

SETTING UP OF A TECHNOLOGY-ORIENTED COMPANY OUT OF AN INTERNATIONAL RESEARCH AND DEVELOPMENT COOPERATION – A CASE STUDY

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Introduction

Setting up a company always should be preceded by a business plan, which documents the base for planning the company and its development.

In this paper, the procedure is documented for the funding of a service company for infrastructure components which is based on internet-control technologies.

Typical components that require service and maintenance can be elements of the drinking water supply network, or the electrical power grid with its numerous elements.

Other applications can be the maintenance of mobile phone networks including the distributed antenna networks which are often placed on very remote positions.

Kyrgyzstans society urgently needs these services to improve the quality of its infrastructure, but on the other hand the critical economic situation in combination with low legal standards can generate dangerous drawbacks for a newly settled company.

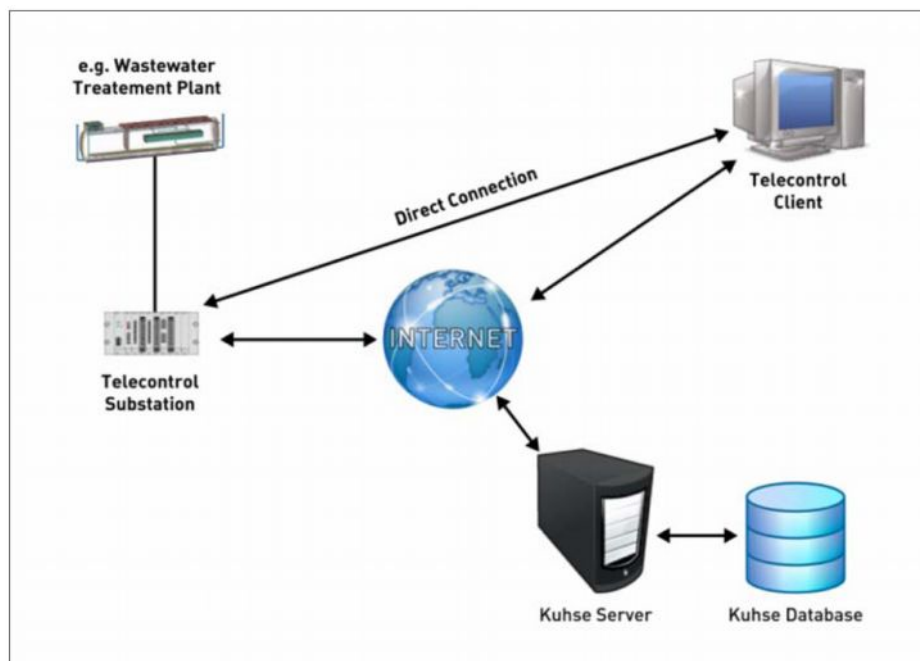


Fig. 1: Concept of an internet-based control-system
(Ref.: Kuhse GmbH – Winsen (Germany) - www.kuhse.de)

Preliminaries and prerequisites

The Kyrgyz Company Bior is cooperating since two years with the German company Kuhse in a joint pilot-project. One of the project's objectives is the installation of internet-based control systems for infrastructure components. Such a system has been installed on a wastewater treatment plant at the Issyk-kul Lake and is operating since 2007. Data about the operation and the performance of the plant now are available by internet. German and Kyrgyz specialists are able to analyse these data in order to check and improve the operation of the plant.

An additional objective of the project was the transfer of technical know-how from Germany to Kyrgyzstan.

For this purpose a close cooperation has been initiated between the KSTU (Kyrgyz State Technical University¹) and CUAS (Cologne University of Applied Sciences²).

Kyrgyz university staff has been educated in the internet based control technology – partly in Bishkek and partly in Germany – and the KSTU has been equipped by the company Kuhse with modern control technologies, so that the prerequisites for a modern education in automation technology have been generated.

Since 2007 already five diploma-theses with the new equipment and modern contents have been successfully completed at the KSTU and the modern automation theory already found entrance in the latest curricula of the student's education.

These activities – strongly exceeding the typical commercial activities of a private company to gain market-entrance – have been made possible by a funding of the German DEG (Deutsche Entwicklungsgesellschaft Contact and Information: www.deginvest.de).

Young engineers, who now finish their education in automation at the KSTU, have gained the latest knowledge about internet based control and modern PLC-elements like the German Siemens S7-technology.

