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American Technology & Management Advisory

16 Case Studies

Important Technology Learned on the
Kharkiv, Ukraine Study Tour to the U.S.

Construction and Design

Center for Economic Initiatives (CEI)

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U.S. Host Companies

American Homes, Decatur, Indiana
Caterpillar, Cincinnati, Ohio
Cimex (formerly Southdown Cement), Cincinnati, Ohio
Dugan & Meyer, Cincinnati, Ohio
Ethan Allen, Cincinnati, Ohio
Florida Tile, Cincinnati, Ohio
Franklin Brick, Cincinnati, Ohio
Gilkey Windows, Cincinnati, Ohio
H.C. Nutting, Cincinnati, Ohio
Hilltop Concrete, Cincinnati, Ohio
Home Depot, Cincinnati, Ohio
Mees Tile, Cincinnati, Ohio
Messer Construction, Cincinnati, Ohio
Northbend Crossing Site, Cincinnati, Ohio
Ohio Valley Precast Concrete, Cincinnati, Ohio
Reading Rock, Cincinnati, Ohio
Schmidt Homes, Cincinnati, Ohio
Steelcraft, Cincinnati, Ohio
Turner Construction, Cincinnati, Ohio
University of Cincinnati, Cincinnati, Ohio

Important Lessons Learned on the U.S. Kharkiv Construction Study Tour

June, 2002

Introduction

At the completion of the Kharkiv Construction study tour to the U.S., the Center for Economic Initiatives (CEI) conducted conferences with each of the participants to discuss the U.S. company visitation program and to assess the technology learned by the participants. It was anticipated that there would be benefits to the Kharkiv firms in productivity, marketing, management and technology.

Many of the participants talk about their impressions of U.S. construction management and organization. As a result, significant organizational changes are anticipated on their return to Kharkiv.

The results of what was learned indicate that dramatic improvements are projected for the Kharkiv companies. In summary, the improvements and lessons learned for application in Kharkiv as stated by the participants include:

1. Some of the participants had been considering the manufacture of prefabricated homes in Kharkiv. The visit to American Homes was of invaluable assistance to these companies;
2. They will try to implement the system of relationships that are present in the U.S. between the customer, the general contractor and the architect;
3. The use of U.S. type insulation and flat roof design for longer lasting roofs;
4. The installation of project managers in the architectural office and on the construction site;
5. The use of subcontractors for special projects and/or tasks;
6. The organization of a Union of Contractors for price control and for communication between industry members;
7. Develop a design/build and management service;
8. Use poured-in-place concrete on the job site;
9. To develop a combined heating and air-conditioning system;
10. Invest in upgraded computer systems for construction and architects offices for improved productivity and quality of work;
11. Improved attitude of workers and improved quality of the finished product.

Case 1: Oksana Bykovets, 23rd of August, Advertising Manager

Company profile

Established: 1993; Ownership: Collective; Number of employees: 11

The enterprise is involved in design of fascia panels, interiors, illuminated signs and advertising boards. Since its establishment the company has been constantly increasing the number of its orders and the range of their products and services. In spite of intensive competition in the field of its operations, the enterprise occupies a stable position in the market and tries to increase its market share by improving the quality of products and by using advanced construction technologies and modern materials.

Presentation

Actually I was assembling my final conclusions on what I learned on the study tour when I was preparing for this interview and I found that I had about 20. I realized that it would take too

much time if I would mention all of them. Therefore, I just picked a couple of them and now I will try to explain why I did so.

All these U.S. companies have different facilities; they use different technologies, they have different numbers of personnel, and they have different profits. Therefore, the most useful item for me out of the whole visit is not some particular aspect such as production or information, but what I found most useful were the general approaches to the way construction work is arranged. As we have been visiting these different companies I discovered, along with the other study tour participants, that a lot of things we have seen we already know and we even refused to use some of them. But unfortunately, even though we seem to know all this, and it is nothing new, it is just not working right in the Ukrainian environment, which means that we are still missing something. We still have to learn something.

What I am talking about is the general human and not the technical approach to construction. First of all I would like to mention the workers factor and the human resource aspects that are typical for most American companies, which are just missing or are forgotten by Ukrainian companies. This is the attitude the U.S. employees have towards their work. They are devoted to it. The second thing is discipline. There is very strict discipline. No late arrivals, no oversized breaks, and of course what really impressed me the most are those billboards in the factories (which we had for so long in Ukraine) and which are so extensive in the U.S. because each day a person can see a vision of the result of his work. I think that in my company in particular, and for most of the companies in Ukraine, a very important objective is motivation for employees. You have to make a person feel a part of the whole organization. Maybe you have to resort to patriotic feelings of something like it. Steelcraft had an “Employee of the Month” sign as did Florida Tile and others. There were pictures of the people who were the most productive. I think this is the way to start to motivate the workers.

This tour, in my opinion, must make all the participants thoroughly think over all the things they have seen and what they already have observed before; and have in reality now in Ukraine; and they have to realize that everything depends on them – what they will do.

Now I would like to say a couple of words about the useful things I learned in terms of what applies to my company work. First of all I would like to mention an experience at Ethan Allen, the interior design company. The work they do at Ethan Allen is very similar to the work we should do at our company in terms of customer relations because we have to work with customers a lot. We have a tendency in Ukraine to not mistreat, but to under treat our customers. We don't value them enough. Ethan Allen does everything possible when they start working with customers. They try to make them come back again. They take into account his or her preferences, the likes and dislikes, and things that work for this particular individual.

A couple of other factors that would be nice to implement in my company is to restructure our firm from a private to a public company because that is what Ethan Allen did. Another important factor is that Ethan Allen owns its own raw material resources including wood mills. So it plans to use these materials in its own furniture production.

Another important merchandising factor I learned is that most American manufacturers, such as Reading Rock, don't just distribute their own products, but also distribute products made by others, including those of their competitors. If you take Reading Rock as an example, the

distribution of other manufacturers' products makes it possible for them to put a 30% markup on products they take from other companies. So that is a mutually beneficial relationship for both the manufacturers and for Reading Rock. It will help to put the company into a very competitive position without having to re-invent a product or just make some extra effort to manufacture it.

I think it was very useful and very impressive to visit American Homes in Decatur Indiana. This was mainly because it was the first visit to a large company during our trip and of course it impressed me greatly. Actually, everything in the firm impressed me. The main thing was that I had a chance to see the houses literally growing right in front of my own eyes starting from the wood parts. You go along the conveyor and you get to see the complete house assembled.

Another thing that I will take back home with me as an experience of this company is the very practical system of rewarding the workers' labor. It is not only paying an hourly rate, but also has overtime pay and there are bonuses.

Another very important factor in the U.S. is the use of advertising. Even though in Kharkiv we are dealing with advertising to a certain extent, we don't pay enough attention to advertising our company itself. This is just one of the learned aspects; our company is preparing advertising campaigns for other companies and other products. We do billboards on the highways, organization of different shows, concerts, and fairs for other companies. There is a Russian saying that a shoemaker doesn't have shoes, so that is what happens in my company. Somehow this issue needs to be improved.

I liked the visit to the Gilkey Window Company; there were a lot of things that impressed me. For example, the high tech production processes that they are using there, the technology of using the heat-mirror effect, the special film they are using inside the window plus of course the high quality of assembly made a big impression on me.

I can't tell you the exact percentage by which this program will affect our sales since I don't have the background to do this, but I am pretty sure that it will not be less than 30%. Of course this is not the first improvement issue to be solved, but it is the most important one.

Dissemination

First of all we are going to have a discussion at my company. And of course I will bring all the materials I got here - there is so much of it. And all of that will be shown to them and analyzed. Of course there are other places where I will talk about the tour. This will include the companies we are working with – our customers and suppliers. Of course this tour will be a significant event in Kharkiv. We will get a lot of interviews and I hope we will be TV stars soon.

I just want to say that the tour itself became a fresh management input for me. It was a new learning point from which I can start because I will now begin working in a new direction and I feel that I have a lot of new potential to do it.

Case 2: Oleksandr Chub, Kharkovstroyproekt, Director

Company profile

Established: 2001; Ownership: Private; Number of employees: 45

The company was established in October 2001. In November it received its state license for conducting design and construction work. The enterprise has highly qualified engineers possessing long practical experience in the construction field.

Presentation

I have been impressed by what I learned in a lot of the companies we have seen here. Some companies possess very high production technologies and well organized production processes. Other companies, for example, impressed me with their management and organizational structures and certain economic parameters. Of course taking into account my specialty, the most interesting companies for me were those with technologies for making reinforced concrete. Again I had a chance to see manufacturing methods that are still fairly new for Ukraine. These are the construction of multi-layered exterior walls that are finished using dry walls. For instance here I could name companies such as American Homes that manufactures residential houses. If you are talking about pure technological aspects, all three construction sites we visited were highly interesting, productive, and useful. Those were Turner Construction, Dugan & Meyer, and Northbend Crossing sites. And all these three projects were pretty much typical and very interesting examples of infrastructure. I have seen a lot of very reasonable and smart planning solutions as well as efficient general organization of the construction processes.

I will definitely try to implement the system of relationships that are present in the U.S. between the customer, the general contractor and the architect. I have actually been trying to establish work of this sort for a number of years but unfortunately in Ukraine we still have the system where the customer, the architect and the general contractor are on totally different sides of the coin. In this type of Ukraine organization first of all the land is bought, before the construction starts. Then the infrastructure for the entire project is prepared, and only after one or two models are built and sold do we start the whole process. The reason why this U.S. experience is so useful and important for me is that last year I turned my company from a pure design company into a design and build company. And now I plan to get a piece of land from the city in my company's name and after that start implementing the same U.S. process of building houses and then selling them gradually and then repeating the process all over again. Therefore, I would like to say that not only the U.S. technical practices, the organizational and structural ideas are very useful for me also. I have been here before and it is a non-stop constant learning process. I would like to say that I am especially grateful for CEI because they have given me a lot of new information.

