have elements allowing an external auditor to certify the completeness, plausibility and representative nature of

> *Beyers uses the ICS as a ‚controlling system' for continuous improvement in the company. ICS visualises which fields should be improved and where actions and measures must be introduced. The ICS also reveals problems within processes, suggests areas for improvements and monitors the implementation of measures/actions as well as their impact on the identified fields.*
> Wolfgang Beyers, CEO, Helmut Beyers GmbH, Germany

In general, the ICS helps owners and managers of organisations to facilitate the process of strategy development and strategy implementation. An ICS assesses the internal capabilities, i.e. a firm's intangible resources, from the point of view of external strategic objectives, e.g. growth, market position, customer satisfaction etc. Using the participative workshop approach of InCaS will help to solve some of the typical problems of strategy development and implementation. First, the core assets that need strategic development can be systematically identified by building on a consistent view of a representative team in the company. This way, the right action items for improving certain areas can be prioritised and linked to overall strategic objectives. Second, a change process is triggered

the ICS. This ICS Audit ensures the reliability of a company's ICS for external readers (especially banks and investors).

A set of standard IC factors could be derived in a second step by examining existent individual ICS content (cf. ICS Checklist 2.3). As the empirical evaluation shows, approx. 80–90 % of individual IC factors may be harmonised on an aggregated level. Using these standard IC factors as a starting point, the ICS content, e.g. the assessment of individual IC factors becomes comparable as well. Thus, an IC Benchmarking becomes possible, while individual definitions of standard factors and additional specific factors still allow the right amount of individualisation for each company. With the help

of this IC Benchmarking concept, companies can compare their own strengths and weaknesses in IC with other companies or a group of companies (e.g. within their industrial sector)and also make it possible to find suitable benchmarking partners for exchanging experiences and learning from best practice cases in a specific area of IC management.

1.3 How to implement an ICS?

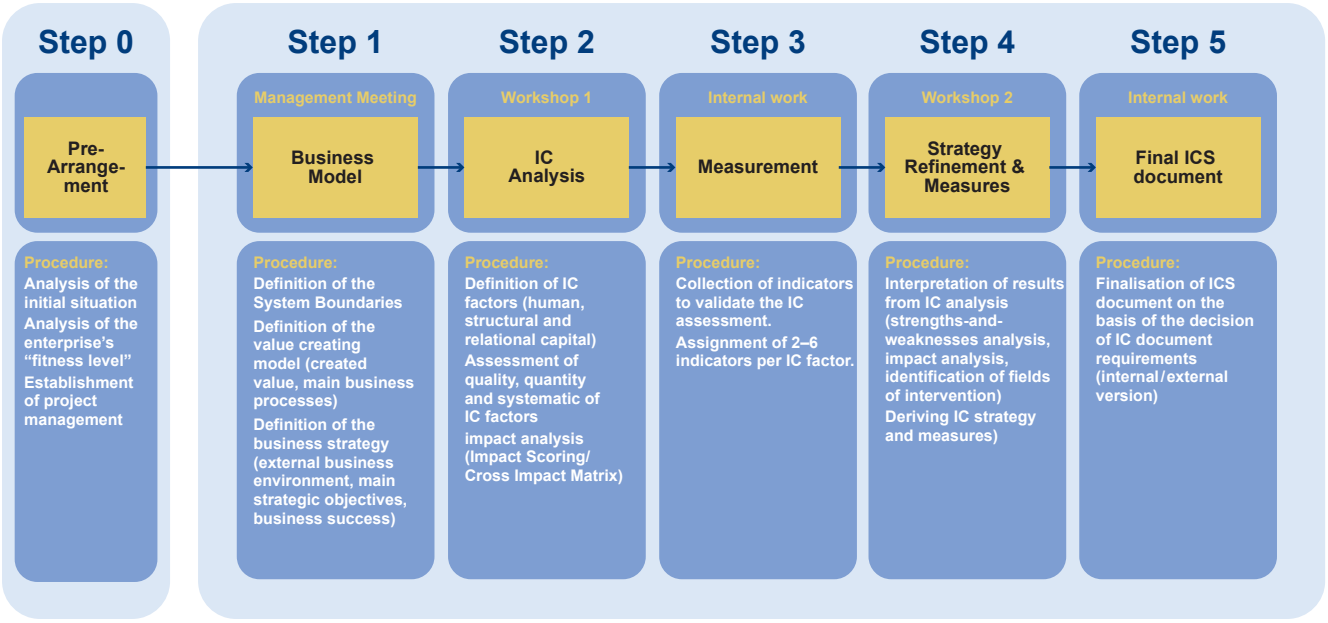
The approach of conducting an ICS is divided into five steps with each step building on the prior one. The ICS implementation is a workshop-based procedure involving a selected number of employees from the implementing organisation. The members of the ICS project team are selected across units and hierarchies in order to ensure a comprehensive reflection of the company's Intellectual Capital. The people involved in the ICS project team therefore range from representatives of the top management to staff from the operational level (for information on how to set up the ICS project team, see 2.3). InCaS experiences have proved that having an external person to moderate the ICS workshops is of vital importance for a successful ICS implementation. The impartial position of an ICS Moderator during ICS workshop discussions provides a main benefit for the company's internal communication in general. It is an important basis for creating mutual understanding between strategic thinking of the management and the operational view of other ICS project team members.

Steps 1, 2 and 4 of the ICS procedure are therefore directly supported by ICS Moderators (see Fig. 2). They moderate the management meeting and guide the ICS project team through the ICS workshops. Steps 3 and 5 are prepared internally without the direct participation of an ICS Moderator onsite. Support can be provided off-site.

> *Some project teams might need more external support than others, but one thing is sure. The help of an external moderator is essential to reach a successful, high quality ICS.*
>
> Daria Kulczycka, Krzysztof Czaplicki, ICS Trainers, Poland

At the same time, the support of an ICS Moderator ensures an ICS implementation respecting the basic ICS quality requirements, as he will have been trained according to the standard European ICS approach described in this document. For more information on training for ICS Moderators please contact the national InCaS agency (see www.incas-europe.org). Advanced training for ICS Auditors is offered by the Fraunhofer Technology Academy.

Figure 2: ICS Procedural Model



1.4 Support material

As this guideline aims to offer practical guidance for an ICS implementation, supporting material has been developed to simplify the ICS implementation and guide the ICS project team through the ICS procedure.

The ICS was designed as a scalable approach leaving the user to decide the extent to which the company's IC is to be analysed. Usually, a decision will be taken at the management meeting (Step 1) of representatives from the top management. The closer the look at the company's IC and its linkages with strategic objectives, the more questions will be raised and discussed during the ICS workshops.

The supporting material offers basic information as well as advanced material for different levels of detail in the ICS implementation process. While the basic supplementary material is provided to support a standard ICS implementation (checklists/working sheets, ICS Toolbox), the ICS Extra Modules address advanced users who already have experience of implementing Intellectual Capital Statements and/or want to go deeper into the ICS methodology. The support material mentioned on the following pages can be downloaded from the InCaS website www.incas-europe.org. Additionally, the website offers further information material about InCaS and Intellectual Capital Statements, e.g. examples of ICS documents from the InCaS pilot companies, company case studies etc.

The following diagram provides a short overview on the ICS working material directly related to the basic and advanced ICS procedure:

Figure 3: Overview of ICS support material

ICS Support Material

	Checklists/ Working sheets (Basic)	ICS Toolbox (Basic)	Extra Modules (Advanced)
Step 0: **Pre-Arrangement**	0.1 Fitness Check 0.2 Project Planning	ICS Toolbox Sheet "Participants List"	M6 Follow-up ICS
Step 1: **Business Model**	1.1 Business Model		M1 Enhanced Business Model M2 Vision M3 Business Processes M4 External Environment M6 Follow-up ICS
Step 2: **IC Analysis**	2.1 Workshop 1 Procedure 2.2 Exploring Intellectual Capital 2.3 Common IC Factors 2.4 QQS Assessment	ICS Toolbox Sheet "Definitions" ICS Toolbox Sheet "QQS Assessment" ICS Toolbox Sheet "Impact Scoring (Simple)" ICS Toolbox Sheet "Cross Impact Matrix (Full)"	M6 Follow-up ICS
Step 3: **Measurement**	3.1 Common IC Indicators	ICS Toolbox Sheet "Indicators"	M6 Follow-up ICS
Step 4: **Strategy Refinement & Measures**	4.1 Workshop 2 Procedure	ICS Toolbox Sheet "QQS Overview" ICS Toolbox Sheet "QQS-Bar-Charts" ICS Toolbox Sheet "QQS Period Overview" ICS Toolbox Sheet "QQS Period Chart" ICS Toolbox Sheet "Weighting (Summary Simple)" ICS Toolbox Sheet "Influence (Summary Full)" ICS Toolbox Sheet "Weighting (Factors Simple)" ICS Toolbox Sheet "Influence (Factors Full)" ICS Toolbox Sheet "IC Management Portfolio (Simple)" ICS Toolbox Sheet "IC Management Portfolio (Full)"	M1 Enhanced Business Model M4 External Environment M5 Learning Cycle M6 Follow-up ICS
Step 5: **Final ICS Document**	5.1 ICS Template		M6 Follow-up ICS M7 ICS Quality Requirements

The following support material is provided to ensure that the basic quality requirements are respected. In the description of each ICS step, icons indicate when the respective support material should be used.

Checklists and working sheets

The checklists and working sheets supplement the single ICS steps. They are designed to support the basic ICS procedure and facilitate the tasks which have to be carried out in order to reach basic expected results.

ICS Toolbox

An MS Excel-based software tool provides further support for the ICS Moderator capturing the relevant data and producing analysis results in diagrams. The ICS Toolbox mainly supports the ICS steps 2 to 4, dealing with the analysis and interpretation of the results.

For advanced users, the guideline suggests when the application of an Extra Module adds up to the basic ICS procedure.

Extra modules

To understand the potential benefit of implementing any of the 7 extra modules, it is important to know what their purpose is and in what circumstances they might be applied.

Except for Module M7, ICS Quality Requirements, the ICS additional modules represent an attempt to overcome the knowledge gaps and management weaknesses commonly observed in average organisations when implementing an ICS. The gaps refer to the business model concept or some of its elements such as the vision, the key business processes and the assessment of the external environment. Modules M1 to M4 each address these issues. On the other hand, Module M5, the learning cycle, intends to guide organisations to question their business model and to learn from its success and failure. Module M6, the Follow-up ICS, holds a similar view but is specifically addressed to those organisations already familiar with the ICS.

The contribution of the extra modules is apparent.

- **M1 – Enhanced Business Model** introduces the organisation to a different logic by emphasizing such issues as the consistency, robustness and sustainability of the business model.
- **M2 – Vision** helps the organisation to better connect its vision with the strategic objectives and future actions. The vision is the window to the company's future but is well-anchored with its identity at the same time.
- **M3 – Business Processes** facilitates the identification of those key business processes that have embedded the key IC factors of the organisation, by assessing their links with the strategic objectives and their contribution to business success.
- **M4 – External Environment** improves the competitive intelligence of the organisation and the efficiency of the allocation of resources. The result of this analysis is a valuable input when assessing the business model for external consistency.
- **M5 – Learning Cycle** is not a new or different stage from the ones already addressed in the ICS "standard" implementation. It emphasises the importance of generating the scope and space for strategic reflection as a necessary condition for creating competitive advantages and fostering systematic innovation.
- **M6 – Follow-up ICS** describes further requirements when repeatedly implementing an ICS . Due to his better knowledge of the ICS procedure of the implementing company's ICS procedure, the ICS Moderator has several possibilities for adjusting the ICS implementation.
- **M7 – ICS Quality Requirements** points out the requirements to be met during the single ICS steps if an enterprise wants to go through an ICS Audit after the ICS implementation. Please note that in this case Module 7 must be applied in each ICS step.

Box 1 Potential benefits

A business that does not create value in a systematic way is not sustainable. Facing such a challenge entails that the business model the organisation has shaped is not only unique but also robust and adaptive at the same time. Whereas uniqueness is about creating distinctiveness, to be robust and adaptive a business model needs to be built around the organisation's core competencies and to be flexible enough to quickly respond to external influences. It assumes the organisation has adopted a knowledge-based approach to managing its business and is able to sense, anticipate and respond rapidly and effectively to customers' needs. To keep momentum an organisation needs to systematically assess its core competencies against other elements of the business model to ensure fitness and to be able to identify and capitalise on market opportunities. In this respect, the systematic dimension accounts for a big stake of a company's sustainability.

Hence, advancing in the understanding of the business model concept and how the organisation creates value holds tremendous promise for driving organisations to new levels of competitive fitness and higher levels of innovation.

When better applied
Extra activities always require more time and effort of the persons directly involved and higher commitment of the organisation's resources.

The organisation's top management will decide on its implementation. For this reason, the top management needs to be duly informed by the ICS Moderator about possible advantages and additional resources that the extra modules might require, AND it must be willing to go through with this exercise. At the beginning of each module, a "Checklist for appropriateness" is provided to help the moderator to decide about the opportunity and major advantages of its implementation – it is not a prescriptive tool.

The table below gives some tips for making such a trade-off (For the value-added of implementing the extra modules, see "Potential benefits" in the previous page)

Linkages to ICS standard implementation
As can be seen, the subjects addressed in modules M1 to M4 were already included in ICS Step 1, Business Model.

The Additional Modules M1 – M4 are not a substitute for ICS Step 1 but an opportunity to take a deeper and systemic look into many of the concepts addressed there – e.g. business model, vision, business processes, etc. Their very aim is to introduce the organisation to a new systematic, increasingly more reflective and systemic view.

Modules	Estimated resources* (in training hours)	Better if implemented** (either/or)
M1 – Enhanced business model	4-6	Step 1 /Step 4
M2 – Vision	3-4	Step 1 /Step 4
M3 – Business processes	2-3	Step 1
M4 – External environment	4-6	Step 1 /Step 4
M5 – Learning cycle	n/a	Always
M6 – Follow-Up ICS	n/a	ICS Reapplication
M7 – ICS Quality Requirements	n/a	When ICS Audit is planned

* More detailed information on this issue can be found in the respective modules.
** When to implement the modules and whether to implement them at all involves several considerations. Even for those companies that have gone through the ICS process just once, it will be advisable to introduce some of the extra modules, particularly M1, M4 and M5. Also, as stated in ICS Step 0 - Analysis of the "fitness level" of the organisation, this decision is contingent on the particular moment (e.g. strategic plan) the organisation is going through and the characteristics of the industry/business environment (e.g. structural changes, degree of turbulence/conflict). In any case, deciding the "readiness" issue depends mostly on the organisation's learning capabilities and absorptive capacity, as well as and above all on its true level of commitment to the success of the implementation – the latter refers to both the quantity and the quality of the resources that the organisation allocates to the project.

