PLANNING AND DEVELOPMENT COLLABORATIVE INTERNATIONAL

# STRUCTURAL REFORM OF THE NIS

# HOUSING AND URBAN SECTORS


## Working Paper Series

**Prepared for the Office of Housing and Urban Programs (A.I.D.)**

# FINAL REPORT

## NOVOSIBIRSK HOUSING MANAGEMENT DEMONSTRATION PROJECT MONITORING: RESIDENT ASSESSMENTS AND INDICATORS AFTER 6 MONTHS

### Working Paper No. 8

Prepared for

Office of Housing and Urban Programs
Agency for International Development
Washington, DC 20523

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CCS-0008-C-00-2057-00, T.O. #2

March 1994

# TABLE OF CONTENTS

**Figures**

# EXECUTIVE SUMMARY

## The Demonstration Project and Current Survey

A demonstration project employing new forms of municipal housing stock management and maintenance has been operating since April 1, 1993 in the city of Novosibirsk, Russia, pursuant to the Agreement on Technical Assistance between the United States Agency for International Development and the Novosibirsk Mayor's Office.

The Demonstration Project is designed to show that a private property management company, whose services are procured through a competitive bidding process, can achieve appreciably higher management and maintenance service efficiency under the same external conditions as public sector maintenance organizations. Constant elements include municipal budget subsidy levels, equal initial material and technical base, and personnel qualifications.

The firm "Tsentr Sirena" was awarded the contract to manage 33 buildings in the Leninski district of the city, which were formerly managed by Housing Maintenance Unit No. 26. Sirena began work on April 1, 1993.

## The Demonstration Project Monitoring Survey

The residents were first surveyed before the beginning of the Demonstration Project, in February and March of 1993. The results are presented in Working Paper No. 6, *Management and Maintenance of Municipal Housing Stock in Novosibirsk: Present Condition and Public Opinion*.

Six months into the Demonstration Project, in September, 1993, another survey was made using a specially developed questionnaire, in accordance with the schedule for regular monitoring of the Project. The current report presents the results of that survey.

The objectives of the current stage and of all subsequent planned stages of monitoring are to:

- Determine changes in the level of resident satisfaction or dissatisfaction with the housing maintenance services provided, both overall and by specific areas;
- Analyze resident attitudes in the area of housing maintenance; and
- Audit the performance and work style of the private property management company.

The survey team set itself the additional task of testing and refining the indicators and other methodological instruments it had developed in the initial survey for use in continued monitoring of the Demonstration Project and other developments in the housing sector.

Specially developed questionnaire forms were placed in the mail boxes of all apartments in all 33 buildings, 2,201 apartments in all. Survey takers then visited the apartments in 2 or 3 rounds at the most opportune time for catching the residents at home (afternoons and evenings on weekdays and all day Saturdays and Sundays). The survey takers collected 970

forms and the residents themselves brought 198 forms to the management office, while 154 residents (7%) refused to participate in the survey. The total number of completed questionnaire forms was 1,169, or 53%. The distribution of responses is summarized in Section 1, and the questionnaire form used is included as Appendix A.

Resident assessments are the most appropriate indicator of the success or failure of the Demonstration Project's private management company, since customer satisfaction with a service most directly reflects that service's true "market value". A survey of residents' assessments both before and during the demonstration project is an important gauge of the results achieved by the company and its success in most efficiently utilizing the resources at its disposal.

For most practitioners trained under the former command and control system this approach represents a 180-degree reversal in their way of thinking about how their sector operates. The socialist, centralized approach, where decisions were often made in isolation from the consumer of housing management services, often led to inefficiency and a lack of responsiveness to the needs and wishes of the residents, who are the fundamental reason for the housing sector's existence.

A market-driven housing sector is characterized by open competition among independent providers of goods and services. Residents are free to contract or change service providers as they choose. Organizations must use the labor, financial, and material resources at their disposal efficiently in order to attract enough business to survive. As a result the resident receives the best service possible under existing conditions, and the resources available to the housing sector are used in the most efficient manner.