After all, the experiences I have had here will definitely have a great impact on my company. As Volodymyr Ilyin has said, I plan to start with organizational restructuring and even though my company is a design / build company, in a pure construction aspect, it is quite young. It is only half a year old, but I can say that after all the information I have learned during this tour, my profits will at least double. And I am serious about it.

Question: How were you going to do this?

Reply: Unfortunately my profits in the past were not extremely large. But in the three weeks that I have been here in the U.S., I have been completely analyzing the interrelationships between different parties and I came to the conclusion that there is a lot that can be changed. And of course I will try to teach my partner how to work in this same manner. Some people in my firm will be released and others will be more motivated.

And of course I am not going to hide any knowledge or information that I learned here. I am going to teach and I am going to pass it on to them because that is what I want, and that is what is profitable for me. So the increased profitability will be due to improved productivity of the existing industry people. Besides, I think that several people I am working with right now on the tour need extra computer classes and I am going to arrange it for them.

This organizational and restructuring process and training for Ukrainian personnel is of course a very important aspect but another thing that I would like to specifically highlight is the architectural tour to Chicago and the University of Cincinnati tour that were not long enough for me. I needed both of those tours because in order to be successful, I want to be the best, the most qualified, the most competitive architect in Kharkiv. And in order to be such, this tour helped me a lot. Basically, since I have seen so much on this tour, I am going to improve in those areas in which I am now working. So the higher qualifications will help me increase my sales and profits.

I would also like to say how satisfied I was with the entire program. I can quite modestly say that my sales should increase 30% and when you come to Kharkiv. You will be able to see for yourself. I don't think that a figure of 30% is surprising for a young company like mine. If I was talking about only the design function, 30% might be somewhat surprising. Since I am now engaged in construction, the company has a lot of growth potential. When talking about design issues, the only way to improve your competitive position in the market is to become the best architect in the City, because people are paying not for the number of drawings you give them, but they are paying for your name.

I wish I knew you in 1991 when we came back from my first trip to the U.S. We were treated like the first men to go into space. We had 250 to 300 people at every lecture or meeting we attended. And those meetings were organized in all design and architectural organizations both at the city level and district level. Of course articles were written, lectures were made and they were distributed to many people. Of course this time there will be no meetings on such a large scale but we will definitely conduct such meetings, give talks and disseminate information. Based on my experiences during the whole tour, and since I have already talked to most of the tour people, the greatest amount of information and knowledge will be disseminated through the Association of Contractors which we are going to establish in Kharkiv as soon as I get back to the City. I have talked with most of the members of this tour group and all of the members of this study tour are going to become members of this Association. We are also going to involve the most well-known and profitable construction companies in Kharkiv. This group will be merged with the Association already set up after CEI's first Kharkiv study tour. This idea was definitely discussed some time ago, but right now the situation is that we just need to fill out the proper paperwork to get registered. So we believe that all will be completed when the CEI follow-up group returns to Kharkiv, the new Association will have been formed.

Case 3: Volodymyr Gavrylov, Zodchiy, Chief Engineer

Company profile

Established: 1989; Ownership: Private; Number of employees: 24

The enterprise was established in 1989 as a production cooperative. In 1995 the cooperative was reorganized as the "Zodchiy" Ltd. The main directions of the company's activities are:

- design work;

- development of city-planning documentation;
- architectural design;
- construction design;
- design of engineering networks and systems;
- project special sections development;
- engineering work in the construction sector;
- buildings and networks inspection;
- functions of general designer and contractor.

In 1997 the company began to automate design work using personal computers. Currently it has 15 working places connected in a local network. Company specialists were trained in graphic programs: AutoCAD 14, ArchiCAD, Adobe PhotoShop, 3D Studio MAX, etc. Since 1989 the company specialists have developed more than 400 sets of design plans and specifications.

Presentation

Everything I saw on this tour was very interesting, especially the manufacturing companies using computers and automation. The first thing I want to mention is the Ohio Precast Cement plant. I was amazed by the fact that there was not excessive dust which is typical in a cement plant. Then I also liked Gilkey Windows and Ethan Allen with its design methods using traditional American designs. Steelcraft was very interesting where we saw one machine that replaced 10 people. I just loved Mees Tiles and the Dunn & Titus construction site at Northbend Crossing. There we discussed construction management and talked in depth about that concept. I really liked the way the homes for the elderly so cleverly built into the landscape. I was also just amazed at the speed of construction. We just don't have anything like that in Ukraine.

There are many ideas we can use back in Kharkiv. Some of them are:

1. We need to look at our internal organization and the idea of increasing productivity. There are many things we can do to help in this regard.
2. Our company with its staff of 15 should consider becoming construction managers. I believe this will help us double our revenues. That is we will be able to increase our sales by 100%.

I am afraid that I did not completely appreciate the banking system in the U.S. and its role in construction. In Ukraine the interest rates are 25-30% and you cannot get long-term loans. The result is that we do not use the banking system when financing construction projects and we must rely on government funding or private funding.

(The remainder of the discussion dealt with the details of raising funds for construction in the U.S.)

Dissemination

I have many colleagues, friends and acquaintances and I am sure they will be very interested to hear about our study tour. As you know, I am the technical writer for this study tour and I have worked each evening on this project by reviewing and updating my notes. Then I certainly plan to write several articles because this study tour will give me a wonderful opportunity to promote our company and me personally.

Case 4: Volodymyr Ilyin, KDSK-1, Chairman of the Board

Company profile

Established: 1961 (privatized in 1995); Ownership: Collective; Number of employees: 390

The enterprise was established in 1961 to build residential houses. In 1963 it began to erect kindergartens and schools. In the late 80s the company became one of the largest enterprises in the region. It built 70% of all the multistoried residential buildings in Kharkiv. In 1990 the enterprise expanded its sphere of operations and began to produce reinforced concrete items, design and construct dwelling houses and other facilities. In that period we constructed 600,000 square meters of residential houses a day.

The company's production facilities are located on the square of 46.3 hectares. Currently the enterprise produces wooden and claydite construction materials, metalwork, different wooden items, concrete. The firm also carries out some design and construction work.

The enterprise has a facility equipped for the production of all the reinforced concrete items needed for erecting assembled multistoried dwelling buildings (280,000 square meters of apartments a year). Unfortunately, currently this facility doesn't operate because of the lack of orders for residential houses.

Presentation

I really liked many of the interesting plants we visited on this tour and I also liked seeing many of the completed buildings. The ones that I liked best were Steelcraft, Ohio Valley Precast Concrete and Florida Tile. They really were ideal production plants and quite unlike anything we have in Ukraine. They were highly automated and used a minimum of manual labor. The employees were mostly engaged in operating the plant and equipment.

The quality of the U.S. product is clearly important since they have installed very good quality control systems. The high productivity of the production lines and the high quality of the products clearly lead to substantial profits.

We also visited a plant that manufactures cast stone. In contrast, at this plant all the blocks are produced manually. They starting with making the melt itself, loading and unloading the raw materials, fill, and then tampering the mixture plus additional pressing and tamping using manual tools such as vibrators, and finally taking the already made stone out of the molds, also done manually. But as I think, such way of doing the operations cannot be called a disadvantage for this company. Why I think so, the technology that is used, and the production processes which are mostly manual require very high attention from the employees who perform the operation.

I am going to use the technology that I have seen at Steelcraft. And I will also use plastic on the window frames and door frames we produce. I would like to apply the technology of making cast stone that looks like natural stone. We saw that at Franklin Brick and I will try to use it. The technology of making cast stone is fairly simple and does not need large investment and equipment such as the operation we saw at Reading Rock.

We are already making similar doors like those at Steelcraft, but our production process itself is not non-stop – it is not based on a conveyor system. We have a batch system and of course it requires way too many expenses. The production line and conveyor line I have seen at Steelcraft

of course meets all the latest requirements and is much more efficient. But I do realize that it is quite expensive but we will do what we can. We can do it in little stages.

Those four companies were the best from my point of view. Actually all the companies we visited were useful and excellent, but I am just trying to seek know-how from the companies which are the best to apply in Ukraine – not only the ones I liked the most. I would also love to use the technology we saw at Reading Rock when they cut the stone in such a way that they get the rock texture on one of the surfaces. And I also want to use this type of stone for retaining walls.

I do realize that it is quite difficult to achieve good results with such types of stone. And I do understand that a lot of tests were carried out before they actually got to the point where the technology was good enough so that at the right time the stone was cut in half and the required texture was preserved.

The second advantage of using this type of stone in retaining walls is that the cast stone is hollow inside so when you place it in position to hold back the soil, the soil penetrates and interacts with the stone and then the combination acts as a whole. It is a very smart engineering solution and there is a demand for that in Ukraine.

In order for something to change in my company, I definitely need to restructure it. And this should be done in several ways. I think that first of all I will start with the organizational structure of the company. In the process of organization I might just totally abandon certain services or departments because I might discover that I don't need them and certain departments will probably get other scopes of responsibilities. At the companies we visited the ratio of blue-collar to white-collar workers is probably 6:1 roughly. But again, these white-collar workers, the ones who are on salary, don't just make a salary, but they also participate in the product distribution most of their time. This means that most of the time the biggest earnings they make is what they get from the portion of products they sell. This is the first step that I will do. The second step is that you cannot improve the cost or the profit of the company without making a technical restructuring. If we are talking about Ukraine, the situation in Ukraine for at least the last 30 years, there were no serious attempts made to really restructure and improve the industry of Ukraine from the technical point of view. Almost no investments were put into new equipment. Of course technical restructuring requires capital equipment.

I will be making some capital investment. I am going to start from improving my organization and gradually move forward. There is no other way to solve the problem. For example, I would like to mention the fact that in the U.S. concrete batches, regardless whether it is pre-cast concrete or monolith concrete, the system of control of the number of ingredients put into the batch is fully computerized. At my company we pretty much made the entire process automatic in about 1985-1990. Since Ukraine was still in the Soviet Union, I got an Honored Citizen of the State Award.