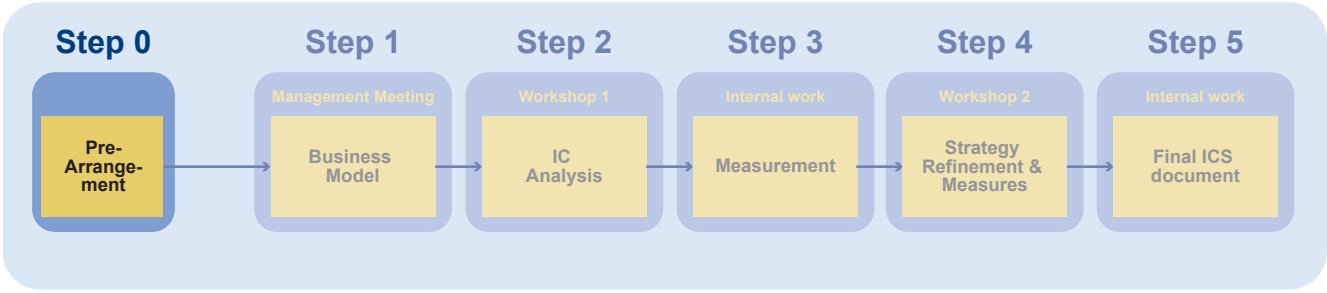
2. A GUIDE THROUGH THE ICS

IMPLEMENTATION PROCESS

The following guide to the implementation process of an ICS describes each ICS step separately according to the same structure. At the beginning, the introduction outlines the main issues of the particular step. Afterwards the actual approach is described, indicating when and how to use the support material. The key issues of each task are summed up within a text box ("at a glance"). These boxes contain short descriptions of the main focus, the intended results as well as the support material provided for the respective task.

The aim of this document is to describe a common ground for a practicable method to introduce and implement ICS in European companies, especially in small and medium sized enterprises (SME). Apart from the practical information on single ICS steps, several text boxes aim to provide more theoretical background information on some specialised topics going beyond the basic questions of the ICS implementation process. For readers interested in further information on the current state-of-the-art in the field of Intellectual Capital management and reporting, the corresponding InCaS document "D1 Overview on international ICS approaches and European SME requirements" provides additional background information.

ICS Step 0: Pre-Arrangement



1. Introduction

Some fundamental principles must be followed when drafting the ICS in order to ensure that the project runs smoothly. Especially for first-time adoption of ICS, it is important that the ICS project manager (person responsible for the ICS in the enterprise) and the ICS Moderator deal with these principles in detail. They coordinate and moderate the entire ICS implementation process. Hence, the overall approach needs to be understood (in reasonable detail) and the ICS project manager should be able to introduce the ICS project team and other people involved in the project to its method and aims.
In order to start the process and gather basic information, the following prerequisites have to be met:

- Analysis of the initial situation
- Analysis of the enterprise's "fitness" level for ICS
- Establishment of project management

2. Approach

2.1 Analysis of the initial situation

In order to ensure that the management meeting is effective and productive, some information on the enterprise should be collected before the first meeting. Information on the background, history and if available specific cultural issues of the company are relevant. Ask the organisation for additional information on strategy, market development, market trends, etc.

"Analysis of the initial situation" at a glance

Main question:
What kind of organisation are we looking at? Where is it located? And in which markets does it operate?

Intended findings:
A brief overview on the respective enterprise.

How to get the intended findings:
The information required should be provided by the respective enterprise, additionally this could be supported by internet research.

Almost all organisations have some documents regarding the strategy, developments and trends of the markets, and even – though sometimes indirectly – possibilities and risks. These documents must be collected during the first visit and studied prior to the first workshop.

2.2 Analysis of the enterprise's "fitness" level

The implementing enterprises differ in size, maturity level and life-cycle stage. In the course of the project, these criteria have been aggregated under the term "fitness" level.

An organisation's "fitness" level affects the entire ICS process, because it influences the determination whether basic or advanced implementation procedures should be applied. There may be circumstances in the life of an organisation that will work against a successful ICS implementation, such as serious financial or strategic crises, internal conflicts, etc. – or characteristics relative to the leadership style, culture or governance system – autocratic, strongly corporative, poor transparency of its operations, etc. –. The presence of more than one of these elements will put the whole ICS process at risk, thus making its implementation inadvisable, or will at least require a very experienced ICS Moderator to cope with a difficult environment.

An organisation that is in the early stages of its life-cycle or unfamiliar with business management concepts and tools might not be "strategically ready" for the ICS. This circumstance, however, does not preclude ICS implementation, it simply demands more training hours and possibly additional workshops to catch up with Step 1.

The maturity level and life-cycle stage of the organisation must be analysed in connection with the analysis of the initial situation.

Depending on the current life-cycle stage, the strategy/strategic objectives under way or severe disruptions in the external environment and such criteria as the management techniques in use, level of reflection on IC related topics etc., the ICS Moderator and the company's top management must decide on the level of detail of the ICS implementation process. Guiding principle should be the absorptive or learning capacity of the company.

The **ICS Checklist 0.1: Fitness Check** can be used as a quick scan to analyse the fitness level for ICS.

Box 2 Maturity level and life-cycle stage

A review of recent literature on the corporate life cycle disclosed five common stages: Birth, Growth, Maturity, Revival and Decline. Theorists predicted that each stage would manifest integral complementarities among variables of Environment ("situation"). The Strategy, Structure and Decision Making Methods; that organisational growth and increasing environmental complexity would cause each stage to exhibit certain significant differences from all other stages along these four classes of variables; and that organisations tend to move in a more or less linear progression through the five stages, proceeding sequentially from birth to decline [Miller; Friesen, 1984]. Exceptions to this cycle are common.

A different perspective, arising from the evolutionary theory, suggests that the pace, pattern and scope of change during the life of an organisation do not follow the life-cycle stages pattern but result from internal/external interaction [Phelps et al, 2007; Aldrich, 1999]. From this view, the guiding criteria should be the particular strategic process the company goes through, its strategic objectives and necessary resources, the degree of turbulence of its immediate external context, etc. irrespective of the life-cycle stage.

"Analysis of the 'fitness' level" at a glance

Main questions:
*The questions are provided in the **ICS Checklist 0.1: Fitness Check.***

Intended findings:
The "Fitness Check" should provide insights on the corporate life-cycle stage and such criteria as management techniques in use and level of reflection on IC related topics

How to get the intended findings:
*The **ICS Checklist 0.1: Fitness Check** should be sent to the organisations prior to the management meeting and should be filled out by the respective organisation and sent back to the ICS moderator for evaluation.*

2.3 Establishment of project management

The formation and reasonable composition of the ICS project team plays a substantial part in the project. The members of the ICS project team should be chosen from across all relevant divisions and hierarchy levels of the company. The view of the organisation as perceived by the team members will be reflected later in the ICS document and should therefore be representative. The ICS project team should comprise managers as well as operative employees. This will ensure that the discussion is down-to-earth and not only reflects the top management team's self-perception. Depending on the size of the organisation, the work should be done in one or more teams. It is important for these teams to regularly exchange information on the status of their work. Furthermore, sufficient time should be allocated to merge the results and develop a shared view, since considerable potential for discussion will arise.

The involvement of at least one representative from the top management in the team has proved to contribute to the success of the project. However, the ICS project manager himself does not necessarily have to come from top management. Coordinating a heterogeneous team spanning the different hierarchy levels is not an easy task. Allow sufficient time to find appointments and to coordinate employees and implementation steps. Professional project management makes a significant contribution to the success of the project.

Persons involved in the ICS project in brief:

- **ICS Moderator**
  The ICS Moderator supports the ICS project manager and accompanies the implementation process. The ICS Moderator guides and leads the workshop discussions and documents the results in the ICS Toolbox.

- **ICS project manager**
  The organisation's project manager is a person from the implementing company responsible for the ICS project internally. He is responsible for organising the ICS implementation: setting up the organisation's project team, fixing dates and communicating results to other employees and the company's management. The responsible person is in contact with the ICS Moderator and assists the latter in preparing the ICS workshops. The company's project manager should therefore basically also be acquainted with the ICS method.

> *The participative side of the methodology is the reverse of the traditional top/down management. This greatly helped to gain easy acceptance. Results confirmed the previously identified trends, but also made it possible to identify and highlight some unknown new facts.*
>
> Marie-Elise Lucida-Jamin, Managing Director and CEO, CORTEL-Group BGME, France

“Establishment of project management” at a glance

Main questions:
Who is participating in the ICS project team? What needs to be considered when setting up the project team?

Intended findings:
The persons involved in the project team should be set up prior to the initial visit. It should be ensured that the responsible people (top management and project manager) are familiar with the topic: What is done? And when is it going to be done? What are the responsibilities of each project team member?

How to get the intended findings:
*The working sheet **ICS Checklist 0.2: Project Planning** should be sent to the respective organisations prior to the management meeting.*

- **Topmanagement representative**
  Person from the enterprise’s top management representing its overall strategic view. This person backs and promotes the ICS project during its implementation. At the same time, he/she must communicate and support the implementation of ICS results within the company afterwards. Therefore, the role is crucial to ensure sustainability of the ICS.

- **ICS project team**
  Heterogeneous team of 5 to 10 members from all units and hierarchies of the company. Usually, representatives from the most important units – operational and strategic – are asked to join the ICS project team in order to ensure a representative picture of the enterprise.

“The better the top management is informed about the method, the greater is their motivation to finally implement the ICS”

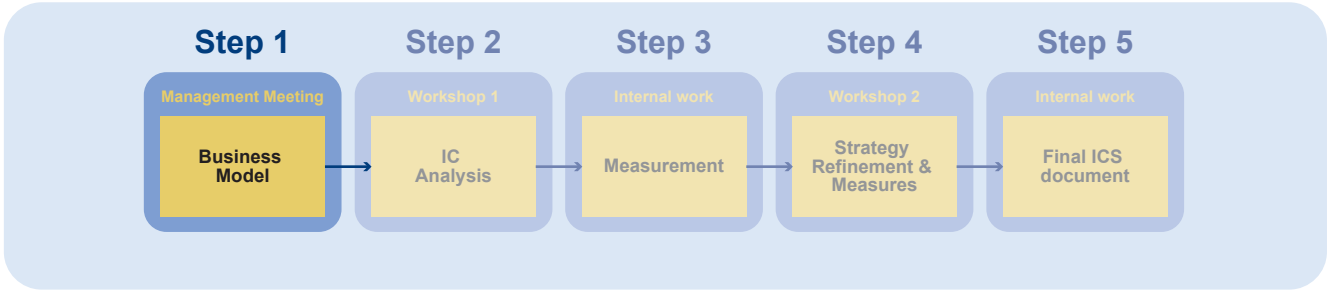
Petja Pižmoht, Bojan Žiger, ICS Trainers, Slovenia

To facilitate this project management task the **ICS Checklist 0.2: Project Planning** can be used.

Based on the completed working sheet and checklist, the details will be discussed at the management meeting (Step 1) preceding the ICS implementation process

When conducting a follow-up ICS: **Module 6: Follow-up ICS** addresses how pre-arrangement activities might be adjusted.

ICS Step 1: Business Model



1. Introduction

After successfully setting up the project, it is important to have established the project management structure and gathered information about the initial situation and the company's fitness level. Documents concerning the company's strategy, relevant market trends, products/services and business processes should also be compiled (if available).

At the initial visit – the Management Meeting (Step 1) – some basic issues concerning the ICS project will be addressed. The moderator should meet the company's management team, i.e. at least one member of top management (e.g. CEO) and the company's project manager responsible for coordinating the ICS process for a 2-3 hour meeting. In this meeting, the company's management should be given an overview of the ICS project and the workshops (Step 2 and 4). Furthermore it is necessary to conduct an interview on the company's background and the business model. Optionally, you could conduct interviews with other key people of the company, e.g. HR manager, R&D manager, other staff, in order to get a deeper insight into the working practices and IC management or knowledge management practices.

By default, the ICS will be developed for the whole organisation. Since it may have to be adapted in some specific cases, the **system boundaries** for the ICS must be defined by the management team. Afterwards, the company's business model should be described. The business model should include the **value ceating model** that shows what and how value is generated. The company's rough **business strategy** should also be roughly defined.

The background, history and specific cultural issues of the company should be analysed during the initial visit by interviewing the management staff (and other staff) of the company, in order to understand the company's situation and needs on a more detailed level. This is particularly important in order to develop any further strategies, especially the IC strategy, which should be in line with the business strategy. Discussion of the current situation and future orientation of the organisation forms the basis for all further steps.

The moderator should use the documents provided by the company to prepare the initial visit. A reference for support material is provided at the end of each of the following sections.

The main result of Step 1 is the completed working sheet **ICS Checklist 1.1 Business Model** which is the basis for evaluating the company's IC in the next steps.

In order to conclude this step, please answer the questions outlined in **ICS Checklist 1.1 Business Model**, section "Defining the system boundaries"

2.2 Defining the value creating model

To define a company's value creating model two questions have to be answered:

- What does the company actually sell (created value)

and

- How is this value produced (main business processes)?

2.2.1 Created value

The created value is what the company actually offers to its customers. This can be a product, a service or a combination of both.

"Defining the system boundaries" at a glance

Main question:
Does the management want to develop an ICS for the whole company or for a part of it, like a department/division?

Intended findings:
Accurately defined and recorded system boundaries for the ICS project.

How to get the intended findings:

- *Definition of the system boundaries just depends on a decision by the management. Major problems concerning this task therefore should not occur.*
- *For support see working sheet **ICS Checklist 1.1 Business Model.***

2. Approach

2.1 Defining the system boundaries

An ICS can be developed for the whole company, a department, a business process or any other part of the organisation. Especially for first-time adoption of an ICS, it is important to consider which part of the organisation will be analysed. For several reasons - availability of employees, risk considerations, etc. – it may make sense to start with a prototype and then transfer the newly acquired knowledge into a second phase. Due to the fact that the participating companies are small and medium-sized the ICS will be developed for the whole company in the majority of cases. The system boundaries should be set and defined as clearly as possible. Whatever decision is taken, it should be carefully documented and clearly stated in order to avoid any misunderstandings.