**Results of the Survey**

The results obtained in the survey are representative of the entire range of residents surveyed. After the first 700 questionnaire forms had been processed, the distribution of answers varied only slightly as more questionnaire forms were processed. The same statistical consistency was achieved for each of the 33 buildings. Appendix B shows the number of questionnaires collected by building.

The survey team employed six types of indicators to measure resident attitudes toward private management company performance:

- **Specific Assessments** of individual private property management company activities showed a net improvement of 3 percentage points in the level of housing maintenance services provided, although the dynamics of the change differed according to the area of service. Positive changes were observed in the condition of the grounds, entries, and elevators, while the condition of garbage chutes and the performance of plumbers and, especially, electricians changed for the worse. The survey team attributes this discrepancy to the disproportionately negative effect of the lack of materials and supplies on plumbing and electrical maintenance. For the current survey, the team elaborated this indicator into **Differentiated Specific Assessments** for each of the areas of service, to analyze contradictory changes in housing maintenance observed in individual buildings.

The variation among the buildings is greatest for entry maintenance, while the assessments for other areas are more consistent.

- An **Integral Assessment** of the operation of the private property management company as a whole, compiled as a composite of the Specific Assessments for each of the areas of service, showed marked improvement in the first 6 months of the private property management company's operation. The number of "good" scores (including the small proportion of "excellent" scores in the initial survey) increased from 21% to 24% for a net change of +3 percentage points, the number of "fair" scores increased from 33% to 55% for a net change of +20 points, while these positive net changes depleted the "poor" category, which decreased by 23 points from 44% to 21%.
- The **Level of Resident Satisfaction** with the private property management company's overall performance, given in response to a direct question, showed even more marked improvement. The number of "satisfied" and "highly satisfied" scores increased from 16% to 41% for a net change of +25 points, the number of "somewhat satisfied" scores increased from 32% to 42% for a net change of +10 points, while these positive net changes depleted the "unsatisfied" category, which decreased by 35 points from 52% to 17%.
- **Repair Requests.** The number of Latent Repair Requests, that is, of less pressing problems to which the residents have become accustomed and about which they have put off calling the management company, decreased from 3.6 to 2.6 per family in the course of the first 6 months of the company's operation.

  Repair requests and red flag complaints will be compared only at the end of the project, in order to evaluate seasonal fluctuations. The survey team intends to elaborate the repair request and red flag complaint indicators in the course of the monitoring to include the substance of the problem reported. Information on the frequency and type of problems is a crucial resource for a property management company in planning for its short- and long-term budget and materials needs, as well as an excellent indicator of the company's performance.

  During the Demonstration Project the percentage of requests fulfilled immediately and effectively in the residents' estimation increased by 3 percentage points, while the percentages of repeated requests and direct appeals to the management demanding attention have decreased by 6 and 2 percentage points, respectively.
- An **Alienation Indicator** gauging the extent to which residents avoided contacting the company and tried to solve problems on their own did not show perceptible change. However, the percentage of residents who said they were satisfied or highly satisfied with the personnel's style of work is one of the highest values among all the aspects of the company's activity evaluated, at 52%, within a spread of 33% to 54%.
- On average for all aspects of the company's activity, 25% of residents noted improvement, 65% said the situation had not changed, while 10% said it had become worse. A **Dynamics Indicator** calculated on the basis of these perceptions indicates that all areas of service show positive change. The greatest improvements were in the condition of the grounds and entries, and the smallest changes were in plumbing and electrical equipment maintenance.

The Demonstration Project has brought about the greatest improvement in those areas perceived as worst by the residents before the project was implemented. In the initial survey the lowest Specific Assessments and the lowest Level of Resident Satisfaction were for elevator operation and grounds and entry maintenance, which are rated as the best after 6 months of the Demonstration Project. Grounds and entry maintenance in particular does not require considerable material expenditures and is more dependent on personnel management and work organization.