I may do organizational and technical restructuring at the same time.

Talking about marketing in construction in the U.S., there is a very effective triangle system of relationships between the customer, an architect, and the general contractor which proves to be highly effective and very useful. In other words, a customer finds an architect first. An architect

in turn has been working in this market for some time and knows which general contractors are the most reliable and probably has the authority and usually uses this knowledge to recommend to the customer a good reliable general contractor. Therefore, when this triangle is closed, the actual construction tasks become much simpler. It is much easier to find subcontractors and control their work and of course all this together improves the quality of the construction when they are going through the commissioning stage.

The relationships in Ukraine are built in a totally different way. The customer usually works separately with architects, and when the design itself is ready, then the customer looks himself for a general contractor. A general contractor, contrary to practice in the U.S., is usually a very large construction company that will do 70% of the work on the project itself.

So, in other words, a general contractor in Ukraine has his own employees, materials, and construction equipment. General contractors will hire subcontractors only for specific work such as electrical work, elevators, plumbing, etc. I really think that this system that we have in Ukraine is not that effective and is, in truth, much worse than what you have here in the U.S.

CEI: How will the changes affect you company in costs, sales, or profits?

That is why I was talking about the reorganization and restructuring of the company first. It is very difficult to calculate the exact figure, but I would like to say one thing. If you restructure the company you will pretty much come to the situation where all the employees who are useless and who don't have to be there, you can pretty much let them go. And in that way you will save money and you will make those people who are left and who are professional to be motivated for the final results. I think that right now, without making any capital investments, with only the restructuring, it is possible to increase the profit of my company by at least 3 percent.

Dissemination

First of all I would like to mention that I am a member of the Council of Cooperation of Ukrainian Constructors. Every three months in Kiev we have our regular conference attended by about 250 people. These are the representatives of the largest construction companies from all over Ukraine. Therefore I am going to make a speech there at one of the conferences that will include a detailed report about my tour to the U.S. The same Council publishes a special newspaper related to construction. Therefore, I hope that with the help of this newspaper my information will be disseminated all over Ukraine. The corporation was established on the base of the former Ministry of Construction of Ukraine. I believe the circulation of the newspaper is over 1 million.

Case 5: Mykhaylo Komar, Modern Technologies & Design, Director

Company profile

Established: 1999; Number of employees in 1999: 10; in 2002: 50.

The enterprise was established in February 1999 as an affiliated company of the Kharkiv branch of the Academy of Technologic Sciences of Ukraine. At the beginning it conducted only interior design work for cottages and apartments. Late in 1999 the company began maintenance and construction work. In 2000 they started capital construction activities. The company is involved in industrial (20%), commercial (60%) and residential (20%) construction.

Equipment includes perforators, electric hammers, drills, etc. When necessary, the company either hires sub-contractors possessing the necessary equipment, or rents equipment which is needed.

Presentation

First of all I would like to say that of all the companies we visited, the ones of greatest interest to me, were the pure construction companies. Out of those construction companies, I would like to highlight Northbend Crossing, American Home, Turner Construction, and the parking garage for the hospital. These U.S. companies in particular are not in construction works itself, but in construction management, and of course technologies. The main thing that totally astonished me was the technology of pulling cables inside the concrete giving tension to the concrete after it had already obtained the necessary amount of strength. The Simens concrete forms we saw at the roundtable were just unique. Actually, I did like the whole architectural concept we managed to see during our tour of the University of Cincinnati. It was very impressive. There were certainly ideas that I can take back and use. All the ideas I have I would like to discuss separately in several areas.

First of all is the organization of the construction itself. Before this trip to the United States I was very much against the subcontracting system in construction organization. Right now I have about 100 employees in my company and after visiting construction companies and projects in the U.S. I realize that five highly professional and skilled construction managers can manage 100 or 200 regular construction employees. But of course to implement it, first of all you must have a legal safety system in place including legal insurance. I mean insurance for the interrelationships between all parties who participate in the project: the customer, the general contractor, and the subcontractors. So that is where I see the problem – to legalize this type of relationship because of the insurance. The type of insurance you have in the U.S. is totally different from what we have in Ukraine. I think that the contract with the subcontractor itself is not as important as the availability of risk insurance.

I think that the maximum increase in profits I will see from the study tour is 20% including the fact that we are now calculating our profit at 10%, which is the same as we have seen here. We plan for profits at the beginning of projects at 50%. Otherwise nobody will work.

I will definitely implement a system of quality control. On a regular basis we will initiate an evaluation of all employee's performance.

Another interesting U.S. practice is the hourly wage – not monthly or weekly, but an hourly wage. Of course it helps a lot to increase the profit of the company if you pay on a per hour basis. The reason is that if you have an hourly rate you would pay a salary or maybe just a higher rate to a foreman who manages lower paid and fewer numbers of skilled workers. Furthermore, if you use a monthly rate everyone pretty much has the same wage by hour. You pay them and they will work hard to finish the construction project as fast as possible because they get money at the end of a period of time. So they work faster and faster and the quality of their work is not maintained. And then you have to come back and redo it and workers get paid for it again. See what happens.

Now everyone at my firm gets paid about the same monthly salary. However, I have 5 or 10 people who make good money and all of them had good experience having worked in Europe in

construction. They are our key construction workers and they are very good professionals. But when you pay by the hour, it is better for the company because the workers don't over speed the completion of work because they think: "every hour we get paid so it doesn't matter if we finish it in two weeks or three weeks". They don't have a tendency to skip the quality of their work. If they are paid by the hour they will spend more time and care on what they are doing. Another important advantage is that they will be on an hourly wage that is considerably lower than the foreman's wage. So therefore they will listen to him and he will be in better control of their work and the time period they spend on any particular task. Now they just don't pay much attention to the foreman who is just someone who is there.

At Northbend Crossing project I liked the way the construction was organized, including the time period and the time schedule. However, I think it is better in Ukraine when we use metal for the framework instead of wood. At Northbend Crossing the entire framework is wood. I think it would be much cheaper than the way we traditionally build houses right now. What would be less expensive is that right now in Ukraine instead of having multi-layered walls, you have walls 60 cm wide. In other words, it would be much faster and cheaper to have multiple layers than to build a 60cm wall. For example, the wall would have a layer of framework, a layer of drywall, a layer of insulation, and then the cladding, which simple and faster.

And of course as you know unfortunately in Ukraine, the financial system just does not work. It just doesn't. If we would be able to improve the financial system itself just a little, everything would be just great.

Concerning the forms for concrete, in Ukraine we make our forms out of wood as opposed to the metal used in the Simon Company's forms. If you calculate the amount of wood we need for the concrete forms for one house, you use as much wood as you would use to build a complete house as we saw at Northbend Crossing. It is too much wood. And the quality of the wooden forms we use in Ukraine right now is awful. It just bends all the time although it is not supposed to.

I would also like to mention a couple of minor points. First is the U.S. conveyor system for the manufacture of prefabricated houses, because we do produce dacha houses but our system is not a non-stop conveyor one. It is split into different stages.

Another thing is, coming back to concrete, I still don't understand how here you get such a smooth surface on the concrete that you don't have to putty or plaster it. As long as you get such a texture, there is no need for additional operations. You don't need to spend money on it. We need to plaster it, or polish it, or putty it.

CEI Answer: The concrete used is the same everywhere. It depends on the type of form you use. There is difference in the type of material we use in our forms. But if you don't use forms, you get different results. Even if you use coarse gravel you will still get the same smooth surface if you vibrate the concrete. If you use wood forms, you must spray the wood forms with clean motor oil. You keep it soaked and then you pour the concrete in there and in 2 days when you take off the form, it will be smooth.

I really liked the capstone producing plants. As soon as I get back home I will try to make a part of my company produce them. I want to use this capstone feature not only for decorative material but also for load bearing material because what we have seen at Franklin Brick was

mostly decorative stone. But what I want to do is to make the stone perform both functions – load bearing and decorative. Unfortunately, the technology of dry concrete they use in dry mix at Franklin Brick is not in compliance with Ukrainian climate conditions. Inside it is perfect, but outside it presents a problem. It will be very convenient for me to produce this type of stone for my own needs plus to distribute it to other companies and that would be very profitable.

Dissemination:

I will do all I can with newspapers, TV, conferences, press; whatever is possible. Of course first of all I am going to communicate with my colleagues. I have a lot of friends and acquaintances in the area of construction in Kharkiv. The first thing I will try to do is to make our operations at least similar to that triangle of customer, general contractor, and subcontractor that I was talking about earlier. And I will try to implement in practice with my partners all those issues of contracts, insurance and other issues I have been talking about. And they will in turn disseminate it further.

It will be useful to bring here lawyers familiar with construction along with construction participants so there would be a mixed group of those special lawyers so they will see how the whole systems works here.

Case 6: Oleksandr Kulankhin, Crystal, Deputy Director

Company profile

Established: 1997; Ownership: Private; Number of employees: 21

The company was established in 1997. At that time it had 7 employees and was a supplier of construction materials and natural stone. Since the enterprise's founding it has been conducting finishing work using natural stone. The firm uses granite, marble, basalt, sandstone and other materials.

In 1999 the company became an operator of the “Kometa” granite producing factory. The factory products were used for finishing work at the Kiev rail-way station and Independence square in Kiev. Many of the factory products are exported abroad.

In 1999 the company received an order for reconstruction and finishing work of a stadium located in Akhtyrka (Sumy oblast). Since that time a big part of their production volume is in construction, mounting and finishing work at different athletic facilities. In 2001 the company won a contract for reconstruction of the athletic facility of the Kharkiv National University. Currently we have finished several premises for the International fencing complex where matches of world champions and Olympic Games medalists are conducted. In 2002 the company plans to continue construction and mounting work at the volleyball, basketball and auxiliary facilities of the University sports complex.