The following questions help to describe the value creating model of the company, i.e. the value the company intends to provide to its customers and how this value is produced. The value creating model is the kernel for any strategic considerations.

- What product or service does the business offer?
- How can customers benefit from this product or service?
- Which market segments / groups of customers are targeted?
- To whom will the proposition be appealing?
- From whom will resources be received?
- How are the products or services created?
- How are they going to be delivered to the customers?
- How will the customer pay for the product or service?
- What is the price/margin for the product or service offered to the customer?

2.2.2 Main business processes

After identifying the value generated it is necessary to figure out how this value is generated. This can be done by identifying the value creating business processes. These are the different steps by which the product/service/value is produced and provided to the customer. They are the central, most important processes of an organisation. All other processes gather around them and need to be specifically defined for each individual company.

The questions of **ICS Checklist 1.1 Business Model, section "Defining the value creating model"** can help to identify the intended findings of this step.

For advanced help see **ICS Module 3: Business Processes**. It supports the definition and identification of a company's business processes. Sometimes there is no shared definition of the main value-adding business processes or existing business process models (e.g. as laid down in Quality Management manuals) may not represent a shared understanding within the company. In these cases, this module can help to develop a minimum consensus on the value adding business processes as an important requirement for subsequent ICS steps.

Box 3 The "systemic" nature of the business model

A business model is a conceptualisation of how an organisation creates value for its customers and other stakeholders. This value creation process includes various processes or an ecology of them combining competencies and other resources through business processes in the way determined by its strategy and strategic objectives, and in accordance with its vision. The degree of *novelty and uniqueness* of this configuration as well as its *overall consistency and adaptive capacity* – both internal and external – are a source of competitive advantage. In particular, the dynamic *synergies* that the firm creates between its business processes and its knowledge base represent an opportunity for new ventures and appropriability.

To create competitive advantages, however, the organisation should manage this "systemic" aspect of business models; in other words, it should go through an exercise of decoupling and coupling its components. Decoupling is necessary to identify and understand the nature of the IC or knowledge components, while coupling is necessary to understand the functionality of the system – i.e. the relationships between its components. From an IC perspective, the business model could also be acknowledged as a *roadmap for building competencies and capabilities.* As stated by Johannesen et al (2005), "It is only when the knowledge base is integrated to transform input into output for the purpose of increasing values that the company's capability of execution is increased." (Note: For a more detailed discussion of the business model and its value creation potential see Module M1, Enhanced Business Model)

INCAS EXPERIENCE

Regardless of the initial difficulties encountered by the organisations to envision and then describe their business models, they were able to recognise the different components (IC elements, key business processes, etc.) affecting its configuration – this goes for coupling abilities.

However, it was not until the organisations went through the cause-effect analysis (cf. Step 2: impact analysis) between business processes, business success factors and IC elements that they were able to see the whole picture and alter either the interrelationships or the components or both. The cause-effect analysis in particular focuses on the systemic nature of the business model enabling the project team to detect possible inconsistencies.

This was the case with the Engineering Business Unit of SIDASA when confronted with the almost total absence of synergies between the company's different business units , one of the EBU's strategic objectives for the period. A similar reaction was experienced by the project team of AIDO when they discovered that the company was pouring resources into business processes that, as defined, were totally unrelated to the business success factors. This lack of connectivity within the business model, and particularly between the business processes and the success factors, meant that achievement of the company's strategic objectives were seriously at risk. Fortunately, these inconsistencies were already solved during the workshop in ICS Step 4. [Note: For other examples see also the quotations on "cause-effect analysis" at the end of ICS Step 4, Refinement Strategy & Measures.]

"Defining the value creating model" at a glance

Main questions:

- *What kind of products/services/value for existing or potential customers does the company offer?*
- *Through which business processes is the company generating these products/services/value?*

Intended findings:

ICS moderator and SME management develop a shared understanding of which business processes are vital in order to deliver the intended value to the customers.

How to get the intended findings:

- *For support see working sheet **ICS Checklist 1.1 Business Model and ICS Module 3: Business Processes***

2.3 Defining business strategy

The aim of defining the main strategic objectives is to develop an awareness of the company's broad strategic direction. These strategic objectives should be the background for analysing IC factors (Step 2: IC Analysis). Furthermore they serve as a starting point for later strategy refinement (Step 4: Strategy Refinement and Measures).

In some cases the business strategy is already made explicit. Then the project team can use internal business documents about the company's vision, strategic objectives, etc. If such documents are not available, the following remarks may help to identify the main strategic objectives.

2.3.1 External business environment

In order to develop strategic objectives, the business environment has to be examined. Keeping in mind the value creating model defined above, major possibilities and risks in the business environment should be explored and their influence on the company's business activities considered. Common features of the external environment include, for instance, buyer/supplier bargaining power, threat of substitutes, political, social and economic factors.

> *Considering the level of business model and strategy definition, there were major differences between companies. Particularly in the first implementation cycle: some companies were mainly focused on short term business effects and therefore did not put their strategy on paper. Particularly for these companies, the holistic view of the business model, strategy and link with Intellectual Capital was helpful and provided them with the basic information they needed to go through the ICS procedure.*
>
> Petja Pižmoht, Bojan Žiger, ICS Trainers, Slovenia

Box 4 Elements of external business environment

The external business environment exerts a remarkable influence on the activity of the organisation. In order to simplify analysis of the business environment, it can be divided into the micro-environment and the macro-environment (Porter, 1979). The micro-environment encompasses the driving factors in the company's closer environment, the marketplace in which the company acts. The main micro-environmental forces consequently originate from competitors, customers, suppliers and other stakeholders affecting the company's ability to make a profit. A change in any of these forces normally requires a company to re-assess the marketplace.

Analysis of macro-environmental forces helps to understand the "big picture" of the environment in which a business operates, allowing it to take advantage of the opportunities and minimize the threats faced by its business activities. The main factors considered are usually political, economical, socio-cultural, technological, environmental and legal forces (usually referred to as STEEP or PESTEL analysis). To gain or maintain a sustainable competitive advantage for a company, it must be vigilant, watching for changes in the business environment. Ideally the business environment should be scanned continuously or at least on a regular basis. It must also be agile enough to alter its strategies and plans when the need arises.

ICS has come to FD at a particularly good moment because we were elaborating our strategic plan 2008-2010 which we planned to finish by July 31st. Thus, we were forced to accelerate the definition process and from that draft emerged these reflections. (This process) has helped us to reflect more deeply about our strategy, which product lines to strengthen… Not only has it helped us to make a deeper reflection, but has also provided us with a tool to help us see where to go and which roads to take. But what I value most is to have realised how little time we are dedicating to strategy issues and how much time we are dedicating to operational issues in comparison.
José Ignacio Ustarán, General Manager, Formación Digital, Spain

The main questions to be discussed in order to get the intended findings of this step are summarised in **ICS Checklist 1.1 Business Model, section "Defining business strategy"**

ICS Module 4: External Environment serves the need to strengthen the external view in the ICS process. Since developing strategic objectives strongly depends on the company's position in relation to its competitors' position, the competitive environment may deserve to be checked more in detail.

2.3.2 Main strategic objectives

As a starting point, some basic strategic objectives have to be determined by the company. The term "strategic objectives" refers to an organisation's articulated aims or responses to address major change or improvement, competitiveness or social issues and business advantages. Strategic objectives are generally focused both externally and internally and relate to significant customer, market, product, service, or technological opportunities and challenges identified in the business environment scanning. Broadly stated, they are what an organisation must achieve to remain or become competitive and ensure the organisation's long-term sustainability. Strategic objectives set an organisation's longer-term directions and guide resource allocations and redistributions.

Based on the strategic objectives, the corporate strategy and IC strategy will be derived in step 4.

The main questions to be discussed in order to get the intended findings of this step are summarised in **ICS Checklist 1.1 Business Model,** section "Defining business strategy"

ICS Module 2: Vision helps to figure out where the company is heading in the long term. It is a valuable complement to the business model, as the latter describes what the company is doing now, but does not answer the question what the company aims to achieve in the future. As the vision is intentionally quite general, it serves as a basis for delineating strategic objectives with a more short or medium-term scope.

“Defining business strategy“ at a glance

Main questions:

- *Which possibilities and risks in the external environment could have an impact on business?*
- *Based upon the scanning of the external environment and the value creating model, what are the main strategic objectives?*
- *What are the main business success factors for the developed strategic objectives?*

Intended findings:

The main strategic objectives and the main business success factors have to be defined in order to give a broad strategic direction for future considerations.

How to get the intended findings:

- *For support see working sheet **ICS Checklist 1.1 Business Model***
- *For advanced support see Extra modules 1,2, 4 and 6.*

2.3.3 Defining business success

In order to operationalise the strategic objectives, the company’s management should define the desired business results the company wants to achieve.

Business success comprises tangible (e.g. growth, revenue) and intangible (e.g. image, customer loyalty) business results. Typical examples are:

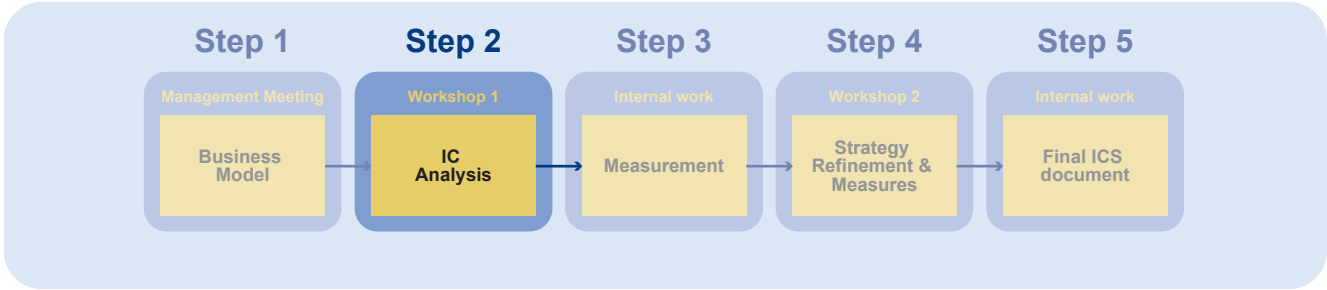
- **BS1** profitability (specifically defined for each individual organisation)
- **BS2** growth (specifically defined for each individual organisation)
- **BS3** image / customer loyalty (specifically defined for each individual organisation)

Step 1 offers various opportunities for integrating extra modules. Some extra modules have already been introduced on the previous pages to support the discussion of specific questions at a more detailed and elaborated level.

ICS Module 1: Enhanced Business Model supports the understanding of the company’s value creating model and its strategy. Sometimes companies are not aware of how they really produce and deliver value. This module can help to clarify this issue.

ICS Module 6: Follow-up ICS supports companies which are conducting a follow-up ICS and informs about how step 1 could be adjusted.

ICS Step 2: IC Analysis



1. Introduction

In the first workshop, the Intellectual Capital will be examined and analysed in detail. The responsibilities of the ICS Moderator for the second step are:

- Guiding the creation process
- Mediating focused discussion
- Stimulating discussion with alternative perspectives
- Facilitating and documenting team consensus
- Summarising and compiling the results
- Documenting the results in the ICS Toolbox

The findings compiled in the workshop provide the basis for the final ICS document as well as further analysis and conclusions for the systematic management of IC (cf. ICS Steps 3 & 4). Detailed documentation of the workshop results in the respective ICS Toolbox sheets is therefore crucial. When and how to use the ICS Toolbox in step 2 is explained on the following pages. Before the workshop starts, the duties/roles should be defined in order to secure optimal facilitation and documentation. In the case of a solo-moderation, the documentation task must be assigned to one of the workshop participants.

General Workshop Rules:

- Each member represents a specific organisational unit (e.g. department, function, etc.) and speaks on its behalf.
- Stick to the facts!
- Each opinion has the same weight, i.e. the opinion of the CEO has the same weight as that of the employee on the assembly line.

For more information on organising and conducting the ICS Workshop “IC Analysis”, please see **ICS Checklist 2.1. Workshop 1 Procedure.**

2. Approach

The IC analysis is broken down into three major parts:

- **IC definition**
- **QQS Assessment**
- **Impact analysis**

2.1 IC definition

In addition to the business model identified in step 1, there are a large number of further (intangible) influencing factors which affect the efficiency and effectiveness of performance and the success of the organisation on the market. They are part of the organisation’s Intellectual Capital (See Chapter 1.2, ICS Structural Model).

As extensive research has shown, the following definitions thoroughly grasp the concept of Intellectual Capital:

- **Intellectual Capital (IC)** is divided into three categories: Human Capital (HC), Structural Capital (SC), and Relational Capital (RC). It describes the intangible resources of an organisation.
  - **Human Capital (HC)** is defined as “what the single employee brings into the value adding processes”.
  - **Structural Capital (SC)** is defined as “what happens between people, how people are connected within the company, and what remains when the employee leaves the company”
  - **Relational Capital (RC)** is defined as “the relations of the company to external stakeholders”.

To speed-up and simplify the process of defining the individual IC factors it is proposed to use the list of common IC factors as a starting point (cf. **ICS Checklist 2.3: Common IC Factors**).

The factors’ name and definition should be adjusted to the company’s specific needs (cf. **ICS Checklist 2.2: Exploring IC**).

Figure 4: Example of an IC definition list (screenshot from ICS Toolbox)

Definitions

The information entered in column E will be transferred automatically to the subsequent working sheets!