Improvement in engineering infrastructure maintenance presents a more difficult problem, under conditions of increasing building and equipment wear. The monitoring has shown in particular that, although in general residents note a small improvement in the performance of plumbers and electricians, they believed that the overall condition of this service area had declined since the beginning of the Demonstration Project.

To help reverse this trend, the materials and supply problem should be addressed globally, through the privatization of supply networks and encouragement of competition, such as soliciting suppliers by competitive bid. In the interim, the management company should focus on prioritizing its work based on the availability of materials and supplies, working around the situation by improving staff productivity and efficiency in concentrating on areas that either do not require supplies or for which they are available. Alternatively, staff may be directly assigned to "forage" for materials from various sources. These efforts should be accompanied by a program of keeping tenants informed of economic constraints.

In general, the residents have positive attitudes toward the Demonstration Project. The Level of Resident Satisfaction with the project even outstrips their assessments of performance in the individual service areas. The complex relationship between residents' subjective perceptions and objective changes in the level of services provided should be borne in mind in planning further reform. Overall satisfaction rose at first out of proportion to the pace at which residents' individual problems were being resolved. But additional improvement will take time, and the results of the private property management company's efforts may not be felt as soon as the residents expect. For this reason, the Level of Satisfaction indicator may turn downward or even dip below the level of the Integral Appraisal indicator, which measures the company's overall performance in carrying out real repairs. As time passes and improvements accumulate the two indicators will become more closely correlated. Strong tenant relations, particularly in information sharing, will enable the property management company to maintain reasonable resident expectations, neither too high nor too low.

The methods employed in monitoring the Demonstration Project have permitted the survey team to concretely measure and evaluate its effect on the complex network of subjective and objective factors and static and dynamic processes of Novosibirsk's housing sector. The streamlined set of indicators will provide useful feedback to Russian practitioners and advisers alike in monitoring changes in the housing sector and planning future programs. The survey/monitoring team will continue to fine-tune these indicators in the course of future monitoring of the Novosibirsk Housing Management Demonstration Project.

# Novosibirsk Housing Management Demonstration Project Monitoring: Resident Assessments and Indicators after 6 Months

## 1 Introduction: Indicators Used in Monitoring the Demonstration Project

The current study employs six types of indicators to measure resident attitudes toward private management company performance:

- **Specific Assessments** of individual private property management company activities. The Specific Assessments for each of the areas in which the private property management company provides service were compiled by clustering responses to questions on the service provided as an overall positive or negative. For the current survey the team elaborated this indicator into **Differentiated Specific Assessments** of each of the areas of service, in order to analyze contradictory changes in housing maintenance observed in individual buildings.
- An **Integral Assessment** of the operation of the private property management company as a whole, compiled as a composite of the ratings for each of the specific areas.
- The **Level of Resident Satisfaction** with the overall performance of the private property management company, given in response to a direct question.
- **Repair Requests** of 3 types: "active" or "red flag" complaints, repair requests, and latent repair requests.
- An **Alienation Indicator** gauging the extent to which residents avoid contact with the company.
- A **Dynamics Indicator** calculated on the basis of resident perceptions of improvement, deterioration, or stability in the quality of service provided.

A summary of the survey questionnaire is presented below, together with the distribution of responses to the various questions. The current values of the indicators were calculated on the basis of thse responses:

1. Have you experienced any problems in your apartment in plumbing or electricity during this time (from April 1)? (1,169 total answers)
   1. No problems . . . . . 42%
   2. There were some problems . . . . . 58%

2. If you experienced some problems, in what way did you manage to solve them? (704 total answers)
   1. No problems
   2. Managed to settle them within the family (or with the help of friends or relatives) . 50%
   3. Called the Management Office . . . . . 40%
   4. By direct arrangement with the plumber or electrician . . . . . 3%
   5. Used other organizations or individuals . . . . . 6%