Presentation

I really liked all the companies on the tour and especially the ones that were most highly automated. I especially liked Mees Tile and was interested to see that they also sell products manufactured by other companies. I thought that they had a great collection of tiles and marble. As a result of what I learned, I will try to set up a wholesale warehouse on Kharkiv to sell granite. I have also decided that it is best for me to buy new equipment and not buy used equipment.

I also liked the visit to Florida Tile and we will use the information I learned there to start to make similar ceramic tiles in Kharkiv.

In construction we badly need an association in the construction field to assist companies in the industry. This should include architects, designers, and construction companies. An association will have many benefits including a way to keep informed about what is going on in the industry and will help the smaller companies get subcontracts. It should also help us in dealings with suppliers, and most importantly will help us lobby the government on policies related to the industry.

The association will help to promote our industry through new marketing campaigns. This will help us to find new clients.

We have seen many new ideas concerning marketing of our services and products. A more aggressive marketing program certainly can have a big impact on our sales. Since we are a design firm, we will introduce the idea of offering home visits where we can more effectively and conveniently discuss the client's needs and wishes. Then we will be in a position to make more effective recommendations and we hope they will be accepted.

I would like to implement an insurance program such as you have in the U.S. We need to decrease the financial risk of doing business in construction and design. I also liked the way you in the U.S. get access to loans and credits. These are really most important in the construction business.

At the University of Cincinnati they explained the coop system they use. I feel that system would work very well in Kharkiv and we will try to implement it. We can use a few interns and it would be a wonderful experience for them to get some real practical work in addition to their academic program.

I liked the idea of Construction Management and will implement it at our company. I believe it will drive down our costs and help the profitability.

We saw at Caterpillar that it is possible to lease equipment. Since we do not have need for equipment all the time, we would prefer to lease it from others.

Dissemination

I have many friends and colleagues that I will talk to about this tour. I think I will talk to at least 25-30. In addition, I plan to write two articles.

Case 7: Igor Malafey, World of Wood, Director of Marketing & Dev.

Company profile

Established: 1999; Ownership: Private; Number of employees: 56

The company was established in December 1999 when foreign equipment made in Germany, Holland and Poland began to be shipped to Ukraine. Currently the enterprise is growing very intensively due to aggressive marketing policy and advantages in quality, prices and assortment of products and services.

Company products: windows, wooden doors (solid and with glass), parquet, boards, plinths, door and window casings, wood stairs, wood items for interior finishing work, wood construction elements, furniture.

Company services: interior design work, assembling and dismantling of wood elements, construction work and repairs (together with other companies), sawing and drying of wood for construction companies.

Market share: 9 – 12 % (depending on type of products).

Company advantages:

- ◆ Wide assortment of products and services.
- ◆ Competitive prices.
- ◆ High quality of products and services owing to usage of modern technologies and imported equipment.
- ◆ Direct supply of raw materials.

Presentation

There were two companies that were very interesting. The first was American Homes and the second was Ethan Allen. Both companies are very close to what my company does. For American Homes I would like to say that they work with wood, they process wood, and they build wooden homes. That is something we are trying to start. Making prefabricated homes is our innovation plan and we will try to launch it as soon as possible.

As far as Ethan Allen goes, they do something we have been doing for a long time. That is making and selling furniture. Our furniture is not as attractive and expensive as that of Ethan Allen, but I was impressed with their presentation and customer service methods. I admired the ladies of that company. I enjoyed their exhibition halls and I have noted all kinds of ideas. That is something we will start. We will have to set up an exhibition hall for our furniture.

We are installing a new production line to produce more expensive furniture. The ideas that I heard at Ethan Allen reverberate with my own ideas. At Ethan Allen I learned a lot of useful things. And we will have one simple concept. That is to provide a customer with an opportunity to plan in a common environment. We will start with walls and roofs and then move to interior design furnishings, accessories, decorations, trimming, etc. I don't think there is one single company in Kharkiv that does the whole thing.

I am sure that these new ideas will increase our sales and volumes. However, I cannot give you an exact figure at this time about how our profits might increase.

At American Homes we did not get information as to the cost of technology, equipment, or their expense as far as electricity goes. I need to know all this information for one single home, one single unit, and of course we will need to modernize our own structures and buildings. So that will all require effort on our part.

I have considered setting up in Kharkiv a technical information-consulting center that would specialize in construction, interior design, and architecture. And I am prepared to include an

organization that has been conducting training sessions for about 25 years. This organization is located in Kharkiv, not very far from I live. It is basically a construction company reporting to the ministry of assembly and general work. That particular company was responsible for building the Kharkiv TV tower. It used to be state owned and now is a privatized company. They have about 100 welding units. They have an excellent laboratory that is in no way inferior to HC Nutting to test the quality of seams. They have 5 buildings, two dormitories, two acres of land on their excellent facilities. I know this company very well because at some point my privatization vouchers went to this company so I am a small stockholder. I also work there and I also help them get grants from the Soros Foundation, from Tacis, from the U.K., and now they are working with Holland. So this organization has experience in working with grants. They have a large library there and are available to use their facilities to set up an information center. They also use this facility as a business incubator in the construction industry.

The main shortcoming of this program is that it is short term. Basically we are all going to leave and spread the information. But at a facility as I am describing, there could be an exhibition of the latest American technology, construction machines, small mechanization units. There might be a marketing internet center to provide monitoring of the latest know-how in construction as well as the latest advances in U.S. construction techniques. There could be legal, accounting, and design counselors who could provide assistance there.

Such a center could be collecting orders and be involved in subcontracting, etc. But the most important thing is that the center could be used for training sessions, follow-up training, and also post-graduate retraining, post-graduate programs for top managers, starting with top managers and going down to the rank and file workers using American technology, and experience. They can even give a certificate of completion at the end of such program. The role of the people who go to such training, as well as their value at our employment market, would increase considerably.

I would like to say that this organization should be funded by grants only at the initial stage and should become self reliant at a later point. Such an organization could also be involved in building homes and selling homes using the American mortgage system. Obvious there is a tremendous need in residential housing at this point. Basically we need seed money, we need a start-up loan, obviously guaranteed and monitored by the U.S government. This type of loan could be used to build homes like your country has designed and is building. And one of Kharkiv's banks is prepared to invest money into this project. Because what happens now is that a lot of military officers are now being discharged and there are a lot of people who find stone homes too expensive. They have some money but not much. There are obviously lots of new families and there is a state sponsored program for building homes for young families in rural areas. If we could actually combine these efforts in such a Technical Information Center with the resources of my organization, I would be happy to take part in such a project. There may be some other agencies or companies that took part in this study tour may also be interested.

I can divide the new information I learned here into three categories: something I learned for myself, something I learned for my organization, and something I learned for my region. I have already spoken about my ideas for the third area – the regional area.

Speaking about my personal findings as a marketing expert, I saw all kinds of new approaches that will be very useful for my career. Speaking about my company, I am going to bring home

several new ideas from the U.S. We are lagging behind, not only my company but other Ukrainian companies I am familiar with, not in human resources, or other things. We are lagging behind in technology. We use obsolete technology that results in our low productivity and high cost of goods.

I am going to familiarize the managers and the owners of my company with the technology I learned here and the technology and customer service of American Homes, and the marketing methods at Ethan Allen. We are trying to start making concrete and there was a lot of interesting information about concrete plants. There are also some managerial ideas I heard about at HC Nutting. For example, they provided additional incentives for their employees by giving stock to them.

We visited a construction site and I thought it was an absolutely wonderful concept of combining sloping surfaces on inexpensive homes for older adults. I would be very interested in the design and drawings of such homes. I liked the structural elements there and that is something we can start making in the nearest future.

I also liked Gilkey Windows very much although my company makes predominately wooden windows. For example, we bought a new Italian line that we are going to launch in the summer. The only thing we saw at Gilkey Windows was plastic windows, and I have seen plastic windows in other countries.

Also, another thing that I learned at Gilkey Window is the manufacture of energy saving windows. At this time we have new norms and new standards for energy saving in Ukraine since the old ones were obviously obsolete. I know the existing experience in Ukraine about making energy saving windows with double-glazing. That is something we are going to make in the near future.

Another interesting example I saw was at the custom cast stone company and I would like to say that they are making manmade concrete blocks, custom cast stone. The market in Ukraine is empty so far as I know. Nobody makes that. I found this experience very interesting. I took their drawings. I took their price lists. I am going to report about that visit to my top management. In this connection I would like to ask about the mechanism for getting information from such companies as American Homes and customer cast stone, and other companies.

Again I would like to get blueprints from Dunn & Titus of the condos they are constructing. I would also be interested to get a video tape or a CD-ROM presentation of American Homes.

Dissemination

I will be talking with many people at our company, at suppliers, and customers and I think that will be a rather large number.

Case 8: Olga Marchenko, Remstroy, Senior Manager

Company profile

Established: 1999; Ownership: Private; Number of employees: 56

The company was established on January 28, 1999 to conduct the following types of construction activities:

1. Construction work: concrete and reinforced concrete work; brickwork; erection of reinforced concrete units; different types of roofing.
2. Welding work: production and assembly of metal work (metal doors, metal framework, gates).
3. Joiner's work: production of windows and doors.
4. Finishing work: plastering, painting, tiling, etc.

The company has welding and joiner's shops. "Remstroy" Ltd is involved in the following types of construction activities: industrial construction (5%), commercial construction (35%), residential construction (35%), and other (25%).

Equipment: Concrete mixer, floor-polisher machines, perforators, corner-cutting machine, paint sprayers, paint grinders, welding apparatus, guillotine, cutting and drilling machines, etc.

Company's goals:

- ◆ To purchase modern equipment.
- ◆ To expand welding services.
- ◆ To increase quality of services.
- ◆ To increase personnel salaries.

Company's advantages:

- ◆ Highly qualified employees.
- ◆ Use of advanced technologies.
- ◆ Availability and successful work of advertising department.