IC type	ID	IC Factor (english)	Definition (english)
Human Capital	HC-1	Professional competence	The expertise gained within the organisation or in the employee’s career: professional training, higher education, training courses and seminars, as well as practical work experiences gained on-the-job.
	HC-2	Social competence	The ability to get on well with people, communicate and discuss in a constructive manner, nurturing trust-enhancing behaviour in order to enable a comfortable co-operation. Furthermore the learning ability, the self-conscious handling of critique and risks as well as the creativity and flexibility of individual employees are embraced in the term ‘social competence’
	HC-3	Employee motivation	The motivation to play a part within the organisation, to take on responsibility, committed to the fulfilment of tasks and the willingness for an open knowledge exchange. Typical sub areas are for example satisfaction with the labour situation, identification with the organisation, sense and participation of achievement.
	HC-4	Leadership ability	The ability to administrate and motivate people. Develop and communicate strategies and visions and their empathic implementation. Negotiation skills, assertiveness, consequence and credibility as well as the ability to create a scope of self dependant development belong to this IC factor.
Structural Capital	SC-1	Corporate culture	The business culture comprises all values and norms, influencing joint interaction, knowledge transfer and the working manner. Compliance to rules, good manners, "Do's and Don'ts" and the handling of failures are important aspects in the process.
	SC-2	Internal Co-operation and Knowledge Transfer	The manner how employees, organisational units and different hierarchy levels exchange information and co-operate together (e.g. conjoint projects). The focused knowledge transfer among employees. Furthermore the focused knowledge transfer between generations is noticeable.
	SC-3	Management Instruments	Tools and instruments supporting the efforts of the leadership and therefore have an impact on the way how decisions are made and what information paths are incorporated in the decision-making process.

"IC definition" at a glance

Main question:
Which intangible resources (IC factors) drive your strategic objectives
- *from the Human Capital perspective?*
- *from the Structural Capital perspective?*
- *from the Relational Capital perspective?*

Intended findings:
Identification and customised definition of important intangible resources in the following categories:
- *Human Capital*
- *Structural Capital*
- *Relational Capital*

The more individualised, the better

How to get the intended findings:
A list of common IC factors is provided ***(ICS Checklist 2.3: Common IC Factors)***

These factors are discussed and adjusted to the SME's specific needs. Further factors can be identified in a brainstorming session ***(ICS Checklist 2.2: Exploring IC)***

The final set of IC factors is agreed on by the ICS project team and taken down in the ***ICS Toolbox sheet "Definition"***

As only one hour is assigned for the task "IC definition" (see ICS Checklist 2.1: Workshop 1 Procedure), it is recommended that a list of predefined IC factors be generated together with the ICS project manager and top management representative prior to the first ICS workshop (Step 0: Management meeting). In the first on-site workshop, it is important to discuss this set of predefined IC factors with the ICS project team to finalise and agree on a set of company-specific IC factors.

Take down the IC factors and their definition to the ICS Toolbox sheet "Definition".

In addition, the number of factors per category (HC/SC/RC) should be limited to 3 – 5, in order to keep the following tasks feasible in reasonable time.

2.2 QQS Assessment

In order to identify the strengths and weaknesses of the IC factors, they must be assessed by the project team in a structured discussion. The IC factors are evaluated by self-assessment, i.e. each factor is evaluated with regard to its current existing quantity, quality and systematic management by the ICS project team.

For some IC factors, e.g. "Corporate Culture" or "Motivation", it is not possible to distinguish between quality and quantity, as these factors are characterised mainly by qualitative features. In these cases, quality and quantity cannot be evaluated separately and may therefore be merged into a single evaluation dimension.

Quantity question:
- Is the quantity / volume of this IC factor (replace appropriately) sufficient for achieving our strategic objectives? Do we have enough of this IC factor (replace appropriately) to achieve our goals?

Quality question:
- Is the quality of this IC factor (replace appropriately) sufficient for achieving our strategic objectives? Do we have the right factor and is the quality of this factor good enough in order to achieve our goals?

Systematic Management question:
- How systematically are we already developing this IC factor? Are there defined, regular measures and routines to care for and improve this factor?

"QQS was finally valued as a good instrument. In fact the QQS questions were very much valued. As one of the team members said: we were very satisfied with our employees' education level until we asked ourselves whether it was relevant to our strategy.".

Daria Kulczycka, Krzysztof Czaplicki, ICS Trainers, Poland

The QQS Checklist **(ICS Checklist 2.4: QQS Assessment)** provides a list of questions to support this task. The list is rather general and should give a rough idea of what questions to ask. It is wise to adjust the questions to the specific IC factor.

Document the adjusted questions in the **ICS Toolbox sheet "QQS Assessment"**

It is also generally possible to reduce the number of evaluation dimensions from 3 to 2, merging the dimensions quality and quantity for the evaluation of all IC factors. This is advisable when going through the ICS implementation process for the first time in order to speed up the assessment process.

Whether to conduct the QQS Assessment on the basis of two or three evaluation dimensions should be decided in accordance with the result of the fitness check for ICS **(ICS Checklist 0.1: Fitness Check)** and the moderator's professional judgment.

Quantity/Quality question:

- Are both the quantity and quality of the IC factor sufficient for achieving our strategic objectives? Do we have enough of this IC factor and is the quality good enough to achieve the goals?

Systematic Management question:

- How systematically are we already developing this IC factor? Are there defined, regular measures and routines to care for and improve this factor?

Choose the number of dimensions to be evaluated (2 or 3) in the **ICS Toolbox sheet "QQS Assessment".**

The French market of education and training has gone through significant changes in recent years. BDL had to adjust to the new environment and rethink its strategy. InCaS was very instrumental in getting a clear view of strengths, weaknesses, risks and opportunities for the company. This lead to a main decision: focus and develop the HR consulting activities of the company. BDL wants to help valuating and maximising the human capital of its customers. In this framework BDL will become an active promoter of InCaS.

Corad LEMAIRE, Managing Director, Business and Development Learning Institute, France

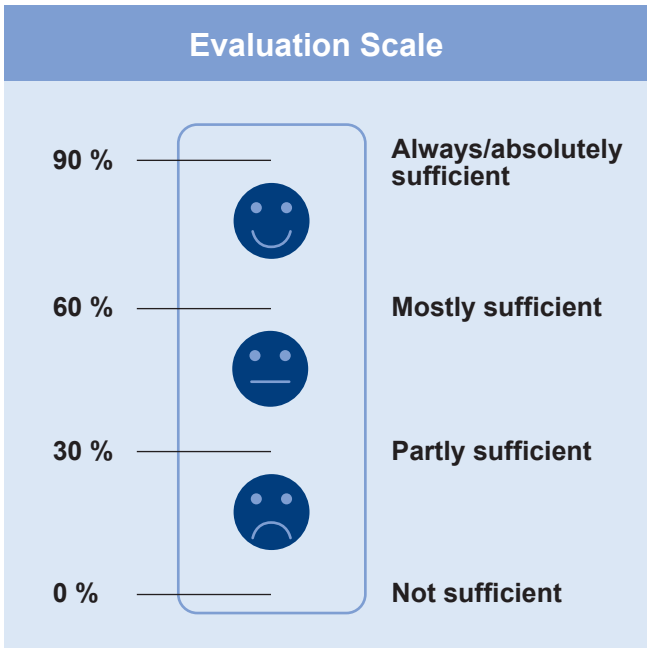
Box 5 The "systematic" dimension: Discovery and further implications

Systematic is a twofold concept, entailing both the existence of a *method* and *regularity* in its application. From a management perspective, this has profound implications as it goes to the heart of innovation, especially of *incremental innovation*. If we assume, first, that a large share of the innovations produced annually are incremental and that, second, the capacity of an organisation to innovate systematically is at the core of its competitive potential, knowing where and how to look for improvement, and doing so regularly, might definitely improve the organisation's absorptive capacity and learning capabilities, and through them, its performance and value creation capacity. (Note: For the relationships between systematic and learning see also Module M5, Learning Cycle)

INCAS EXPERIENCE

The "systematic" dimension of the QQS Assessment was a big surprise for most of the SMEs. Though familiar with the term, few organisations could see its impact on the quality and quantity of their IC and even fewer were able to derive further implications from its absence. However, the fact should be highlighted that the Improvement Action Plan of the ICS reports of June 2007 and 2008 contained measures that, though with a different degree of strategic flavour, were aimed at increasing the value of the "systematic" dimension, thus helping to instil this "value" into the business culture. The ICS Follow-up (Module 6) has set the way to advance in this direction. (For examples of these measures, see ICS Library on www.incas-europe.org)

Figure 5: QQS Evaluation Scale

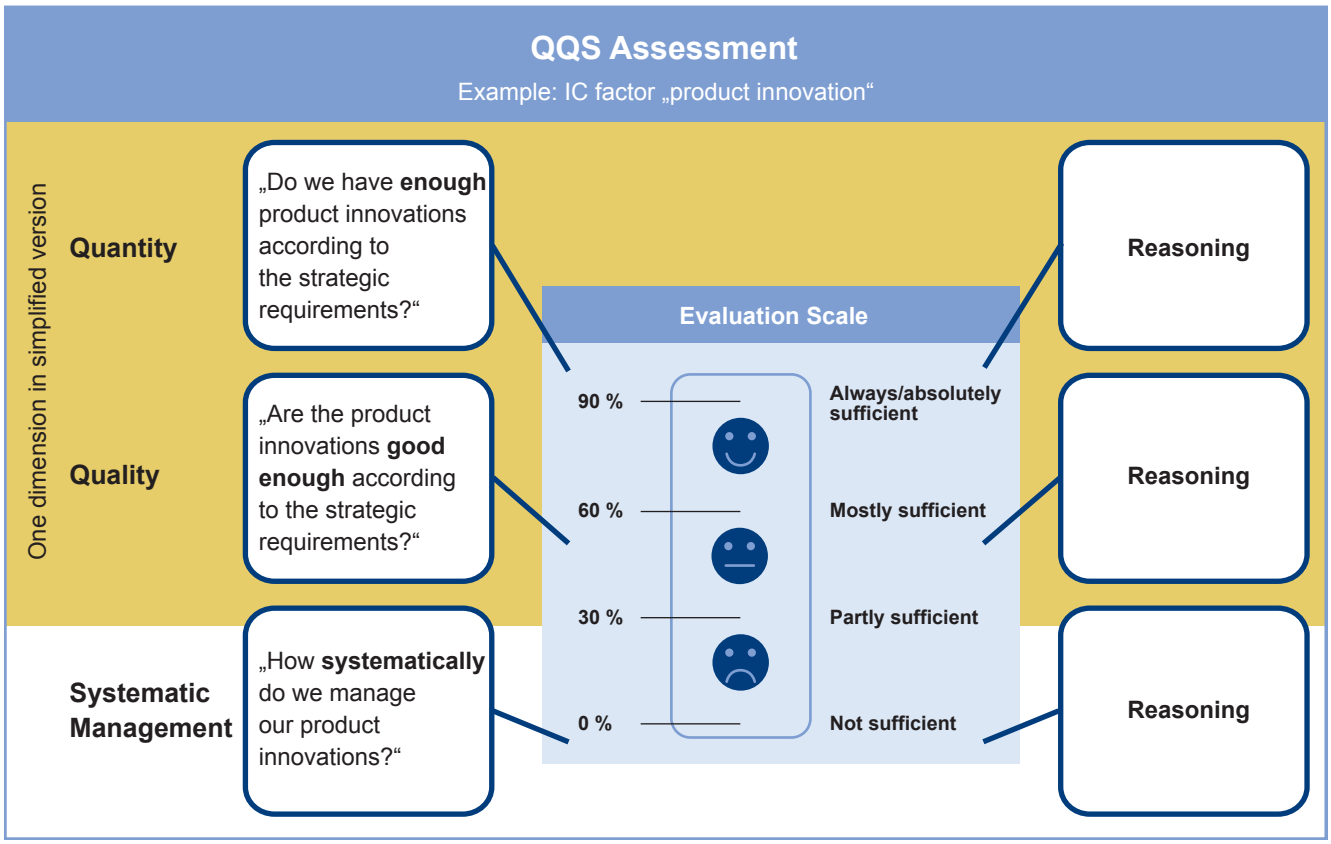


The QQS Assessment corresponds to the specific strategic objectives defined by the enterprise **("Strategic Objectives" in ICS Checklist 1.1: Business Model).** The evaluation of each IC factor is conducted according to the evaluation scale on the left [cf. Figure 5]. The strategic requirements serve as the level of reference (e.g. 60% = mostly sufficient according to our strategic objectives). Note the difference between this relative measure and an absolute measurement scale such as kilograms or metres. Having two well trained teams of engineers as part of the human capital is not good per se: having the right number and quality of employees according to the specific company strategy is also important.

We believe that our present suppliers do not allow us to achieve our export objective. It is our business to develop plans and designs, but what we deliver are machinery and equipment. We are sending these plans to the US or Brazil…therefore the relationship with suppliers is very important. Maybe our current suppliers are not adequate to achieve our strategic objectives. ...We need to standardise the process a lot more.

Roger Pou, Engineering Business Manager, SIDASA, Spain

Figure 6: Example of QQS questions on the basis of the IC factor “product innovation”



Box 6 The QQS moderation process

1. Pinpoint the IC factor, which is going to be assessed (read out loud the IC factor and the corresponding definition. If necessary the definition can be adjusted).
2. Ask the questions you formulated for each evaluation dimension. If necessary the questions can be adjusted (cf. Figure 6: Example of QQS questions on the basis of the IC factor “product innovation”).
3. After asking the question, it is evaluated. Each member evaluates the IC factor by raising a card according to the evaluation scale above.
4. Discuss the arguments for high and low ratings.
5. Document the reasoning why the IC factor has been evaluated so high/low. It is crucial to document the findings of the discussion well as they will provide the basis for the interpretation of results in step 4.

Hand out coloured cards for every team member, e. g. a white card indicating a 0 % evaluation, a red card for 30 %, a yellow card for 60 % and a green card for evaluations between 90 % and 100 %.

Usually the team members will not have a homogeneous opinion on the evaluations. It is therefore the task of the moderator to document the arguments for low and high assessments as they emerge in the process of discussion. Fact-supported opinions count more than vague impressions, even though the latter do have some relevance as well. The exchange of opinions helps to better understand the intangible nature of each specific IC factor and sometimes reveals the mental models of individual participants. After a brief discussion, a common position for the value is documented.

One aspect to be considered is to avoid bias caused by the presence of top management. The blue collar employee from the production assembly line will most likely tend to adjust his opinion in line with the manager’s when evaluating the IC factor. A standard trick to avoid this bias is to advise the top management to raise their card last.