A typical candidate, we call him Asgar X in this paper, has completed successfully his studies in automation engineering at the KSTU. Then he has worked two to four years in the company Bior, to gain practical work, management and economic experience.

From the beginning of his work he is preparing himself for his entrepreneurship, which is supported by the top-management of Bior.

Now Asgar is optimally prepared to start his own small business for service and control of infrastructure-components.

Personal qualifications

Asgar X still has good connections to his university KSTU and his professor, who supervised his diploma thesis. Further he has built up his private network of personal connections within the company Bior and to some of their customers. Based on this network Asgar X will be able to found and operate his business in the beginning as a one-man-company without further employees.

He will acquire his first orders and projects from Bior in the area of maintenance and repair. As it is for start-ups hardly realistic to gain a loan from a local bank, a small interest-free loan will be supplied by Bior for the primary equipment. From this source he also will receive a used car and a small office. For Mr Askar X, who owns only a very small capital, this is a chance of fascinating prospects to start his career with strong partners.

His former professor confirmed that Asgar is a very hardworking and talented student with high commitment who has already been able to handle smaller projects in the framework of study and self-manage successfully.

Askar is married with 1 child. His wife is doing office work in a large company (fixed-income family as a financial reserve), and supports his intention of becoming self-employed.

Main task and operational aspects

¹ Technical Project Partner at the KSTU is Prof. **Rysbek Akmatbekov**; Faculty for Information Technology and Automation; Bishkek

² For more information about CUAS and the ongoing cooperation please contact: Prof. Dr. **Michael Bongards**
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Main task of the new company are servicing and maintenance for infrastructure elements. It can be expected that this industry will grow rapidly, a necessary step, caused by the increasing requirements of a developing country. First activities are planned in and around Bishkek and in the Issyk-Kul area. Besides maintenance further activities are possible in the sale of new equipments based on the direct contact and the good relationship with his customers. These sale – activities are planned in close cooperation with his partners.

In this branch a skilled company with the image of delivering a reliable good work is of substantial relevance.

Since the office of the company should be located in the rooms of Bior, telephone call forwarding will be established so that in the absence of the entrepreneur calls can be handled by Bior

For the first year no salaried employees are planned, the entrepreneur starts his business by his own. After this year it may then be decided whether the entrepreneur's activities can expand and further professionals shall be employed.

The most important strategic partner in Kyrgyzstan will be the company Bior, which in close cooperation with Kuhse in Germany will monitor the market and, where appropriate, will help Askar in expanding his business.

Legal form and domicile of the company

The company is in single proprietorship and is owned by Mr. Askar X.
Salaried employees do not exist.

Seat of the company is: 720040 Bishkek

In the tax regulations of the Kyrgyz Republic, the company is listed with a tax-number.

The registration of the company has been done.

All other necessary permits will be provided in time. Assistance of the Chamber of Commerce and Industry of Kyrgyzstan will be required if necessary.

Start the entrepreneurial activity is planned for 01.01.2010

Banking connections and tax payments

The entrepreneur should be careful in selecting his house bank. Probably a small private bank trust is not useful. If possible, an already longer existing state bank should be selected in which the probability, to lose his money or that the financial transactions will be poorly executed, are low.

The company should use a professional tax advice that collects monthly or quarterly figures about turnaround, cash flow and profit and who is responsible for not missing tax payments.

In the beginning Bior could do the bookkeeping for a small fee. By this method the economic situation of the Entrepreneur Askar X is the well known to his partner, but on the other hand the close cooperation with a strong partner is inevitable, to survive economically in Kyrgyzstan.

Market and competitive situation

The Kyrgyz Republic is a country with strong social tensions. As in many other countries in the world contradictions between rich and poor are increasing and thus the crime. This gives in particularly sensitive areas such as personal safety and other related fields a substantial need for control systems using Internet to transfer data to specialised agencies.

In the field of economy new business areas will be created for measurement and control of data.

The remote system of Kuhse allows the efficient storage and control of data. Some branches of the economy in Kyrgyzstan already use the remote monitoring of data, example are the telecommunications. Here, the wireless transmission towers and associated equipment are controlled

remotely. Similarly, in a wastewater treatment plant on Lake Issyk-Kul the continuous operation of this facility is monitored and appropriate intervention will take place, if there are deviations from the norm.