3. How effectively were your problems dealt with? (480 total answers)
   1. No problems
   2. Resolved quickly and effectively . . . . . 39%
   3. Resolved only after repeated requests . . . . . 12%

4. Resolved only after complaining to the Management Office . . . . . 2%
5. Problems remain unresolved . . . . . 47%

4. Evaluate please if the situation has gotten:

| | Better | Unchanged | Worse |
|---|---|---|---|
| Operation of elevators (295 answers) | 19% | 68% | 13% |
| Cleanliness of elevators (303 answers) | 24% | 66% | 10% |
| Cleanliness near the garbage chute (294 answers) | 26% | 61% | 13% |
| Cleanliness of entrances (1096 answers) | 34% | 56% | 10% |
| Cleanliness of courtyards (1040 answers) | 48% | 45% | 7% |
| Plumbers' efficiency (635 answers) | 15% | 73% | 12% |
| Electricians' efficiency (579 answers) | 14% | 76% | 10% |
| Attitude of staff toward residents (709 answers) | 24% | 70% | 6% |
| Responsiveness of staff toward residents (626 answers) | 24% | 66% | 10% |

5. How well are you satisfied with the current performance of the maintenance organization with respect to:

| | Highly Satisfied | Satisfied | Somewhat Satisfied | Unsatisfied |
|---|---|---|---|---|
| Operation of elevators (285 answers) | 2% | 39% | 45% | 14% |
| Cleanliness of elevators (289 answers) | 4% | 33% | 48% | 15% |
| Cleanliness near the garbage chute (294 answers) | 3% | 30% | 50% | 17% |
| Cleanliness of entrances (1,065 answers) | 4% | 31% | 45% | 20% |
| Cleanliness of courtyards (1,031 answers) | 6% | 49% | 33% | 12% |
| Plumbers' efficiency (583 answers) | 3% | 32% | 41% | 24% |
| Electricians' efficiency (545 answers) | 4% | 34% | 41% | 21% |
| Attitude of staff toward residents (603 answers) | 5% | 47% | 36% | 12% |
| Responsiveness of staff toward residents (557 answers) | 5% | 36% | 41% | 18% |

6. Was your apartment privatized during this period? If so, when? (1,169 total answers)
   1. Yes . . . . . 38%
   2. No . . . . . 62%

7. If you have some suggestions to the management company, please write them down here.

   604 total answers (52% of total questionnaires) including 150 unsatisfied with current performance.

8. Your gender (1,109 total answers):
   1. Male . . . . . 30%
   2. Female . . . . . 70%

9. Age (1,088 total answers)
   25 or younger . . . . . 9%
   26-35 . . . . . 15%
   36-55 . . . . . 38%
   55 or older . . . . . 38%

# 2 Specific Assessments of Private Property Management Company Activities

## 2.1 Specific Assessments

Specific assessments characterize the opinions of the families interviewed regarding the level and quality of the service the HMU provides in 5 specific areas:

- Operation and maintenance of electrical and plumbing equipment (that is, the quality of services provided by plumbers and electricians in the units),
- Operation and maintenance of the heating and water supply equipment,
- Operation and maintenance of the elevators and garbage chutes,
- Cleanliness of the yards, and
- Cleanliness of the entries.

The Specific Assessment indicator for each area is expressed as a proportion of positive and negative responses. In constructing the Specific Assessment indicator for each particular area, positive or negative values were assigned to respondents' answers to question 5, "How well are you satisfied with the current performance of the maintenance organization with respect to [each of the areas under examination]?" Each multiple choice response of "highly satisfied" or "satisfied" was tallied as a plus, and each "somewhat satisfied" or "unsatisfied" response was tallied as a minus.

Table 1 compares the values of the Specific Assessment indicators before the Demonstration Project and after 6 months.