Figure 7: QQS-Assessment

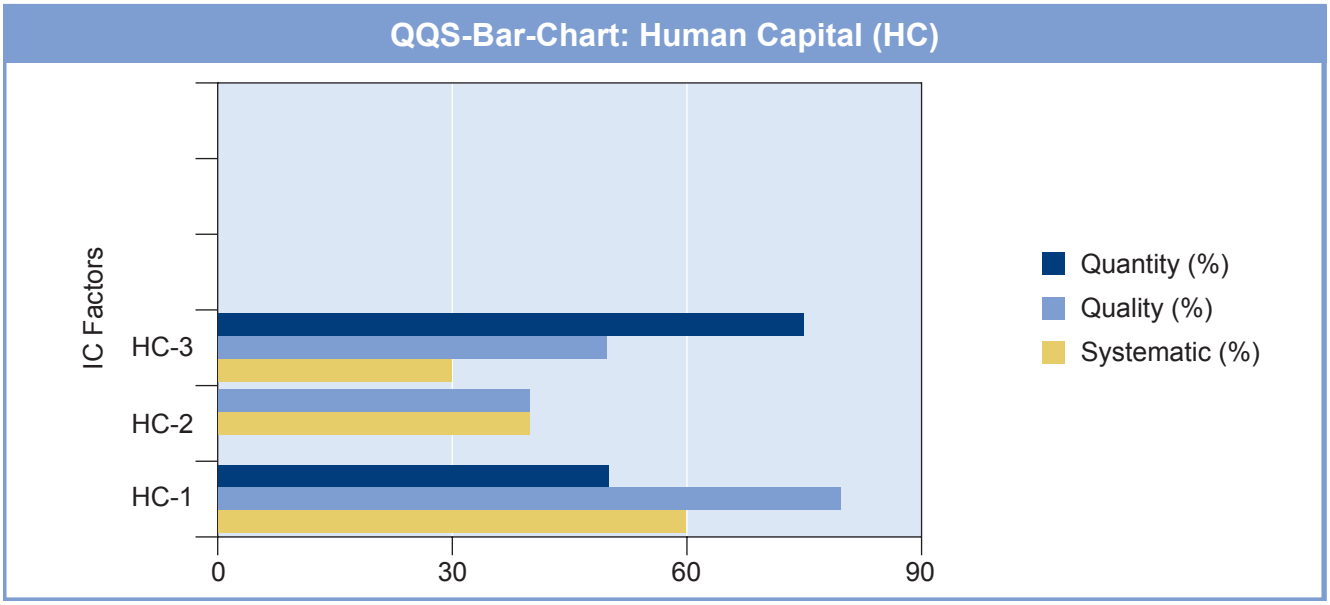
QQS-Assessment

IC type	ID	IC Factor	Specific questions regarding the quality How good?	Evaluations in % Quality (%)	Answers and arguments of the project team Reasoning
Human Capital	HC-1	Professional competence	How good is our employees' Professional Competence considering our strategic objectives?	80	"Our employees' Professional Competence is almost absolutely sufficient as they are having the skills that are needed in order to fulfill their tasks. Nevertheless there are a few areas where the staff could possibly need further education."
Structural Capital	SC-1	Corporate culture	How good is our Corporate Culture considering our strategic objectives?	85	"The quality of our Corporate Culture is quite sufficient. We are dealing with each other in a manner that helps us to achieve our objectives. In our company we can address even problematic issues frankly and our executives are most of the time very approachable. Last but not least undertaking this project is a sign that we have a good Corporate Culture."
	SC-2	Internal Co-operation and Knowledge Transfer	How good is our Internal Cooperation & Knowledge Transfer considering our business needs?	85	"The quality is quite good. Requests from other departments are processed quickly. Generally all employees are very cooperative and help each other to fill "knowledge gaps". This attitude is essential part of our Corporate Culture (see above)."

The ICS Toolbox provides all the fields required for proper documentation of the QQS Assessment. Visualisations for the next workshop will be generated automatically.

Guidance on how to interpret the visualisations can be found in the European ICS Guideline Step 4.

Figure 8: Example of a „QQS Bar-Chart"



"QQS-Assessment" at a glance

Main question:
How well are the SME's IC factors developed in order to achieve its strategic objectives?

Intended findings:
A picture of the current status quo of the SME's IC factors and an overview of the strengths and weaknesses of the SME's IC.

How to get the intended findings:
The IC factors are assessed by the workshop participants in a self-assessment using the evaluation scale.

The project team agrees on a percentage value and reasoning for this value for each factor and evaluation dimension and documents the results in the ***ICS Toolbox sheet "QQS Assessment"***

For further support see ***ICS Checklist 2.4: QQS Assessment.***

2.3 Impact analysis

Intangible resources are characterized by complex interactions which depend on the context and are regularly hard to understand from external perspectives. Simple cause and effect chains, e.g in simple machines (switch on, machine runs), are of little use in the area of Intellectual Capital.

The challenge to be met is to manage these intangible resources. This is a highly complex task due to the ambiguity of interactions between influencing factors and the associated challenges of allocating resources efficiently.

Sensitivity analysis is one method for tackling this complexity which supports the analysis of interactions within an organisation and visualizes interdependencies [Vester, 1999].

The ICS procedure offers two possibilities for analysing the impact of a company's IC. Depending on the size and maturity of a company, either a simple (Impact Scoring) or a full version (Cross Impact Matrix) can be applied to assess and analyse the Intellectual Capital and its interrelations.

Based on experience with pilot enterprises during the InCaS project, the following issues have to be taken into account when choosing the appropriate approach for a company:

Impact analysis is a simple way of assessing the IC factors' impact on a company's business success. It is appropriate for companies going through the ICS implementation for the first time, as it provides fast results within a short time, maximising the cost-benefit relation. Applying the Impact Scoring reduces the ICS implementation process to two workshop days with the ICS project team. The simple version can sensitise inexperienced companies for the ICS methodology by limiting the complexity of interrelating IC factors to core information.

Start-up companies and micro-organisations may also prefer the Impact Scoring, as their organisational complexity is usually lower and might therefore not require an extensive analysis.

On the other hand, larger or more experienced companies with a higher level of complexity are advised to go through the full version of the impact analysis (Cross Impact Matrix). As the pilot implementations during the InCaS project have revealed, users already familiar with the ICS (ICS reimplementation) or management instruments in general will appreciate the additional information provided by the Cross Impact Matrix. It offers deeper insights into the complex interrelations between their intangible resources and the linkages to business success and strategy. The full version requires one more workshop day, i.e. altogether three workshops with the ICS project team.

> *"Once you start digging into the factor – provided it is important for achieving the strategic objectives – you start seeing things you were not aware of before, and that makes you change the valuation."*
>
> Roger Pou, Engineering Business Manager, SIDASA, Spain

Figure 9: Example of an Impact Scoring

Impact Scoring

No.	IC type	ID	IC Factor	Ranking Team Member 1	2	3	4	5	6	7	8	9	10	Ranking Sum	Weighting Score
1	Human Capital	HC-1	Professional competence	3	4	3	2	3	3	3	2	4	3	30	8 %
2		HC-2	Social competence	4	3	5	4	4	5	5	4	3	5	42	12 %
3		HC-3	Employee motivation	8	7	8	5	7	8	4	8	8	8	71	20 %
4	Structural Capital	SC-1	Corporate culture	5	5	4	7	5	7	6	7	5	4	55	15 %
5		SC-2	Internal Co-operation and Knowledge Transfer	7	8	6	8	6	6	7	5	7	6	66	18 %
6		SC-3	Information Technology & Explicit Knowledge	2	2	1	1	2	2	1	3	2	2	18	5 %
7	Relational Capital	RC-1	Customer Relationships	6	6	7	6	8	4	8	6	6	7	64	18 %
8		RC-2	Investor Relationships	1	1	2	3	1	1	2	1	1	1	14	4 %
				36	36	36	36	36	36	36	36	36	36	360	100 %
8 Total				Highest Rank 8										Maximum possible total 36	

2.3.1 Impact Scoring (simple version)

Impact Scoring makes it possible to prioritise the fields for intervention. The ICS project team ranks the IC factors according to their impact on the organisation, i.e. the factor exerting the most influence on business success is ranked highest. The question to be answered is: "How important is this particular IC factor for achieving our strategic objectives?"

For preparing step 4, use the ICS Toolbox to enter the results from the Impact Scoring in order to document the process. The data entered in the **ICS Toolbox sheet "Impact Scoring (simple)"** will help top management to visualise the findings at a later stage.

2.3.2 Cross Impact Matrix (full version)

The full version helps to analyse the interrelations between IC factors. The interdependencies between IC factors are examined and their degree of influence on each other is analysed. Full impact analysis makes it possible to identify the interactions **between the organisation's IC** and **Business Processes and Business Success.**

0 = no influence
1 = weak influence
2 = strong influence
3 = exponential influence

In contrast to the Impact Scoring, the Cross Impact Matrix analyses each factor with regard to its influence on other factors. Each IC factor is then analysed to determine whether it has no influence (0), weak influence (1), strong influence (2) or even an exponential influence (3) on other IC factors (cf. Figure 10: Example of a Cross Impact Matrix working sheet).

The Cross Impact Matrix is relatively comprehensive, but increases accuracy. Furthermore, the project team needs to deal with the subject in more detail and will therefore become more aware of IC relevant aspects.

The **ICS Toolbox sheet "Cross Impact Matrix (Full)"** displays all IC factors in relation to all other IC factors. These interrelations must be assessed for each factor and the results taken down into the respective ICS Toolbox sheet.

Figure 10: Example of a Cross Impact Matrix working sheet

Cross Impact Matrix

No.	IC type	ID	IC Factor	HC-1	HC-2	HC-3	SC-1	SC-2	SC-3	RC-1	RC-2	Active Sum	Passive Sum	Relative Influence	Controll-ability
1	Human Capital	HC-1	Professional competence	x	1	1	0	1	1	1	0	5	4	10 %	1,25
2		HC-2	Social competence	0	x	2	1	3	0	2	0	8	4	16 %	2,00
3		HC-3	Employee motivation	2	1	x	3	3	0	2	1	12	9	24 %	1,33
4	Structural Capital	SC-1	Corporate culture	1	1	1	x	2	0	1	0	6	7	12 %	0,86
5		SC-2	Internal Co-operation and Knowledge Transfer	1	0	2	2	x	2	2	0	9	11	18 %	0,82
6		SC-3	Information Technology & Explicit Knowledge	0	0	1	0	1	x	1	0	3	4	8 %	0,75
7	Relational Capital	RC-1	Customer Relationships	0	1	2	1	1	1	x	1	7	9	14 %	0,78
8		RC-2	Investor Relationships	0	0	0	0	0	0	0	x		2		
8 Total				**4**	**4**	**9**	**7**	**11**	**4**	**9**	**2**	**50**	**50**	**100 %**	**1,00**

weak influence strong influence exponential influence

Example:The factor HC-1 “professional competence” exerts a weak influence (1) on HC-2 “social competence”, i.e. if you enhance the qualification of employees, their social competence is influenced as well.

“Weighting” at a glance

Main question:
What is the relative importance of IC factors for achieving the SME’s strategic objectives?

Intended findings:
- *Ranking of IC factors according to their estimated impact on strategic objectives.*
- *Shared understanding of the relative importance of IC factors.*

You will get a prioritised list of factors for the business success of the organisation.

How to get the intended findings:
Assessment of IC factors with regard to their relative importance considering the SME’s strategic objectives.

*Take down all results in the **ICS Toolbox sheets “Impact Scoring (Simple)”** or **“Cross Impact Matrix (Full)”***

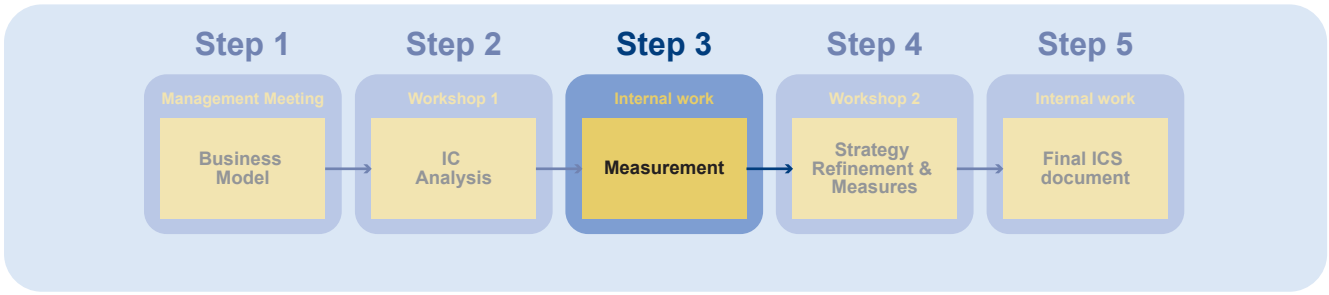
2.4 Preparations for Step 3

Step 3 is done internally in the organisation.

The main task of step 3 is to find useful and appropriate indicators for the respective IC factors. The IC indicators help to measure the IC factors and their development over time on a quantitative basis, thus adding validity to the self-assessment. For perfect preparation, you should read the guideline for step 3 prior to the workshop in order to be able to brief the project team for step 3 at the end of the workshop (half an hour should be sufficient for the briefing).

ICS Module 6: Follow-up ICS supports companies which are conducting a follow-up ICS. Regarding step 2 it shows how to compare IC analysis results from the current ICS with those from former ICS.

ICS Step 3: Measurement



1. Introduction

Between the first and the second workshop the team should do some internal work. They are supposed to determine IC indicators for the most important IC factors. These are necessary in order to measure the IC factors and monitor their development over time. In this sense, they add validity to the self-assessment in Step 2.

By reading “ICS Step 3” of the ICS Guideline, the moderator will learn how an IC indicator is defined and how to determine it. ICS Step 3 provides all the necessary information for briefing the ICS project team at the end of the first workshop and supporting the company’s project manager as the person mainly responsible for determining IC indicators.

2. Approach

- **Why** is it necessary to identify indicators?
  ➜ Application of IC indicators within the ICS process
- **What** to do?
  ➜ Briefing the company’s project team
- **How** to define indicators?
  ➜ Definition and determination of IC indicators

2.1 Application of IC indicators within the ICS process

The application of IC indicators is not restricted to “Step 3: Measurement”. They are likely to appear already within “Step 2: IC analysis” as a part of the evaluations’ reasoning. They are also needed in the course of “Step 4: Strategy refinement & measures”. Determining IC indicators ensures that

we are able to check the IC factors' value and development on a quantitative basis. In order to define actual measures for particular IC areas, we have to monitor how the associated IC indicators develop over time.