Presentation

I highlighted three companies that I really liked. That doesn't mean that the rest of the companies were not impressive, but these three were the ones that I remember the best. The first company was definitely American Homes where they produce prefabricated houses. The operations of the company were first class. We got to see the whole technological process and the complete cycle of how a house is manufactured from beginning to end. It was so impressive that it inspired me to seriously consider it and I can tell that the possibility of doing the same type of production in Ukraine is real. At the end of the tour we were given a complete set of brochures so we got all the information and we have seen the completed houses that were for sale. So these clearly gave us the basis for establishing a company like that.

My husband is in business where he is dealing with wood processing, using equipment, not only Ukrainian but also Italian and German. I phoned him that very day we visited American Homes, raving about my impressions and the information I got and he said for me to collect all the information I can about this method of manufacture. When I get back we will analyze it and try to implement something. As I work in the area of sales and marketing and deal mostly with advertising, I would like to specially highlight the advertising work that is done at American Homes. The brochures were so full and wonderful they are absolute masterpieces.

The second company on my list is Gilkey Windows. The reason I mentioned this company is because at American Holmes we could not take pictures but while at Gilkey Windows we could film as much as we wanted. Therefore, I have much more visual information about Gilkey Windows. I have visited the window making company in Kharkiv that is very similar in all

aspects to Gilkey, but the only thing that is missing is the manufacturing technology itself. This Kharkiv company is situated very close to the place where I work and I am going to talk to them and I will be giving them most of the literature we got from Gilkey Windows and get them familiarized with all the pictures. If they wish to take a copy they are perfectly welcome to do so. I really think that it would improve their business. They would definitely use all of it.

I would also like to say a few words about the general manager of the plant who was a very knowledgeable and pleasant man. I was really impressed by the fact that he, the owner of the plant, gave us a tour of the factory and later participated in the round table discussion. The respect he showed to our group said a lot about the company itself. And again, I would like to highlight the role of the advertising department; the showroom really impressed me very much. It was very functional, very bright, and very informative for customers. And of course the professional brochures are really very good.

I work for a construction company, although I am not a manager. I know people in my company whom I can talk to about this concept of building residential houses for elderly adults and there are certain features we saw at Northbend Crossing that I liked very much because the whole idea of building houses for this class of society is very good. And the second thing is that the land is already owned so we don't have to pay twice for it.

The third company that I would like to mention is Caterpillar. I think we are going to operate in a little different manner because right now we mostly deal with wood processing equipment. We did distribute equipment but we do not do any maintenance and we do not rent or lease any yet. But the thing I wish to see undertaken is a service and maintenance center, not only a distribution center like the one we saw at Caterpillar. We are definitely going to implement this plan. So we are going to distribute, rent, and lease equipment. At least we will try to establish this system.

Our line of equipment is not only Ukrainian but also Italian and German. If we could have a maintenance center and warranty repair in Kharkiv for Italian equipment that would be a great help since we don't have one now in Kharkiv. We have some equipment which we have already purchased from Italy and the Italian company is so interested in promotion in Ukraine that they are willing to give us some equipment free of charge just to be in the Ukrainian market. The Italian company is well known and quite large for the Kharkiv area. The relationship we established with the Italian company is quite reliable and long term. What surprised me at Caterpillar was the difference in policy. The Italians are willing to give us equipment free of charge to start with to find its niche in the Ukrainian market. But when I asked Caterpillar the company representative about it, he told me that this practice was not used at all in the U.S. You buy it or you don't get it at all. The Caterpillar idea is now going to be used at the company where my husband is working.

Organizational aspects:

I would like to mention specifically all the changes that will happen under the impact of the study tour in my company where I work. First of all, at every U.S. company there is a company uniform or insignia that all workers wear. This is not a typical thing for Kharkiv yet.

Another organizational aspect I saw at Florida Tile is employee motivation, which is so important for the company. At this plant, if some employees are very productive during the whole year and manage to work without injuries or accidents, they are rewarded. Special dinners

are organized and employees are paid bonuses by the company to reward them for their performance and for their safety record.

Another thing we need to get back, which we used to have but have abandoned, are the bulletin boards where you can see the results of employee competition. We used to have them during the Communist era but then somehow it just vanished. Here it was wonderful because companies don't have to spend much money on it. You just write the schedule or diagram on who is the best and the lowest and it inspires employees. We saw that at Steelcraft, American Homes, and Gilkey Windows. It is easy to do and not expensive.

Production aspects:

One of the things that we will eventually have to do is to modernize the tools our workers use to perform their work. Without it, they will not be able to achieve quality results. Of course much more attention must be paid in Ukraine to safety issues, because what we have seen here is how safety is treated. Unfortunately, we do not have such concerns about safety on the job as we have seen here. It really impressed me a lot. Maybe it is right to put responsibility on the company because then the company pays sufficient attention to arranging for safety in the proper way.

Another thing that is quite obvious is that you in the U.S. have fewer workers who are more professional, and you pay them more. I think it is obligatory to stress improved productivity of the workers and I am going to strongly recommend that it is better to have fewer workers - real professionals – than somebody you pay less and they have low work performance. The more productive workers should be paid more.

I would like to talk about productivity in my area in my company. Productivity in terms of advertisement is going to increase due to the Internet. Because, as I see it, every single company in this country has its own website, even the small ones. Of course as soon as I get back I am going to create our company's web site as soon as possible. We are going to put the report about this tour on the web page and put in the photos and maybe certain video clips. I have filmed a lot and I think the video will come out very well.

I want to highlight the advertisement product at Dugan & Meyer, because I was really impressed with how the whole package was created. It is probably the most functional and the most professionally made of all the advertisement products we have seen so far. I am going to use the same kind of techniques on our advertisement. It is very effective when you have the combination of photos and information; and certain details are presented even with a certain amount of humor. For example, when they give the figures for the number of cups of coffee that are drunk during the construction period, it attracts you to a company like that. I think in the near future, due to the changes in advertising policy alone, it will be possible to increase the sales volume of my company by at least 30%.

I would also like to say that the most realistic follow-up that can be done within the first month after we get back to Ukraine is the organization of a roundtable meeting similar to the one we had yesterday. The reason is that the group has agreed that we are going to do our best to start an association of contractors and architects in Kharkiv. Instead of spending a lot of money and time to participate in quite expensive trade shows that are frequently held in Kharkiv, it is often not productive to attend even though we feel we need to. It would be more efficient to arrange a

roundtable of all the contractors and architects, with the suppliers of different materials and equipment under the umbrella of an association. The roundtable would be more efficient, less expensive, and more productive of our time. Everybody could sit down at the same table, exchange ideas, ask questions, and discuss the points of interest. That could be accomplished in a month.

Dissemination

I have connections with TV in Kharkiv and since I have a professionally made video film of our tour, I will put it on TV. Of course I will get a copy for CEI. The other thing is of course newspaper articles because I like to write and I have been writing for quite a while. I am going to draft an article and I hope it will be accepted by a number of local Kharkiv newspapers.

I would like to thank you very much for a wonderful opportunity you gave to us to come to the U.S. and participate in this study tour, not only because it is beneficial for me, but also because it is beneficial for my company. Two representatives from our company have visited the U.S. and now people will know that this company's representatives went to the U.S. and that will immediately skyrocket the reputation of the company. I am going to work on new advertisements, booklets, and brochures, and I am going to insert a paragraph that our company is the one that took part in CEI's study tour in the U.S. Therefore, people who get the booklet will naturally ask questions about this tour.

Case 9: Vasyl Nefidov, Entrepreneur, Private Entrepreneur

Company profile

Established: 1995; Ownership: private; Number of employees: variable

Our company started in 1995 as a manufacturer of wood products (windows, doors, shelves, tables, chairs, furniture, furniture to order, etc.). With each year we expanded our production which resulted in a 5-15% increase in profits each year. This allowed us to purchase new assets and expand our production process. Our product mix constantly increases and this allows us to offer products not only for consumers in Ukraine but in Russia as well. In 2000, 2% of our manufactured products were sold to Russia and in 2001 it was 4%. The company makes items both for commercial buildings (30%) and residential (70%). The business is not seasonal. 10% of the revenue is spent on advertising. Subcontractors are not used.

Company's advantages:

- ◆ High quality products
- ◆ Individual work with clients and knowledge of what customers want
- ◆ Ability to re-orient the company for manufacturing new items

Presentation

The most useful visit for me was our visit to Gilkey Windows, the company that makes combination windows in which wood is combined with aluminum. I was very impressed with the organization of the operations and with the new equipment they have. I was also impressed with their quality control methods. For example, each employee is responsible for the quality of the work of the previous employee on the line. If an employee misses rejecting a defect or substandard product, he will also be held accountable.

I was also impressed with their latest technologies such as using a coating to prevent glass from shattering and also a film to decrease penetration of the sun's rays. Their distribution system is very expensive and very effective. At this point they do not really need to engage in costly advertising or promotion campaigns because they have captured a certain market share and they are growing. It is really impressive that they have penetrated such a huge market as Chicago; they are building a new store there and they have a steady supply of orders.

Yes, there are certain things that I am going to do. I am going to pursue marketing more aggressively and conduct market research. Also I will do more advertising. But the most important thing I am going to change conversion to is a production line system. At this time in my company, one employee is responsible for manufacturing say, a window or a door. And it will take him two or three days to complete the whole thing and I keep this person accountable for the finished product. What I am going to do is to break down this production into several operations or stages and put one employee in charge of each operation so there will be one continuous line. I will also make sure that each employee is checking the work of the previous employee. For example, if at the beginning my employee will get a substandard item, he will send it back. He will not continue working with this obviously substandard item.

Another improvement I am going to introduce is something I saw at American Homes. They really don't use much manual labor. They use pneumatic nail guns and screw gun and some of them are battery operated. So I am going to purchase and use those nail guns in my work. That will definitely improve our productivity.