**Table 1. Specific Assessments Before the Demonstration Project and After 6 Months**

| | Before | | After 6 Months | | Net Change (percentage points) |
|---|---|---|---|---|---|
| | Positive | Negative | Positive | Negative | |
| Elevators* | 33% | 67% | 39% | 61% | +6 |
| Garbage Chutes | 50% | 50% | 33% | 67% | -17 |
| Entry Maintenance | 18% | 82% | 35% | 65% | +17 |
| Grounds Maintenance | 17% | 83% | 54% | 46% | +37 |
| Plumbing Equipment Maintenance* | 37% | 63% | 35% | 65% | -2 |
| Electrical Equipment Maintenance | 64% | 36% | 38% | 62% | -26 |
| Average | 36% | 64% | 39% | 61% | +3 |

*To ensure the substantive comparability of results between the initial and current surveys the Specific Assessments for the Elevators and Plumbing Equipment Maintenance were averaged by their components:

- The Elevator specific assessment was calculated as the average of the ratings for elevator operation and cleanliness.
- The Plumbing Equipment Maintenance Specific Assessment was calculated as the average of the Specific Assessments for plumbers' performance and for the condition of the heat and water supply systems.

The data in the table show a net improvement of 3 percentage points in the level of housing maintenance services provided, but the dynamics were different for different areas. Positive changes were observed in the condition of the grounds, entries, and elevators, while the condition of garbage chutes and the performance of plumbers and, especially, electricians changed for the worse.

These differing results can be traced to differing external circumstances. The cleanliness of grounds and entries, and elevator maintenance depend on organization and employee dedication, rather than on the availability and adequacy of materials and supplies. The performance of plumbers and especially electricians, on the other hand, depends on the availability of spare parts needed to repair worn-out equipment. This factor also applies to the operation of garbage chutes. The design of the garbage chutes dictates sporadic operation, due to the differing capacity of the garbage receiving scoop and the collecting basket.

Since the new company has the same budget and stock of materials as its predecessor, the Housing Maintenance Unit, success was first achieved in the areas most sensitive to new forms of personnel management.

## 2.2 Differentiated Specific Assessments

The Differentiated Special Assessment was not used as an indicator in the initial survey. The survey team elaborated it from the Specific Assessment to analyze contradictory changes in service observed in individual buildings in the six months since the beginning of the Demonstration Project.

In contrast to the simple Specific Assessment indicator's positive/negative continuum for all buildings, the Differentiated Specific Assessment spreads the ratings out on a scale of 1 (unsatisfied) through 10 (highly satisfied), and is calculated for each building in the survey. Each response to question 5, "How well are you satisfied with the current performance of the maintenance organization with respect to [each of the areas under examination]?" was assigned a weighting along the scale, rather than a simple positive or negative value. A response of "highly satisfied" scored 10, "satisfied" scored 6⅔, "somewhat satisfied" scored 3⅓, and "unsatisfied" scored 1. The total was then divided by the number of responses to obtain a Differentiated Special Assessment between 1 and 10 for each of the areas under examination for each building.*

Table 2 shows the average Differentiated Specific Assessments for all buildings, together with the minimum and the maximum values found for individual buildings The spread is greatest for entry maintenance, while the other ratings are more consistent.

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*For a more detailed treatment of this type of indicator see "How Satisfied are Your Tenants?", *Journal of Property Management*, November, 1992, p. 50. One was used as the low value, rather than zero, in order to duplicate the method used in the article, and to preserve the indicator's intuitive, rather than mathematical, character.