2.2 Briefing the company's project team

The company's project team should be informed about the definition of IC indicators, the requirements for determining IC indicators and their function in the whole ICS process.

The organisation's project manager is responsible for determining IC indicators. He is free to organise internal meetings in order to specify IC indicators. Since IC indicators are sometimes treated confidentially within a company, the project manager may need the support of the top management to access relevant data.

After briefing the ICS project team at the end of step 2, the moderator should support the organisation's project manager and be available to answer any questions by phone or email. Please be aware that the moderator needs the determined IC indicators as an input for the second workshop. It is therefore important to ask the organisation's project manager to send the list of IC indicators prior to the second workshop.

2.3 Definition

In order to measure the IC factors the ICS project team has to determine related indicators. The IC indicators help to measure the IC factors and their development over time on a quantitative basis. Furthermore determining IC indicators is beneficial for monitoring measures for particular IC factors.

An IC indicator can be a key figure, a management ratio or information gathered in surveys. It helps to describe a particular aspect of an IC factor. Examples for these kinds of figures and management ratios are: number of employees with university degree, number of days for vocational training, number of customer complaints, etc.

2.4 Determining IC indicators

The enterprise's team should determine the IC indicators according to their particular business situation and status quo of IC. For example, if "Leadership ability" is assessed low, the ICS project team may justify this evaluation with the fact that there are simply not enough executives. The IC indicator "Number of executives" could be used as evidence.

IC indicators should be calculated on the basis of a clear definition. Additionally the data source should be of sufficient quality.

A list of common IC indicators is only provided as a suggestion **(ICS Checklist 3.1: Common IC Indicators)**, as the ICS project team is supposed to adapt the IC indicators specifically to their needs.

Frequently, a lot of key figures or management ratios are available within the organisation's various departments (Marketing, HR, Accounting, etc.). The team should take care not to choose figures simply because they are available, but should also choose figures which are useful and appropriate for measuring a particular IC factor. Individual project team members could be assigned to deliver specific indicators related to their domain. For example, an employee from marketing could compile data about brand awareness and an employee from human resources could present data about employees' level of education. The organisation's ICS project manager must harmonise the definitions and is responsible for quality issues.

We thought we had this aspect (the measurement of indicators) under control but we realised different people had different measures about the same indicator. They defined the indicator the way they liked it, they measured it the moment they liked it and so on. Just taking these few things, ICS has been very good to us because it has allowed us to think of other things.
I sent an e-mail asking for an indicator and the Administration Department sends me a value, the Post-Sales Department sends me a different one, and if I ask more people I get 14 more different data. …You think the measure (value) of an indicator is unique in theory and you find yourself with as many measures as persons that provide the data.In this sense we value the exercise as very positive because (as Post-Sales Services touches other departments) we get to know the flaws that exist in other departments, too. This (Step 3) has led us to simplify and to focus on key indicators... At Sisteplant we took a drastic measure and said "from now on you will be responsible for this indicator, you for this… etc"", not the Department but the person.This changes everything, redefine the criteria…the impact has been tremendous… 90 days the average time of response.
Mario Insunza, R&D Manager, Sisteplant, Spain

Box 7 IC Measurement – Stuck in the middle of nowhere?

In today's competitive environment, running a company on the gut is simply inconceivable, irrespective of the sector, size and scope of its operations. Measurement is intrinsic to the idea of effective management. In fact, it is the fulcrum for *continuous improvement* and *competitiveness.* In particular, indicators form the basis for sound decisions and the monitoring and evaluation of projects and programmes. Decisions taken in this way normally prove more effective and yield higher returns ceteris paribus. In this respect, it can be said that they also promote a more effective and efficient allocation of resources within the organisation.

What is an indicator? According to the OECD1, an indicator is "a quantitative or qualitative factor or variable that provides *simple and reliable means to measure achievement,* to *reflect changes connected to an intervention,* or to *help assess the performance of a development actor".* Thus, a *timeframe* and a *base-and-target* value are inherent to it.

Indicators allow the top management to track the evolution of a certain variable and by doing so to introduce the necessary changes in a specific course of action. To be effective, though, *a measurement system should be embedded into the culture of the organisation and integral to its global management system.* This contributes to create momentum. In the particular case of IC-related indicators, due to the complex and interrelated nature of intangibles, it is also important that the company generates a space for experimentation – it is not unusual for these indicators to undergo more than one adjustment/change to better reflect the reality they are intended to capture.

INCAS EXPERIENCE

Certainly, the definition of indicators is never an easy task. In more than one case it generated a lot of debate within the project team and the persons directly or indirectly implied by the indicator –e.g. providers of information, people whose activities were under the "scope" of the indicator, and those ultimately accountable for it. This was also positive, though. SISTEPLANT was one of the companies where debate was more intense. Consistent with the results of the IC Management Portfolio – which appointed "Professional Competence" as one of the key factors to be developed – the project team came up with an indicator to measure the degree of polyvalence of the competencies of the After Sales Services department (ASS). This piece of information raised awareness about the potential of internal mobility of the department, thus helping the company to overcome two of its problems of major concern: labour fluctuation and motivation. (For further examples on indicators see ICS Library on www.incas-europe.org)

1OECD/DAC Glossary of Key Terms in Evaluation (2002) [available online: www.oecd.org]

The following illustration shows some examples of IC indicators and what is needed to determine them:

Figure 11: Indicators

Indicators

	IC Factor	Indicator	Definition	Unit	Actual Value	Targeted Value
Human Capital	Professional competence	Number of employees	Number of direct employees the organisation had over the course of the last accounting year. Every employee, whether on a full-time contract, or a part-time contract, or any other form of direct employment contract, should be included in this headcount and should be counted a `full head` (i.e.1.0 heads).	#	50	60
		Employees with university degree	Average number of employees with university degree in the last accounting year.	#	9	15
		Employees with professional education	Average number of employees with professional education in the last accounting year.	#	12	15
		Apprentices	Average number of apprentices in the last accounting year.	#	2	3
		Days for vocational training	Number of days off for vocational training per employee in the last accounting year.	#	0,5	1,5
Structural Capital	Internal Co-operation and Knowledge Transfer	Number of internal reconciliation meetings	Number of official cross-departmental meetings in the last accounting year.	#	45	45
		Number of collaborative projects	Number of projects which were undertaken together with other departments in the last accounting year.	#	5	10
		Succession regulations for CEO	Existence of a succession regulation for the CEO.	0/1	0	1
		Succession regulations for other top executives	Number of top executives with succession regulation/Total number of top executives	%	30	90
Relational Capital	Customer Relationships	Total numbers of customers	Total number of costumers who have placed orders with the organisation in the last accounting year.	#	120	200
		Number of recorded customers complaints received	Total number of recorded customer complaints received in the last accounting year.	#	20	5

“Measurement“ at a glance

Main question:
Which key figures or management ratios could help to measure the SME’s IC factors? Do they fulfil the requirements set out above?

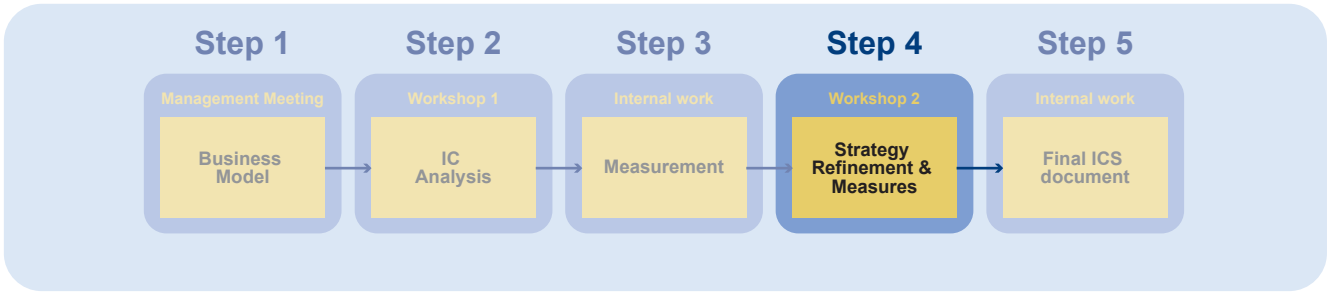
Intended findings:
A quantitative basis for validating the IC factors’ assessment and measuring their development over time.

How to get the intended findings:

- *Individual project team members are assigned to deliver specific indicators related to their domain. The SME project manager harmonises the definitions and is responsible for quality issues.*
- *For support see working sheet **ICS Checklist 3.1: Common IC Indicators.***

ICS Module 6: Follow-up ICS shows how valuable insights could be gained from comparing indicator time lines.

ICS Step 4: Strategy Refinement & Measures



1. Introduction

After the previous steps, all the information needed for defining IC measures and refining strategy will have been generated. The ICS project team should have identified the main IC factors and evaluated them with regard to their Quantity/ Quality and Systematic Management. Furthermore, they should have assessed the IC factors in terms of their relative importance. The moderator should also have a first list of IC indicators prepared by the organisation.

A presentation summarising all results of the IC analysis should be prepared for the second workshop on the organisation's premises.

The diagrams and charts of the green ICS Toolbox sheets form the basis for presenting results. It is the task of the ICS Moderator to choose the relevant charts and diagrams for the interpretation – this will of course differ from company to company. The most important charts and diagrams as well as their basic interpretation are described on the following pages.

Based on these results, the moderator will lead the project team's discussion on the following basic questions:

- How should an ICS project team interpret the results of the IC analysis?
- Which IC factors have the highest potential for intervention?
- What does that imply for the organisation's IC strategy?
- Which measures should be implemented for the development of IC according to the strategy?

Step 4 of the ICS guideline explains how to interpret the findings of the IC analysis and how to moderate the workshop. The conclusions drawn during this workshop will serve as the basis for any activities on the systematic management of the company's IC, as well as for the final ICS document and further communication of the results.

2. Approach

ICS step 4 "Strategy Refinement and Measures" is broken down into two major parts:

- Interpretation of results
  - Strengths-and-weaknesses analysis
  - Impact analysis
  - Identify fields of intervention
- Deriving IC strategy and measures

2.1 Interpretation of results

The following process of IC interpretation will bring together the two major sets of data generated in the IC analysis:

The **ICS Toolbox sheet "QQS Assessment"** reveals the strengths and weaknesses of the company's IC.

The **ICS Toolbox sheet "Impact Scoring (simple)"** shows the relative importance of the different IC factors for business success, if the simple version of the impact analysis has been used in step 2.

The **ICS Toolbox sheet "Cross Impact Matrix (full)"** shows the relative influence of the different IC factors on all other factors, business processes and business success, if the full version of the impact analysis has been used in step 2.

2.1.1 Strengths-and-weaknesses analysis

The first step is a strengths-and-weaknesses analysis based on the QQS Assessment. The ICS Toolbox provides two basic instruments to support this task:

The **ICS Toolbox sheet "QQS Overview"** shows the numerical data of the QQS Assessment for each factor and a summary for each of the three IC categories (HC, SC, RC).

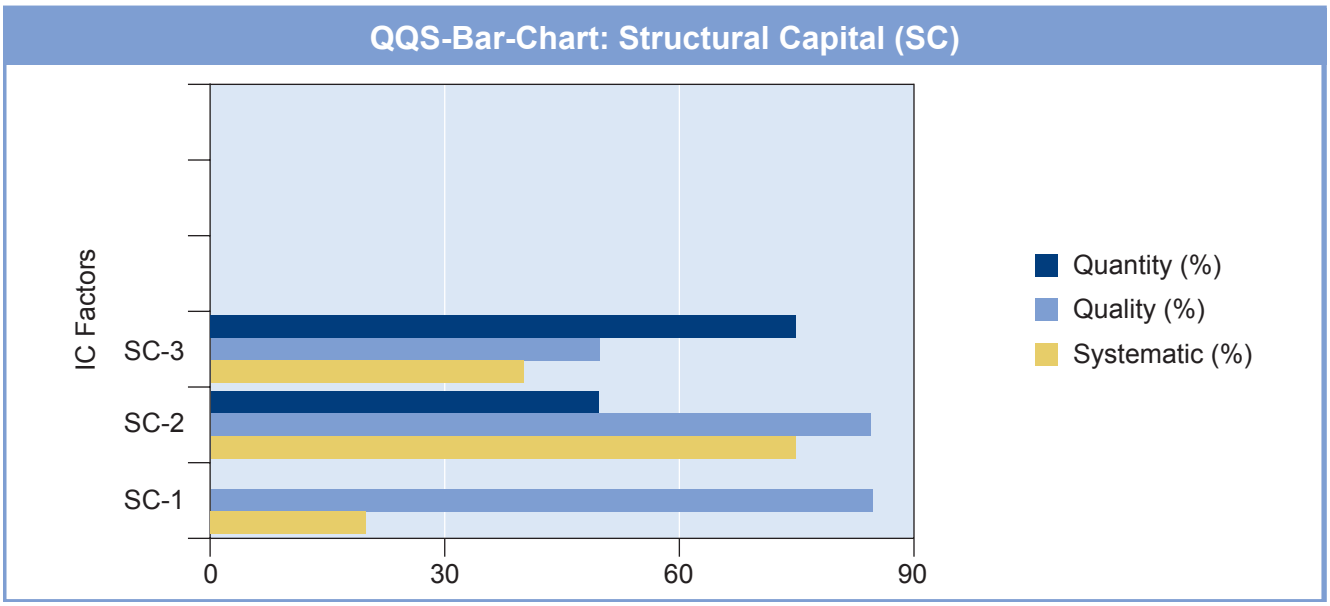
Figure 12: QQS Overview (ICS-Toolbox)

QQS-Overview

IC type	ID	IC Factor	Quantity (%)	Quality (%)	Systematic (%)	Mean Value (%)	Improvement potential (%)
Human Capital	HC-1	Professional competence	50	80	60	63	37
	HC-2	Social competence	N/A	40	40	40	60
	HC-3	Employee motivation	75	50	30	52	48
Structural Capital	SC-1	Corporate culture	N/A	85	20	53	48
	SC-2	Internal Co-operation and Knowledge Transfer	50	85	75	70	30
	SC-3	Information Technology & Explicit Knowledge	30	50	40	40	60
Relational Capital	RC-1	Customer Relationships	60	70	60	63	37
	RC-2	Investor Relationships	90	90	90	90	10

○ Low mean value (high improvement potential) **indicates weakness.** ○ High mean value (low improvement potential) **indicates strength**.