In recent months, on the Kyrgyz market new low-cost remote monitoring systems from China are offered and sold successfully. This shows substantial maintenance requirements, which currently are not hedged, because the service is not offered.

The entrepreneur expects that the business will concentrate mainly in the fields of maintenance and repair. It is natural that the potential customer will have to pay less for a repair than for a new acquisition.

A company that is targeted on maintenance and repair of infrastructure equipment does not yet exist in Kyrgyzstan. Often this work is done by computer companies, which also have other areas of activity, along with serving.

Here for the funding company of Askar a great competitive advantage is available. Especially a unique position is generated by the close cooperate with an alliance of companies from Germany and Kyrgyztan - Kuhse and Bior. This unique selling proposition to potential customers must be constantly promoted and good quality work will be one further prerequisite to evolve the company.

Operational Organization

Mr. Askar X is individual entrepreneur and sole worker of his company.

All the work in the company is done by himself or with strategic partners of his firm. Parts of his work are:

- Acquisition
- Manage marketing activities (in collaboration with Bior, that sells equipment to be serviced and repaired)
- Internal organization such as orders
- Office (billing system, controlling, contact with state institutions such as tax office, etc.)
- Work with the customer

This requires a clear planning within the available working time, and it is not an 8-hour day.

Depending on the order situation - and the entrepreneurs must experience to gather the perspective -at least 1 day per week must be available for work in the office.

Further he should consider some travel time in the area around the lake Issyk-Kul.

Orders during the business time can be documented by the Bior–Office. If operations should be coordinated, the office can inform Asgar by mobile phone about the next destination.

A good service will be communicated among customers and potential customers and will result in a good image of the entire system (Kuhse – Bior - Askar X).

Expected Revenue and Profit

A minimum of sales is estimated for the following calculations. The private costs and a potential capital value are approximated.

Sales are generated from 2 main sources of revenue:

- Repair / Maintenance
- Commission for orders placed on Bior.

For the sales planning it has been assumed that during the summer months, and shortly thereafter increased repair and maintenance expenses will be generated by the customer.

It can be assumed that these revenues are minimal necessary to have sufficient liquidity and to cover all costs and expenses to cover debt service. Any additional revenue beyond that, should apply to reserves for further investment or as a cash reserve.

Later, in good business times, is also an increase in private abstractions possible. For now private withdrawals are not used for luxury and only the truly necessary expenses are covered. Each company should have a certain cash reserve at the end of the year. The minimum turnover also takes account of this.

Marketing Concept

The marketing or advertising expenses should be in financially manageable limits. Advertisement is useful where the target clientele shall be reached or the personal contacts are to be searched.

However, this presupposes that the entrepreneur always

1. Knows, observes and communicates with his target group.
2. Knows, observes and visits his target region.
3. Keeps his service at a high level (corresponding to the expectation of the target group), fitting to the expectation of the customers questioned, fitting to changing needs of the audience and according to the price of the region and the business needs
4. Will use effective advertising and promotional tools, like Corporate Design (consistent layout in the presentation of the Company outwards), well designed business cards, advertising, flyers and letters to companies in the target region with a short presentation of the Services – Design.

Strengths / Weaknesses and Opportunities / Threats

Based on the analysis in the preceding chapters a detailed business-plan has been generated to calculate all financial aspects.

Additionally some reflections about the positive and negative aspects in form of a SWOT-analysis (Strengths / Weaknesses and Opportunities / Threats)³ are documented in this chapter.

Strengths and opportunities of the Entrepreneur

- Entrepreneurs from Kyrgyzstan who speaks both Russian and Kyrgyz
- Entrepreneurs have strong strategic partners (including Kuhse and Bior)
- Receive support for these partners at the company launch and later in the marketing
- Has very good training and practical experience
- Brings entrepreneurial qualities such as perseverance, willpower, assertiveness and risk
- Has good communicative properties

Risks and threads of the entrepreneur

- Failure by illness, accident, etc.
- Unpredictability of economic and political stability in Kyrgyzstan
- Strong price increases
- Unexpectedly strong competition pressure
- Underestimation of the operational controlling

³ SWOT Analysis is a strategic planning method used to evaluate the Strengths, Weaknesses, Opportunities, and Threats involved in a project or in a business venture. It involves specifying the objective of the business venture or project and identifying the internal and external factors that are favorable and unfavorable to achieving that objective. (Ref.: en.wikipedia.org/wiki/SWOT_analysis)

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