Actually I intend to improve my productivity by roughly 10 to 15% just by using pneumatic nail guns. We waste a lot of time by hammering in nails. It is very wasteful and time consuming, especially given our mass production.

I don't know how that will affect our profitability, but our productivity and quality will certainly increase. When I get back I am going to do an internal analysis of our operations and I will study everything we do. Then I will be able to come up with hard data on overall profit improvement.

I will certainly pay more attention to advertising. I will use newspapers and radio. I am also going to take pictures of our products and make flyers for distribution.

I do understand that Gilkey does advertise, but actually there is no need for them to do it since they have such an excellent reputation. And this is probably due to their excellent customer service, because they always ask their clients: Do you want a singly or double pane window? Do you need this film for protection of not? They can also custom design the window. They can put in spacers. They can put in all kinds of decorations there. So obviously they cater to the needs of the customer.

Our visit to American Homes prompted an idea that I might pursue in the future. I mean making dacha homes and cottages from wood. There are obvious advantages here. First of all, those homes can be sold very fast. Also the production expenses are very low because you don't need a lot of bricks and sand – just the minimum. Besides, people are willing to accept wooden homes for dachas whereas they expect a regular home to be made of brick and mortar.

The cost of such a wooden house will be much less than that of a brick home because for a brick home you have to pay for the bricks and for shipping and transportation. And also for wooden cottages you can use stucco for the exterior finish. We also have insulation available. As far as the designs go, the design can even be customized.

There are several other things I noticed. One of them is the use of a distribution network. The next thing is finding your own niche in the market. The other is using subcontractors. If we start manufacturing those wooden cottages, I will definitely consider subcontracting some of the jobs. I am talking about sawing and cutting wood. I am talking about treating wood, especially for fire protection, using nail guns, plastering, finishing, etc. All those operations can be subcontracted. You know that everyone in Ukraine has statues. That is another job that can be subcontracted so my company can hire another company to build those items that are about 7 feet high.

We actually sell our doors and windows in several ways. We accept referrals from our clients and friends. We advertise somewhat. We also have a little pavilion at one of the markets in the south of Kharkiv called Round Market where we display our windows and doors. We have contact information for our company, business cards, and such. So when people go marketing they go past this pavilion, they see our products, they pick up our cards and we hope they will contact us. About 60 – 70% of our orders come from our former clients. So we have a chain of reference here. In fact, 100% of our sales are direct sales. We do not use any distributors or wholesalers at this point.

Actually we prefer to work with our customers directly and our logic is that we will know exactly what kind of varnish or stain they prefer and we will be able to consider all their requests. I believe that if we deal with distributors our return rate will be significant, because the customers might not necessarily like our windows or they might think our frames are crooked.

We do not compete with the firm Garant in Kupiansk. We are in Kharkiv and they are in Kupiansk. We have heard of them and realize that they were participants on a previous CEI study tour.

There is a large company near Kiev (actually Cherkassy) that makes plastic windows that look like wood. I saw their products at a trade show in Kharkiv. I cannot tell you about their market share in Kharkiv, but obviously they use distributors while my company does only direct sales.

Dissemination

I have a lot of friends who also own companies like mine that are predominantly carpentry and wood manufacturing firms. I am going to share what I learned with them. We help each other a lot. Sometimes they place orders with me and I place orders with them so we help each other. I am going to share my impressions with them about know-how and I am going to show them my U.S. catalogues. I also have a friend who is working on his PhD at the Kharkiv Institute of Construction Engineering. I will talk to him about the information I got here. I will probably talk to over 30 people and they will talk to others so we are looking at a domino effect here. I will also write an article if I get a chance. That will give me free advertising which is always helpful.

Case 10: Yevgen Nenko, Nais, Director

Company profile

Established: 1990; Ownership: Private; Number of employees: 12

The company was established in 1990 to conduct the following activities:

- design of administrative and dwelling houses, facilities of health resorts for children, recreation and tourist facilities, trade and public catering facilities, etc.
- Technical supervision over the construction process of facilities designed by the company.
- Engineering / functions of general designer.

Since the company formation, its specialists have developed design plans and specifications for reconstructing buildings occupied by big commercial banks located in Kharkiv, and several big trading and commercial units located in the downtown area. Recently the company has concluded contracts on the design of facilities for large companies well known all over the world – McDonald's (USA) and BILLA (Austria).

Company's advantages: Highly qualified talented personnel (our senior managers are winners of 17 Ukrainian and International architectural competitions).

Company's goals:

- ◆ Implement advanced design technologies.
- ◆ Expand range of company's services.

Presentation

I learned a great deal on this study tour that was very well organized and run. I really thank CEI for the opportunity.

My most notable experience was of the trip to Chicago and the chance to see a Frank Lloyd Wright building. He is world famous and this was a great experience for me.

The companies that were of most interest to me were Messer Construction, Turner Construction and Dugan & Meyer. At Messer we saw the parking garage they were building. The most significant item was the poured-in-place concrete, the trusses and the framing. Also of interest was the post-tensioning in concrete construction. We are now beginning to use poured-in-place concrete construction in Kharkiv now that we are starting to see the use of cement mixers.

At Turner Construction we saw the planning and interior design operations, the site work and the power lines. I also liked the linking of the cafeteria and the gymnasium. We also saw the decking up above. The roof construction was also of interest to me.

At Dugan & Meyer we visited a new city administration building that was under construction. I was really impressed with the general organization of the work site. Worker productivity is clearly higher in the U.S. and construction projects are completed much faster.

There are many ideas that we can implement in Ukraine. The first is the concept of construction management and subcontracting. Construction management will improve the efficiency and workflow at the construction site. The use of subcontractors will allow us to employ specialists

who should improve the quality of work, speed up the construction process, and allow us to evaluate the work since we will know exactly who was responsible.

There are new ideas in the design process that we will be able to implement, especially in the area of roofing designs. We should also be able to provide better engineering systems and combine heating and air conditioning systems. The later are not provided in Ukraine, although we still have the extremes of hot and cold.

We need to improve our marketing program to help promote our services. We will need a good brochure, and will certainly provide more information than is normally given in a brochure.

We need to develop a construction trade association in Kharkiv. There will be many benefits if we communicate with each other about what is going on. One of our goals is to develop a database of information about contracts, suppliers, materials, etc.

You have mentioned the possibility of a Technical Resource Center in Kharkiv. That would be a wonderful idea and one that we would want to encourage. There are many times when we need technical information and are unable to find it in Kharkiv. Usually this is information about new processes, companies, and materials.

Dissemination

I will certainly do my best to disseminate the information about this program.

Case 11: Yegor Pazyi, Time, Head of Construction Site

Company profile

Established: 1996; Ownership: Collective; Number of employees: 58

The company was established in 1996. It is involved in commercial and residential construction (50% - commercial and 50% - residential). The clients are 100% Ukrainian. The company spends about UAH 310 on advertising. The company does not use subcontractors. The business is not seasonal. New customers are often attracted by referral.

Company's advantages:

- ◆ Strong team of young employees
- ◆ Modern technologies and materials
- ◆ Creative approach to our work
- ◆ Full cycle of construction jobs

Company's weaknesses:

- ◆ Lack of modern construction equipment and accessories
- ◆ Lack of modern computer programs for construction

Company's goal: Our company was created with the objective of making profit and satisfying the needs of our customers

Presentation

I would like to say that from an esthetic point of view, I was impressed with the tour of Chicago. It was beautiful and excellent and was absolutely unbelievable. Then, from the point of view of

a professional, since I am performing construction work, I liked the visits to the Messer Construction site where a parking garage and hospital expansion are being built. I will explain why because this construction project was an example of a very efficient and good technical monolith concrete application. We did have this technology in Ukraine but somehow it was just forgotten. I also liked the system of organization and the way safety issues are concerned. I also noted the maximum possible mechanization of manual labor use. Of course the materials that are used not only at this construction site in particular but at most of the construction sites in the U.S. are excellent.

The insulation that preserves heat for the houses in the U.S. seems to be very environmentally clean and safe. Unfortunately most of the materials that are used for heating insulation in Ukraine are very hazardous. People have to wear respirators and gloves because the insulation may go into your nose or you can get burns on your hands. We use a mineral wool that is not asbestos, but it is still hazardous. The mineral wool we are using is in the raw state and what we have is essentially a pack of mineral wool boards about 150 cm by 50 cm and that of course requires more handling of the product.

I liked the fact that every company that manufactures construction materials has its own quality testing lab and the quality testing process is not done at just one point but usually at two and often at three stages of the production process. And of course the most amazing thing about American Homes is the stilts that are used by workers who do the finish plastering work. That was like a circus; it was magic. People don't have to exert much effort, they work on those stilts so easily and it saves so much time and it is so efficient it was just amazing. Of course it is not expensive to implement and that is what I am going to do. That is why I am mentioning it. It is a very good idea, a very simple solution and it solves a lot of problems.

I also liked the way heating systems are arranged in the buildings in general.

Concerning monolith concrete construction, I would like to know how reinforcing bars are protected in horizontal surfaces. From what I noticed in vertical surfaces, such as in the walls, there is no protection for reinforcement bars. I understand they are covered with a jell-coat, a thin film of chemical and when the concrete is formed the concrete has acid in it and the acid in the concrete dissolves the protection and it is stronger.

The reason I am interested in it is that you can have a lot of emergency situations where water or moisture get to the reinforcement, and if it is not protected enough, it will just corrode.

When I was talking about the high culture of the production process, I mean, how much attention is paid to the quality and look of the final product either of the completed works or of the final product. That means a lot to people here in the U.S. Another thing I would like to mention is the way at the Dugan & Meyers construction site, where the Mason City building is being constructed, they pour the concrete floors. Why I am interested in it is because if it is an exterior surface, not an interior surface, it is understandable that you can see the joints. You can see how it was actually poured in relatively small areas. But there on the floor, it looked as though they just poured the whole area and there were no seams, joints, or cracks. How did they manage to pour so much concrete on such a large area and get such a perfect and smooth quality?