Figure 13: QQS Bar Chart (ICS Toolbox)



The **ICS Toolbox sheet "QQS Bar Charts"** visualises the same information for easier identification of major differences in the evaluation of IC factors.

When preparing the strengths-and-weaknesses analysis, please use these two instruments and incorporate them in a presentation for the project team.

Starting with the **QQS Overview**, it is advisable to focus on the columns "Mean Value" and "Improvement Potential" (cf. Fig. 12) at first. The "Mean Value" aggregates all three QQS dimensions (Quality, Quantity and Systematic Management) into one value. "Improvement potential" shows the gap between the mean value and 100%. The highest mean values (low improvement potential) indicate strengths, the lowest mean values (high improvement potential) indicate weaknesses.

When discussing the QQS Overview with the project team, the moderator should ask the team if these results reflect the status quo of the company in their opinion. As it is based on the team's self-assessment, the focus should be on the relative differences between IC factors and not on the absolute level of evaluation. Referring to the example shown in Figure 12: QQS Overview (ICS Toolbox), the question could be: "Compared to the other factors' evaluation, is the factor 'Investor Relationships' really our company's biggest strength?" and "Is the factor 'Social Competence' really our company's greatest weakness?". In this context, do the evaluations of the other factors reflect their current level of Quantity, Quality and Systematic Management?

By validating the assessment results in this way, the team responsible may analyse in more detail what has led to individual evaluations, in order to review specific evaluations that might be questioned. Then it is possible to refer to the reasoning given by the group for the specific evaluation in the first workshop. To support this process the **"QQS Bar Charts"** can help to interpret the results at a more detailed level. The bar charts make it possible to check at a glance if the IC factor's Quantity/Quality or if the evaluation of its Systematic Management has caused its strong or poor overall assessment, summarised in the mean value.

Examples for typical interpretations of the QQS Bar Charts include:

- Low quantity/quality but high systematic management indicates that potential problems might already be solved in the future (but check whether the existing management activities tackle the identified quantity/quality problems!)
- High quantity/quality but low systematic management indicates that there are no current problems, but that there is a risk of declining quantity or quality if systematic management measures are not implemented (observe the factor's future performance!)

Finally, **the summary of the QQS Overview** shows the overall evaluation of the three IC categories and of the three dimensions of evaluation. By looking at this table, the moderator and the ICS project team can identify any strengths or weaknesses in the company's Human, Structural or Relational Capital and whether the main observed problems lie in Quantity, Quality or the Systematic Management of IC. This sums up the QQS findings on the most aggregated level and is therefore an appropriate instrument for an executive summary.

Figure 14: QQS Overview – Summary (ICS Toolbox)

Summary	Quantity (%)	Quality (%)	Systematic (%)	Mean Value (%)	Improvement potential (%)
Human Capital	63	57	43	54	46
Structural Capital	40	73	45	53	47
Relational Capital	75	80	75	77	23
Total	**59**	**70**	**54**	**61**	**39**

2.1.2 Impact analysis

In general, the Impact Scoring reveals the relative importance of each IC factor compared to all other factors. In both versions, i.e. the Impact Scoring (simplified version) as well as the Cross Impact Matrix (full version), the column "Weighting Score"/ "Relative Influence" shows the importance of each IC factor: the higher the score, the greater the importance of the single IC factor for the company and its strategic objectives.

Taking a look at this ranking of the IC factors, the moderator should discuss with the project team whether the weighting scores reflect the priorities appropriately. The greatest differences in the team members' ranking can be discussed in order to clarify why specific factors have been ranked relatively high or low. With regard to the example in Fig. 15, this could explain, why team member 5 has ranked the factor 'Customer Relationships' relatively high, whereas team member 6 has ranked it relatively low.

The results of this discussion can be documented in the column "remarks" in the Impact Scoring sheet of the ICS Toolbox.

Figure 15: Impact Scoring (Excerpt from the ICS Toolbox)

Impact Scoring

No.	IC type	ID	IC Factor	Ranking Team Member 1	2	3	4	5	6	7	8	9	10	Ranking Sum	Weighting Score
1	Human Capital	HC-1	Professional competence	3	4	3	2	3	3	3	2	4	3	30	8 %
2		HC-2	Social competence	4	3	5	4	4	5	5	4	3	5	42	12 %
3		HC-3	Employee motivation	8	7	8	5	7	8	4	8	8	8	71	20 %
4	Structural Capital	SC-1	Corporate culture	5	5	4	7	5	7	6	7	5	4	55	15 %
5		SC-2	Internal Co-operation and Knowledge Transfer	7	8	6	8	6	6	7	5	7	6	66	18 %
6		SC-3	Information Technology & Explicit Knowledge	2	2	1	1	2	2	1	3	2	2	18	5 %
7	Relational Capital	RC-1	Customer Relationships	6	6	7	6	8	4	8	6	6	7	64	18 %
8		RC-2	Investor Relationships	1	1	2	3	1	1	2	1	1	1	14	4 %
				36	36	36	36	36	36	36	36	36	36	360	100 %

Highest Rank 8 Maximum possible total 36

2.1.3 Identify fields of intervention

The IC Management Portfolio displays the future potential of the different IC factors in a four quadrant matrix. The IC factors' potential for intervention depends on the assessment of their status quo (QQS Assessment) and on their relative importance regarding the strategic objectives (Impact Scoring, Cross Impact Matrix). In the **IC Management Portfolio** this combination is visualized along two dimensions:

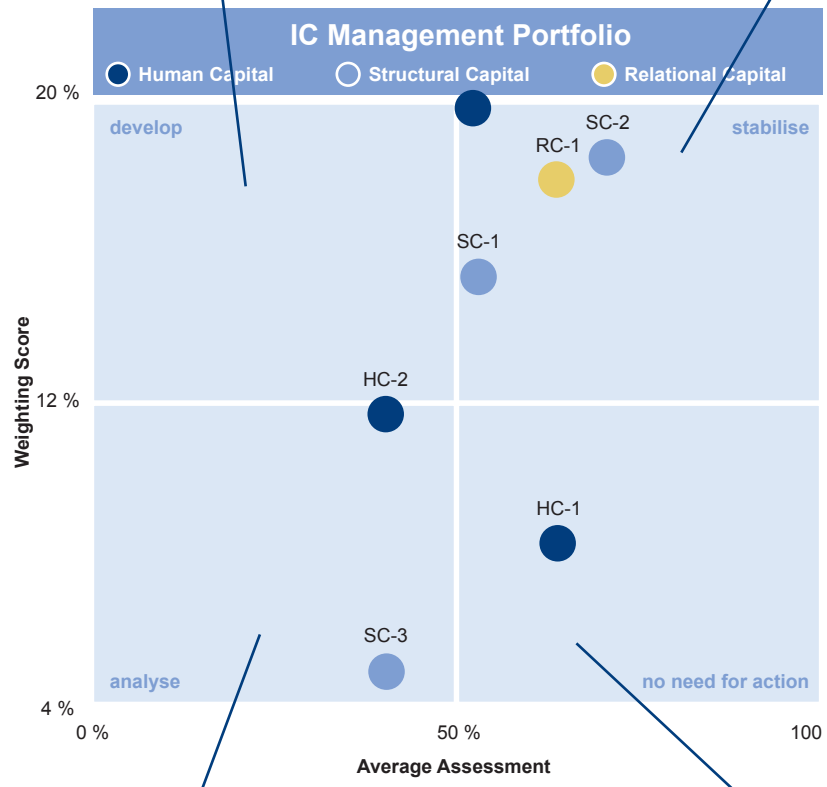
Figure 16: IC Management Portfolio (ICS Toolbox)

Develop
1st Quadrant: upper left signfies high relative importance and high potential for improvement.

In general, IC factors in the upper left typically represent future fields for intervention. If a factor appears in this section, the status quo is rather poor within the QQS Assessment. But on the other hand, the impact scoring revealed, that their relative importance is rather high. Therefore, it is crucial to develop these IC factors, as interventions will have the highest impact on the companies IC.

Stabilise
2nd Quadrant: upper right shows a high relative importance but low potential improvement.

A large number of IC factors in this sector is generally regarded as a good sign since they have been rated very high regarding Quality, Quantity and Systematic. Here you find the strenghts of the companys IC. As the IC factors are already in sound condition and are important for the organisation the should be stabilised on the current level in the future.



The y axis (Weighting Score) is preset at a min. 0 % and a max. 20 % and respectively the interval is set at 10 %. You should adjust the axis according to the minimum and maximum weighting score (see below)

Maximum Weighting Score	**20 %**
Minimum Weighting Score	**4 %**

HC-1	Professional Competence
HC-2	Social Competence
HC-3	Employee Motivation
SC-1	Corporate Culture
SC-2	Internal Co-operation & Knowledge Transfer
SC-3	Information Technology & Explicit Knowledge
RC-1	Customer Relationships
RC-2	Investor Relationships

Analyse
4th Quadrant: lower left displays low relative importance but high potential for improvement

In the lower left quadrant we find IC factors which would generally benefit from management intervention but they have little influence on the companys strategic objectives. Hence, immediate intervention is not required. But they should be analysed in more detail, e.g. identifying factors that are important for specific development measures by indirectly affecting other factors' development.

No need for action
3rd Quadrant: lower right displays factors with low relative importance and low potential for improvement.

IC factors in the lower right quadrant can be mostly ignored. They are already in a very good condition and a improment has little influence. Thus, there is little or no need for action in that segment.

Improvement potential (x-axis): IC factors on the far right have a low improvement potential (high QQS mean value), factors on the far left have a high improvement potential (low QQS mean value).

Relative importance (y-axis): IC factors far down have a low relative importance, factors far up have a high relative importance for achieving the desired business success and the organisation's strategic objectives.

ICS is a map of the enterprise and its development. With the help of this map positive and negative developments are visualised and can be identified.
Dr. Reinhard Ahlers, Managing Partner, Balance Technology Consulting GmbH, Germany

The combination of these two dimensions yields a portfolio with four quadrants permitting determination of the potential for intervention for each IC factor (cf. Figure 16: IC Management Portfolio (ICS Toolbox)). The basic assumption is that factors with a high improvement potential combined with a high relative importance will be the most effective fields for intervention. Measures for improvement and development will unfold the greatest impact and will have the best cost-benefit ratio or the highest return-on-investment. The essential question for the top management, namely "Where should we start to invest? Where can we get the maximum impact at minimum costs?" can be answered by systematically searching for the factors with the highest potential for intervention.

Moreover, the IC Management Portfolio as the most highly aggregated visualisation of IC analysis can be used as the "Intellectual Capital Map" for the specific company. The greatest potential for intervention can always be found in the upper left quadrant. How the four quadrants are to be interpreted in general is shown in the following Figure 16: IC Management Portfolio (ICS Toolbox):

The **ICS Toolbox sheet "IC Management Portfolio (simple)"** shows the results, if the simple version of the impact analysis has been used in step 2.

The **ICS Toolbox sheet "IC Management Portfolio (full)"** shows the results, if the full version of the impact analysis has been used in step 2.

"Interpretations of results" at a glance

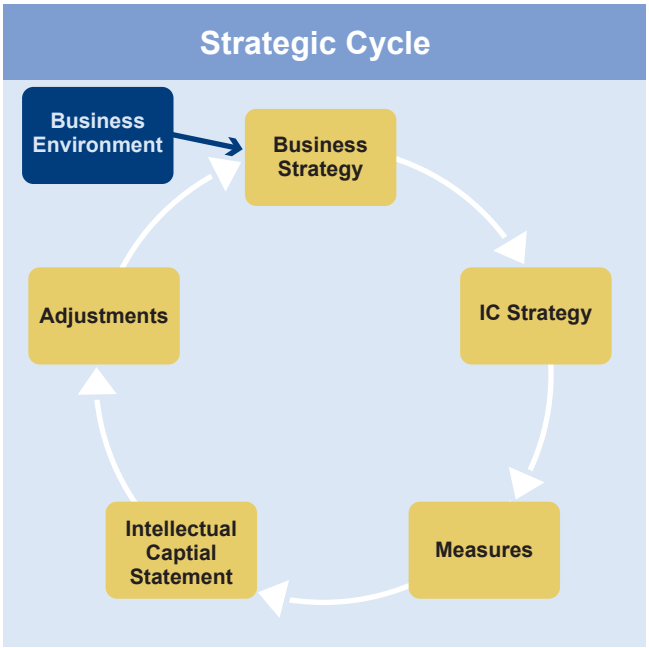
Main questions:
Which IC factors can be regarded as strengths and which factors need improvement? Which of these IC factors have the greatest relative importance regarding the organisations strategic objectives? Where should we start to invest in order to optimise the cost-benefit ratio of measures for the development of IC?

Intended findings:
Fields of intervention, i.e. IC factors that have a high relative importance and high improvement potential.

How to get the intended findings:
*For support see the **ICS Toolbox sheets "QQS Overview", "QQS Bar Charts"** as well as the **"IC Management Portfolio".***

2.2 Deriving IC strategy & measures

After the IC analysis, the company can extend its aims to a detailed description of its future business and IC strategy. In addition, measures can be derived for IC development.



Based on the interpretation of results, the project team should discuss the implications for the organisation's strategy. The considerations regarding opportunities and risks from the previous steps should be related to the organisation's vision and strategy.

The business strategy must be refined and should take the new information gathered in the previous steps into account. For the organisation's successful long-term orientation in a knowledge society, however, further considerations are required with regard to the Intellectual Capital. The IC strategy derived from the business strategy is developed to this end. The IC strategy describes the organisation's position with regard to sub-areas of Intellectual Capital. It forms the basis of its care and further development.

The IC strategy is clearly derived from the business strategy and steers the measures to develop Intellectual Capital. The success of the steps taken is measured and evaluated in the ICS and forms the starting point of a new cycle after adjustment to changes in the business environment.

The moderator should guide the team through this process by helping them to reflect on their basic strategic objectives in the light of the fields of intervention identified before: "Which are the greatest opportunities for the development of our IC? And where do the risks lie regarding IC factors critical for the desired business success?"

The team should find a consensus on which intangible resources need development and which other IC resources might be needed to achieve the defined strategic objectives. Moreover, they may discover new strategic opportunities of which they were not aware before.

When the team has decided which IC factors need development as the first priority, they should discuss the measures to be taken in order to achieve an improvement. To support this discussion, the moderator should guide the team to reflect on the defined fields of intervention by taking another look at the QQS Assessment. Does the potential for intervention of the respective IC factors lie in Quantity, Quality or lack of Systematic Management? Put an emphasis on the reasoning given for the QQS Assessment by the team. Often, the problems documented here reveal a first approach for a solution.

When a measure for developing a specific IC factor has been defined, the team should also think about how to measure the desired changes. Here, the IC indicators play an important role again. IC indicators make it possible to monitor the IC factors' development over time and answer the crucial question whether the implemented measures were successful. The moderator can refer to the list of IC indicators provided by the organisation and/or the **ICS Checklist 3.1: Common IC indicators** as a starting point. Based on this, he should guide the team by asking: "Which of the existing IC indicators help to measure the specific objectives of this measure? Which additional indicators could be used as an objective basis for monitoring the measure's effectiveness and success? What is the indicator's desired value that indicates success?"

This methodology reveals the strategy to the employees in a very simple way and hence the direction they have to follow. Everyone in the company was surprised to see how easily the strengths and weaknesses of the company could be identified and how simple it was to define resulting priorities. InCaS process leads to action plans. This is achieved very effectively, within a very short space of time and most importantly, with the employees' consensus.

Marie-Elise Lucida-Jamin, Managing Director and CEO, CORTEL-Group BGME, France

A complete definition of a measure for the development of IC factors comprises the following elements:

- The measure should have a meaningful name.
- Main objectives and desired results.
- Approach: What should be done and when?
- Duration of the measure. When should the main objective be achieved?
- Starting point: When should the measure be started?
- Assignment of responsibilities and resources.
- Which IC factors are to be developed by implementing this measure? What is their current QQS Assessment?
- Which IC indicators help to measure the IC factors' development? Which IC indicator's value signals that a measure has achieved its objective (IC indicator's desired value)?

Box 8 **Evaluation at the Core: Improving the organisation's analytical and learning capacities**

That an organisation will be at the edge of competitiveness depends ultimately on its institutional capacity to *deepen its core capabilities* and to *accelerate learning across its boundaries* (Hagel III and Seely Brown, 2005). The road to this is neither apparent nor straightaway, requiring that the organisation may have to resort to catalysts to speed up the process. This is the case of many measures intended to affect the organisation's IC since behaviours are very difficult to change in the short term. Hence, it is expected that those catalysts which are assumed to enhance the organisation's absorptive and learning capacity will be especially emphasised – e.g. meetings aimed at increasing analytical capabilities and the number and quality of knowledge flows, etc. The *evaluation stage* of a management process serves this purpose. It not only offers the organisation the chance to *go over the assumptions it has made* about the behaviour and evolution of certain variables of both its internal and external environment – e.g. business processes, market trends and breakthroughs, IC elements, etc. – and their interrelationships, but *also provides the space and scope for organisational learning.* The challenge that remains is to effectively implementthe resulting measures. (Note: For deeper insights on this and other related issues go to the Additional Modules M1to M6, particularly M5)

INCAS EXPERIENCE

If there is a climax in the ICS implementation process it happens at this stage. Once the company has described its business model (more precisely, identified its components), identified and assessed the IC factors and defined a set of indicators permitting management of those that are key to achieving business success, it starts a process of "systemic" understanding of its value creation process (i.e. business model) and a phase of deep reflection and questioning about both its structure and content. This reflection is also a hotbed for the measures the organisation might take as part of the Improvement Action Plan. The path for improving the organisation's IC and overall performance is set at this stage. Fruit of Step 4 SIDASA reformulated its BPs to create greater synergies between them to improve the possibility of achieving business success. The organisation also added a factor to the IC portfolio in order to account for its relationships with customers, and ultimately for the strategic objectives of "Improve customer satisfaction" and "Growth". Likewise, Formación Digital, with the help of the Business Processes reality-check (Module M3), regrouped two of its BPs and reduced the number of IC factors by 14. All measures were intended to affect IC management effectiveness and efficiency. (Note: For other examples go to the "Improvement Action Plans" included in the ICS Reports available in the ICS Library, www.incas-europe.org)

Finally the team will have defined a set of measures aiming at the systematic development of particular IC factors as well as a set of indicators for measuring changes in these factors. This set of measures can be viewed as a first rough IC strategy which could be elaborated over time. Based on these findings, the management may think about expanding its business strategy taking into account IC-related objectives and the opportunities deriving from systematic IC development.

"Deriving IC strategy & measures" at a glance

Main questions:
How can the SME develop its IC considering the interpretation of the IC Management Portfolio? Which measures should be implemented for the development of IC factors in order to support our overall strategic objectives (IC strategy)? Could business strategy be extended to IC-related topics and objectives?

Intended findings:
Measures for IC development according to the organisation's strategy.

How to get the intended findings:
*For support see **ICS Toolbox sheet "QQS Assessment",** especially the column **"Reasoning", "IC indicators"** and the documentation of the organisation's strategic objectives.*

After finishing step 4 the company will have gained insight into its major strengths and weaknesses concerning its Intellectual Capital. In order to reflect the company's strategy including these new insights, it may be helpful to go back to some of the extra modules.

In general **ICS Module 5: Learning Cycle** may help to support reflection on the findings gained in the ICS process. Based on this general reflection, some of the following components may be focused again to deepen or adapt the shared understanding of these components taking into account the learning triggered by the ICS process.

The company should consider whether the IC Management Portfolio fits the stated business model. Perhaps the company does not employ the most valuable resources adequately. Consult **ICS Module 1: Enhanced Business** Model again in order to analyse this. In this way, the ICS project team can examine if the business model fits the IC factors' configuration.

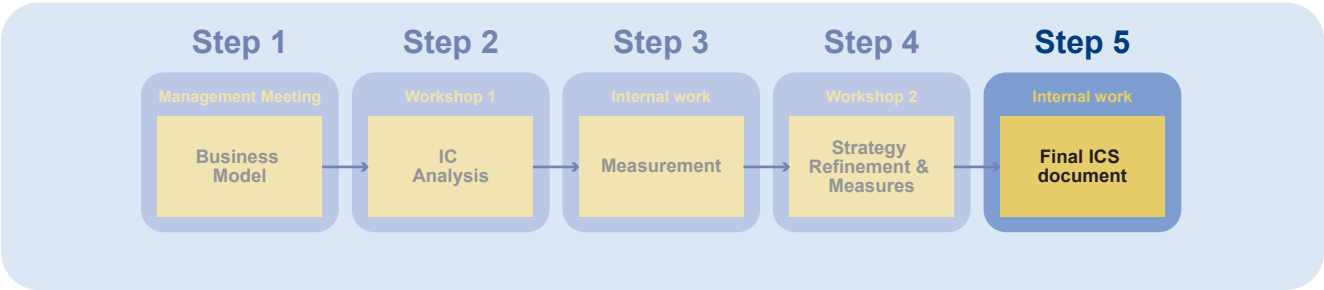
By going back to **ICS Module 4: Business Environment,** the company can assess whether its IC factors' configuration helps to avoid threats and exploit opportunities. By incorporating these two extra modules, the company is able to judge its strategic fit regarding an inside and outside perspective.

ICS Module 6: Follow-Up ICS shows how to track and interpret changes in IC factors. In addition, it helps to clarify what could have caused undesired and unintended changes.

"With InCaS we could reveal the fundamentals of the firm and on this base translate these fundamentals into the improvement of our internal organisation. The strategic reflection included in the InCaS process has been a milestone in the development of Projiris. We could measure the deep change of the company since its foundation and also set new targets for the future."

Philippe Stollsteiner, Managing Director, PROJIRIS, France

ICS Step 5: Final ICS Document



1. Introduction

Step 5 is about compiling and presenting the results of the ICS process in a final ICS document. After the last workshop, the ICS Moderator and the team should have gathered all the information needed to prepare this document.

"ICS Step 5" of the ICS guideline explains how a final ICS document should be structured and which basic content it should contain. Furthermore the ICS Moderator will get all information needed to brief the workshop team as it will prepare the final ICS document internally.

2. Approach

- **What** you should do → Briefing the company's project team
- **How** you should do it → ICS document requirements

2.1 Briefing the company's project team

The workshop team will prepare the ICS document internally. It therefore needs all the information for preparing the ICS document at the end of the second workshop.

An ICS template with a predefined document structure is provided to support this process **(ICS Checklist 5.1: ICS Template)**. Based on this template, the moderator will help the organisation to develop and layout the final ICS document.

Box 9 Structure and content of ICS document

INTERNAL VERSION:
As the internal version is for internal purposes the SME is free to decide about an appropriate structure and content. Nevertheless it should be considered that the more detailed the document is the better it could serve as a basis for decision-making.

What could be included is suggested below:

1. Strategic objectives
2. Status Quo of IC
3. Fields of intervention including indicators to measure changes
4. Measures/actions

EXTERNAL VERSION:
For the external version, it is important to consider that external stakeholders like banks prefer a clear and short presentation including quantifications. Nevertheless they should be provided with a context for interpretation as they do not know the SME in detail. An ICS document for external communication purposes could be structured as follows, for example:

1. Preface – Why does preparing an ICS make sense for our organisation?
2. Summary
3. Description of the Business Model
   a. System boundaries
   b. Value Creation Model
   c. External Business Environment
   d. Strategic Objectives
4. Status Quo of Intellectual Capital
   a. Definitions (HC, SC, RC)
   b. Assessment (HC, SC, RC)
5. Development of Intellectual Capital
   a. Strengths and Weaknesses
   b. Weighting
   c. Fields of intervention
6. List of indicators

As this step is done internally, the process should be supported off-site, i.e. be available to answer any questions by phone or email. An internal version can be generated for management and internal communication purposes.

2.2 ICS document requirements
The ICS document has two major functions and its actual structure and content depend on the intended function. It can be used for internal purposes as a management tool and for external purposes as a communication tool. In the internal version all data should be disclosed whereas the external version might not show all data. The content therefore needs to be adjusted to the requirements of the two versions.

The ICS Moderator should talk with the team and especially with the management about which stakeholders the team wants to address with the ICS document. Depending on this, the participants can consider an appropriate structure and content. The exemplary ICS document template offered by the project should be of great use for the ICS project team. Additionally the moderator should inform the team about basic aspects which help to determine structure and content. The participants need to consider what the different stakeholders expect from such a document. Depending on the stakeholders' expectations and the company's own willingness to disclose information, they must decide which information is to be disclosed and how it is to be presented. Last but not least they must consider the kind of benefit the ICS document should generate for the organisation. Should it help to present the organisation, estimate the company's value or point out strengths and weaknesses for internal management purposes?

The ICS should be brought into the Corporate Identity layout and the insights need to be explained. The acquired data from steps one to four make it clear that the findings can only be sensibly interpreted in the context of the organisation. Completely different conclusions may emerge, depending on the initial situation and the set strategic objectives. An ICS document which is used for communication must therefore provide a description of this context. Furthermore, an interpretation from the organisation's point of view should be given which helps to link all the facts and figures to the company's particular context. Based on these interpretations, the organisation should show which consequences are drawn and how the company will develop its Intellectual Capital to ensure future business success.

Due to ICS, BLOOMING Technologies was able to define the main fields of intervention within our organisation. Building and maintaining close business relationships with the customers and improving the company's organisational structure by defining and implementing a full set of internal procedures were particularly important for us.

Jacek Sikora, President of the Board, BLOOMING Technologies, Poland

ICS Module 6: Follow-up ICS shows how to adjust an ICS document to the requirements of a follow-up ICS.

For minimum requirements ensuring a high quality of ICS see ICS Module 7: ICS Quality Requirements. Module 7 specifies the ICS quality requirements for external reporting, implementation and post-ICS activities. Module 7 is the certification basis for the ICS Audits. Furthermore, it helps to generate a sustainable impact.

Summary

Having gone through the single steps of the ICS procedure, the reader will now be familiar with the main elements of the ICS methodology as it summarises all the basic requirements which have to be met when implementing an ICS in order to respect the common InCaS standard.

At the same time, this document concludes the results and experiences of 25 companies and several leading IC experts on Intellectual Capital Statements within two years of research and ICS application. The success of the InCaS methodology has proved to be vitally dependent on the support of an ICS Moderator who ensures an ICS implementation respecting the basic ICS quality requirements. Training for ICS Moderators is offered according to the standard European ICS approach described in this document. For more information on training for ICS Moderators, contact the national InCaS agency. Contact details of the respective InCaS agency can be found at www.incas-europe.org. Advanced trainings for ICS Auditors is offered by the Fraunhofer Technology Academy.

Also, the support material mentioned in this document can be downloaded from the InCaS website www.incas-europe.org. It provides electronic versions of all checklists and working sheets referred to in this guideline. Furthermore, the website offers various ways of exploring the world of "Intellectual Capital Statements in Europe" beyond the ICS implementation process: more information material on the InCaS method and related topics can help to deepen the insights to Intellectual Capital Statements and the world of Intellectual Capital in general. Additionally, the InCaS project itself as well as the major results and experiences of the InCaS companies during the project are presented in different ways: e.g. examples of ICS documents from the InCaS pilot companies as well as company portraits from all pilot companies can be viewed on the website. Selected multimedia case studies allow insights into the benefits and the impact of InCaS on the individual enterprises.

"Final ICS document" at a glance

Main questions:
Who does the organisation want to address with its ICS documents? Which stakeholders' needs have to be considered and how do they influence the ICS document's structure and content?

Intended findings:
Two finalised ICS documents, an internal and external version.

How to get the intended findings:
- *Give the team the necessary instructions at the end of the second workshop.*
- *For support see working sheet ICS Checklist 5.1: ICS Template.*

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List of Figures

List of Abbreviations

BP	Business Process
BS	Business Success
HC	Human Capital
IC	Intellectual Capital
ICS	Intellectual Capital Statement
RC	Relational Capital
SC	Structural Capital
SME	Small and Medium-sized Enterprises
WS	Workshop