[CEI: The concrete is poured on the metal deck with about 2% more water in it. But, in the concrete, instead of steel, you have fiberglass. The reinforcement is fiberglass, not steel. The

fiberglass comes in bags and you mix it into the concrete before you pour it out onto the metal surface.]

It really is a pity that I did not get a chance to see the most well known company that supplies electric tools to the U.S. In Ukraine the main suppliers such as electric tools, drills, vibrators, and all other kinds of instruments is Bosch. Here I have seen DeWalt a couple of times and I would like to know which company is best with regard to cost and which is the most well known in U.S. regarding the supply of these tools. And I would also like to know if you use pneumatic tools.

[CEI: We use pneumatic tools, especially in vertical construction of steel buildings. We do not hot weld but use pneumatic nuts and bolts to go together. The largest hand tool manufacturer in the U.S. is Sears & Roebuck. Their tools are guaranteed for life. If you break a tool and take it to Sears, they will give you a new one without questions. They have catalogues and maybe I will be able to get you one.]

Another thing that I really liked, for example, is that we in Ukraine mostly weld our framework which is not as good as the method that is used here where you bolt and fix it into different elements you assemble. It is much safer and much more efficient than what we do.

I can tell you that all the U.S. experience will be implemented as I explained, but it is very difficult to give you an exact figure for the impact on our costs or profitability. And another factor is that we do not build as much as you do in the U.S. We also sell construction materials as an addition to our actual construction activity. If we would be distributing construction materials, it would be much easier to calculate the profit and the sales volume, but we sell work and that is pretty difficult to calculate. It is very seasonable work and one year could be completely different from another one. And then another thing is that the weather conditions in Ukraine where we have cold weather more of the year than hot weather. That also affects the construction industry. When you come for to follow-up on this study tour we will definitely give you our best estimates.

The first thing that will improve the productivity of our workers is the use of tool belts where he could keep all the tools he needs. That is what I am going to implement. We do have some belts, but they are not that efficient and most of the time construction workers have to carry a lot of tools with them which is not very convenient. In the U.S. you can put the tool belt on and then it is much more convenient to work. It is especially important if you are doing high work because if you carry something, you only have one hand free. Either you have to go back and forth to get tools, but if you have your ruler, hammer, screwdriver with you, you have two hands free and you can work much more productively and much safer.

We also need to reanalyze the operation hours that are typical for Ukraine. The most difficult thing we have, not only in construction companies, but almost everywhere, where you have an hour for lunch and that is it. But instead of having an hour for lunch, it would be much better if we would implement a 10-15 minute break after two hours of work, give them half an hour for lunch and then give them another break closer to the end of the day. That would give people much more opportunity to recover and get more rest. That will not cost us and may actually improve productivity and profits. We have 48 employees in total and about 38 construction workers. Also, we sometimes use subcontractors.

Another thing is that we definitely need to analyze is the company organization, to make each person responsible for each separate piece of the construction process. It clearly needs to be done.

Dissemination

First of all there are my colleagues who are working with me in my company. Then there are colleagues at other companies and the rest are personal contacts, acquaintances, and neighbors. I am more used to working than talking, but I will do my best.

Case 12: Oleksandr Sukharevskiy, Remstroy, Executive Director

Company profile

See profile of Olga Marchenko, also of Remstroy

Presentation

First of all, I would like to say that everything we have seen here was very useful because it is a totally different country, with a different mentality, a different economic situation, and a different way of doing things. I would specifically like to highlight the Messer Construction Company we visited concerning the construction of the parking garage. What I saw there was the main purpose of my coming here to the U.S. That is what I wanted to see the most - the technology of using monolith concrete construction. Unfortunately, right now this technology is pretty much dead in Ukraine though it used to be very popular and I would really like to give it a second chance. This technology is first, very economic and second, it helps to complete construction in a very short period of time. We see here in the U.S. construction projects are completed within a year or two whereas in Kharkiv we have an opera house that took about 12 years to complete.

Parking garages like that are not built in Kharkiv but the main idea is not that it is a parking garage; the idea is the technology of construction with monolith concrete itself (poured on-site rather than pre-cast off-site and then assembled on-site).

The second company I would like to point out is Steelcraft, the door production company. Right now I have my own welding workshop where we produce metal doors, metal louvers, and also other decorative elements. Of course the operation of this welding workshop could not even be compared with the conveyor automatic production we saw at Steelcraft. Frankly speaking, I liked the auto technology itself a lot because it is fairly simple and I noticed one very important factor. It is not necessary to buy new expensive foreign equipment. It could be possible to take equipment already existing in Ukraine and just modernize it. I have in my workshop two presses similar to the ones they have at Steelcraft which are hardly ever used now. I liked the way Steelcraft arranges work in terms of improvements and modernization of their technology. The technology I have has been in use for quite a while without the necessary improvements. Based on the Steelcraft experience, as soon as I return home I will take steps to take conveyor automation further and not, as a present, to stop and do hand operations constantly on a regular basis. Especially I would like to mention that if you do the work manually to determine the mounting locations and machining for locks and latches, is a very complicated operation that is very time consuming and subject to errors. It is very difficult if you don't have the process that Steelcraft has. It is too complicated and you have to spend much too much time.

I would also like to say a couple of words about the Florida Tile company. Not about the production, because I myself built a similar type tile plant using Italian technology in the northern part of the former Soviet Union some time ago. But what I liked about this factory was the way warehousing is organized. A friend of mine deals with distribution of equipment and spare parts and he has enormous areas of warehouse. It is virtually impossible to put all that material in order using the old methods. I have 25 employees at the warehouse and if they calculate the number of errors that are made during the filling of an order, this rate would be about 25%.

Another very interesting plant was the Franklin Brick capstone producing company. There was nothing unique about the whole process itself which we have seen in Ukraine and we have even more automatic processes, but what was interesting was the way wooden molds are used. If you calculate the cost of wooden molds, they are about 50% of the cost of the final product. So the way they use them, how efficiently they use them, and how they produce them is very interesting. You see we are always trying to improve and improve the life cycle of the molds and therefore we reached the point where the molds became very expensive and then our product became too expensive. Of course it is much cheaper to manufacture wooden molds. Our tour guide told us that in order to make one metal mold you have to spend about \$3,000 to \$3,500. That is very expensive. The reason why this company is interesting is because most of the time my company is not building something new but 60% of the time we are renovating existing buildings. And what everyone knows, the old buildings in Kharkiv present certain historical and architectural value. Therefore, most of the time we have to purchase from abroad the decorative elements, cladding, and finishing elements. We tried to use local products and it just didn't work. So we had to go to the foreign market and buy them. And the products we receive are made mostly from gypsum that of course doesn't have enough strength and enough resistance to external weather conditions than this cast stone we have seen at this factory. This is because gypsum has to be either choke coated or painted with special paints to protect it from the environment. But with this stone the situation is much easier. I want to start making this cast stone myself. I can afford to manufacture one of those molds myself and when you have the right batch for the cap stone you can compete in the market. Plus it doesn't need a lot of money put into it. It is not an expensive technology.

In general you are not able to get more than 15% profit in Ukraine. That is just not possible. But again if you add the manufacture of the stone, the installation and/or assembling the stone elements, then you would probably add another 5-10% to the profit.

I actually liked the idea of having the employees trained at the same time they are going to the university. Right now I do have the same type of training at my carpentry shop so these employees are working part time internships at my company are still going to college. And I am also going to apply the way the annual evaluation of performance is done in the U.S. because then you can see who needs a raise, who needs a decrease in payment, who needs additional training, and what steps need to be taken to improve production itself. So actually the annual evaluation is the first thing I am going to implement in my company. Unfortunately, we don't have an actual systemized way to re-qualify our employees. Whatever is done is done very chaotically. There is no standard approach to it. So finally, we are going to have a re-qualification program and a retraining program.

Dissemination

I have many colleagues in Kharkiv and I will be talking to them about the information I have learned on the study tour.

Case 13: Ruslan Tsyganok, Stroystandart, Deputy Marketing Director

Company profile

Established: 1995; Ownership: Private; Number of employees: 11

Since the date of its establishment the company has been producing construction finishing materials and carrying out various jobs. The company has developed all the materials used itself. The materials produced now include: construction chalk paste filler; filler (dry mixture), hermetic (dry mixture), decorative marble-granite stucco; crushed slate for roof ruberoid, and priming coat. The primary materials are produced locally. Our company is the first producer of decorative marble-granite stucco and crushed slate for ruberoid in Ukraine. Orders for jobs are received by direct agreements with customers at projects under construction, partially from promotion. Jobs are paid by cashless settlement, by means of transferring money to the bank account of the company, after job completion. To a great degree the business is seasonal: March-November, 85% of the gross revenue. The company itself carries out all finishing works.

Types of Construction: Construction finishing work: 25% - industrial; 40% - commercial; 35% - residential.

Equipment: stone crushing machines; bolting machines; mixers, loaders.

Sales volume: 65% – sales of materials; 35% - construction.

Clients: 90% - Ukrainian customers; 10% - others.

Promotion: advertisements in “Business” and “Stroiprice” newspapers; participation in construction exhibitions; advertising stands in construction materials shops. 10-15% of the revenue is spent on promotion.

Presentation

The companies I liked best were Cimex (cement), Steelcraft, and Gilkey Windows. In particular, I liked their distribution systems, their marketing methods, and their management. Gilkey has its own large market niche and is a well known company in the U.S. and is known as well in Ukraine.

My company would like to be able to sell outside Ukraine. We are in discussions with a potential Italian investor and then we would be able to sell our products in Italy.

At Cimex we saw a wide variety of different cements and mortars, different colored cement, and different and useful shapes. They also have their own in-house laboratory for product testing.

At Steelcraft we saw a lot of automation and in the laboratory we saw a unique steel product with a coating that made it look like wood. That would be very interesting in Ukraine.

I was impressed with the warehousing and inventory control systems in use at the firms we visited. It was clear that they work very hard to keep their inventory levels at a minimum.

When I get back I will recommend that we make a rapid increase in our distribution system. My idea is to have a network of distributors in various different areas of Ukraine, mainly in Eastern

and Central Ukraine. Right now we have one in Kiev and one in Sumy. We believe that large construction companies and retail stores would make the best distributors.

Dissemination

In addition to talking with all my partners and colleagues, I will have the video I took on this tour. I also expect to have an article published in the Construction Journal.

Case 14: Leonid Udovenko, Archproekt, Chief Engineer

Company profile

Established: 1994; Ownership: Private; Number of employees: 18

The company was established in May 1994. It conducts design work in the spheres of residential, civil, industrial and municipal construction. The “Archproekt” Ltd develops design plans and specifications for erecting dwelling houses (up to 16 floors), cottages, offices, supermarkets, banks, kindergartens, schools, churches, etc. Currently design work is conducted for customers located in Ukraine and Russia. The company’s market share is 5.7 %

Presentation

The most useful company visit for me was HC Nutting where they provide testing services for concrete and welding. I was impressed with their testing methods and the excellent equipment they are using. In Kharkiv each company does its own testing and this always raises the question of a conflict of interest.

I also liked the visit to the Dunn & Titus construction site called Northbend Crossing. I would love to be doing something similar. The building design was really quite excellent and the landscaping was unlike anything we have seen in Kharkiv.

The elementary school site we visited was also of interest. Ukrainian law does not allow heating units to be installed in school buildings. It is certainly a different situation here in the U.S. I also liked the landscaping at this site.

We had a visit to Caterpillar and we were impressed with the equipment. Using this equipment would allow us to reduce the construction time and would improve the quality of the construction work. I believe this equipment is affordable in Ukraine and we can purchase the equipment in Europe.

I was very favorably impressed with the attitude of people here towards our group from Ukraine. They were very open, honest, and friendly. Certainly they did their best to answer our many questions. The only exceptions were questions that were clearly about subjects that were proprietary in nature.

There were several ideas that we should be able to use back in Kharkiv.

1. I liked the roofing solutions where they use very light structures. This is very different from the techniques and methods we use in Ukraine.
2. I liked the idea of using hot air for heating. Our present method is to use hot water from a central heating station as opposed to hot air. This would also allow us to use individual heaters rather than the central heating system available from the government. I also learned there is equipment available for this.

3. A new computer system will raise productivity 10 - 12% and that will help our profitability.
4. The insulation used in the U.S. is much more efficient than the type we use in Ukraine. We should make the switch.
5. I want to re-organize our design company. That will increase our productivity and our ability to get the job done on schedule and on budget.

Dissemination

I hope to get something published after I return. Of course I will do my best to talk to as many people as possible upon my return.

Case 15: Mykola Varva, Technotur, Deputy Director

Company profile

Established: 1993; Ownership: Private; Number of employees: 30

The company was established in 1993 to conduct repairs of buildings and private apartments. It is involved in sanitary engineering, mounting and construction work. In 1998 the “Technotur” Company worked at 4 units; in 1999 – 5 units; 2000 – 7 units; 2001 – 8 units (Chuguyev meat-processing factory, “Metropol” hotel, a public fountain, stores, warehouses, offices, private houses and apartments, etc.).

Company’s advantages:

- ◆ Reasonable prices and high quality of services.
- ◆ Permanent supplier of all the necessary construction materials (we have the best possible discounts).

Presentation

At this point I find it pretty hard to single out one company since each company had some points of interest for me and of course they were very diverse companies. So I cannot say that I liked one best of all.

The one that is closest to what my company does is at Northbend Crossing and the reason is that my company pretty much deals with renovating apartments and finishing apartments. So what I was particularly interested in at that particular site is the way construction is managed and the materials they used.

I was interested in such materials as drywalls. Also at the University of Cincinnati presentation at the College of Applied Sciences we had a presentation about Drivet, used for insulation and finished walls. It appears that they have a fascia that is covered with a vinyl layer that provides rigidity, strength, and elasticity. This material can be used as a water barrier for waterproofing and can be used for finishing. Although we have all types of materials here, I was impressed with the idea that fascia insulating material is covered with an epoxy finish and the qualities of the finished product are quite different.

We are also trying to use computer software to design private apartments, but here I was able to see how computer software is used on an industrial scale. Again I was confirmed in the idea that computers are good. We realized that they were necessary a long time ago, but it turns out that

not many software programs were available some years ago. Obviously one needs to be experienced in using them. Companies must computerize themselves to stay competitive.

At Northbend Crossing I liked the construction management. What actually happens in our country is that we send in a construction team and each worker will be doing a lot of things. Here I saw very narrow specialization among subcontractors. Yes, you will be using more people and we will be using fewer people and there are obvious advantages in your approach. Everything is fine-tuned, everything is professional, and every subcontractor is doing something in a narrow field and is doing something that is clearly defined. Everything is done in a very qualified and skilled manner and fast. In the case of substandard production, you can always find who is responsible for that. With us sometimes we get in a vicious circle. Yes, we know it is substandard, but we have no idea who is responsible for it and who should be blamed or reprimanded.

When I visited Ethan Allen I liked the customer service, the way they work with their clients, the way they try to use every possible way not to let their customers leave the store without buying things.

One thing that I will try to do when I return to Kharkiv is to use computer software more extensively for design work. Then to put our marketing strategy in order and I am sure that will have very positive results.

Also, I will need to work with our workers and with our people. I will need to talk to them and I will need to start introducing some of the management systems I have seen here. For example, if we are talking about advertising and promoting our company, at this time we rely on word of mouth primarily. So when one client recommends another, there is a whole chain of referrals. We will need to improve that. Another problem is that we do not always manage to retain our customers. Sometimes they will leave us and go to somebody else. I hope our budget will enable us to publish a brochure with the best examples of our work. I will need to work with our top managers, sit with them, and have discussions.

Although there are several reasons why we lose customers, the most important is price. Competitors would go to our customers, would offer cheaper services and of differing qualities. Of course we have all kinds of customers. Some don't count their money and they don't care. Some are more generous than others. Some people try to save. There are all kinds of people. Not always are we able to persuade our client that it will be a good idea to spend a little more to get a more quality product that will pay for itself in the long run.

It would be ideal to hire more people and to let them specialize. We are not going to do that, but what we are going to do at this point is to use our different teams for different jobs. So it is a type of specialization but it will be gradual. So we will be doing this specialization stage by stage.

I have another preliminary idea. If we need to remodel one apartment, I will send two to four people and I will hold them accountable for both the time and the quality. And all of them will be accountable.

What I really liked here is your insurance system. Every subcontractor is bonded here. What happens in Ukraine, because nobody is bonded, if somebody fails you, you might just as well say good by to the whole project. Because nobody has sufficient funding to get things finally right, there are terrible problems because of those gaps, because of somebody's poor performance. Here the insurance companies provide financial support in case of need.

I have in my head a lot of ideas that I want to implement, but you should realize that we are a small company with about 30 employees. So it is not possible for us to invest in an automatic line or something else like that. At this point I am really considering buying more hand power tools to speed things up, to reduce time and costs.

Dissemination

When I go back I will talk to people about this program. A lot of my friends and acquaintances know that I am taking part in this program so they will be tormenting me for a long time.

Case 16: Yuriy Vydrya, Rover, Director

Company profile

Established: 1996; Ownership: Private; Number of employees: 15

There are two owners. The company conducts construction and repairs of different types on buildings: offices, apartments, and production facilities. Besides, it produces and installs wood windows, doors, parquet and furniture. About 50% of the company's business is construction and renovation; the other 50% is millwork. One of the last company's projects was reconstruction of the first building in Kharkiv made of reinforced concrete in 1902.

The company rents production facilities (a saw-mill, millwork workshops, etc.) and warehouses in the industrial area of Kharkiv and rents 30% of its equipment. For big jobs the company uses subcontractors. The millwork is made both for sale (to customer's order) and for use in construction carried out by the company.

Competition is very strong in this field of the company's activities. Main competitors offer similar products of similar quality and price. But our advantage is availability of a finished cycle of wood processing (sawing, sorting, drying) and production of items which don't have high labor cost and don't need raw material of high quality (e.g. special pallets for freight).

The company has a 1% market share.

Presentation

Speaking about our most important appointments, they were to American Homes, Home Depot, Ethan Allen, and Caterpillar. I would also like to add that all others were important, as there was always something to learn. I took four video tapes and actually had to buy additional tapes here. I also took some still pictures.

To give you one little example, I got an idea that a lot of metal parts can be replaced with wooden parts and it will give me a great advantage. We have our own carpentry shops and we will be able to gain a competitive advantage over my colleagues who do all metal work. In Kharkiv we fasten dry wall to metal frames that are expensive and have to be imported from Poland and other countries. At American Homes I saw something very different. Unfortunately

they did not allow us to film there, but we taped it at another construction site. Drywalls are fastened onto wooden frames, and that is something I can do easily. Drywall is attached to wood as opposed to drywall to metal.

I had another idea learned while on the tour. We can replace concrete with chipboard because at this point we use concrete for everything: for roofing and for decks. Chipboard will be more effective and less expensive. We also can use it for decking in between floors in houses that are made from concrete at this point. We can start using wood that will be less expensive, lighter, and will not require specialized machinery to install it.

Another thing I noticed here is the use of fans at each workplace. Sometimes those fans would be sitting on a tripod and sometimes they would be fastened on a bracket. They can be turned on and off as required. This is definitely not common now in Ukraine. We have enough fans in shops and offices, but not on manufacturing shop floors.

A final thing that impressed me was the fact that preservative treated wooden structures do not always get painted. They age to look like the original wood. They also make fences out of unpainted wood.

Dissemination

I will be talking to all my colleagues and friends and I am sure they will be very interested in what I have to say.