**Table 2. Differentiated Specific Assessments for All Buildings (scale of 1 to 10)**

| Area | Differentiated Specific Assessments | | | Spread (max-min) |
|---|---|---|---|---|
| | Average | Minimum | Maximum | |
| Elevator Operation | 4.5 | 3.0 | 5.2 | 2.2 |
| Elevator Cleanliness | 4.4 | 3.3 | 5.1 | 1.8 |
| Garbage Chutes | 4.1 | 3.3 | 4.8 | 1.5 |
| Entry Maintenance | 4.2 | 1.6 | 5.4 | 3.7 |
| Grounds Maintenance | 5.1 | 3.4 | 6.9 | 3.5 |
| Plumbing Equipment Maintenance | 4.0 | 2.6 | 5.3 | 2.8 |
| Electrical Equipment Maintenance | 4.3 | 3.1 | 6.7 | 3.6 |
| Personnel-Resident Relations | 5.0 | 2.7 | 5.9 | 3.2 |
| Personnel Responsibility | 4.4 | 2.4 | 5.7 | 3.3 |

Appendix C gives the Differentiated Specific Assessments for each building. The survey team will continue to use the Differentiated Specific Assessment in the monitoring process because it distributes the indicator ratings by building, providing the management company with a more detailed assessment of its performance and a guide to specific targets for improvement.

## 3 The Integral Appraisal of Private Property Management Company Activities

Unlike the Specific Assessment indicators, which reflect changes occurring in the various service areas in isolation, the Integral Appraisal of private property management company activities is an aggregate rating by family for all aspects of the private property management company's performance discussed in the questionnaire, interpolated from the Specific Assessments. The indicator was constructed for the initial survey as follows:

- If a family noted the absence of problems in the operation of water supply and heating systems, elevators and garbage chutes in the entry, one "plus" was tallied for each of these aspects.
- A "plus" was also tallied for positive assessments of plumbing and electrical equipment maintenance, and the maintenance of yards and entries.
- A "minus" stood for the existence of problems or a negative assessment.

The data were then grouped into the categories of "excellent", "good", "fair", and "poor" for the indicator, according to the number of pluses and minuses.

For the current survey the integral rating was estimated from the answers to the first seven items in Question 5, "How well are you satisfied with the current performance of the maintenance organization with respect to [each of the areas under examination]?". If the average score for all these items in a single response was between 4 and 5, the response was assigned to the "good" category; If the average was between 3 and 4, the response was assigned to the "fair" category; and to the "poor" category for an average below 3.

Figure 1 illustrates the marked improvement in the integral appraisal indicator in the first 6 months of the private property management company's operation. The number of "good" scores (including the small proportion of "excellent" scores in the initial survey) increased from 21% to 24% for a net change of +3 points, the number of "fair" scores increased from 33% to 55% for a net change of +22 points, while these positive net changes were deducted from the "poor" category, which decreased by 23 points from 44% to 21%.

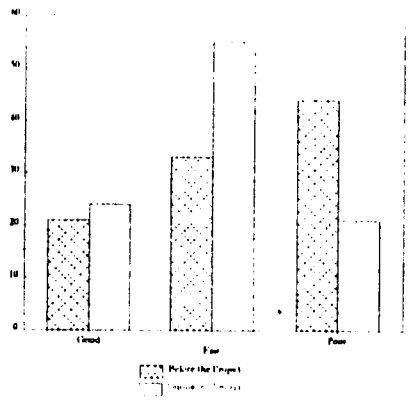

**Figure 1.** Integral Appraisal values before the beginning of the Demonstration Project and after 6 Months.

## 4 The Level of Resident Satisfaction with the Services

In developed market economies the quality of service an industry provides is generally judged by customer satisfaction. The Demonstration Project monitoring process also utilizes this criterion. In the initial resident survey the families were asked in a direct question to what extent they were satisfied with the services.

In the current survey the figures were calculated by averaging the responses to question 5, "How well are you satisfied with the current performance of the maintenance organization with respect to [each of the areas under examination]?".

Figure 2 illustrates the even more marked improvement in the Level of Resident Satisfaction indicator in the first 6 months of the private property management company's operation. The number of "satisfied" and "highly satisfied" scores increased from 16% to 41% for a net change of +25 points, the number of "somewhat satisfied" scores increased from 32% to 42% for a net change of +10 points, while the "unsatisfied" category decreased by 35 points from 52% to 17%.

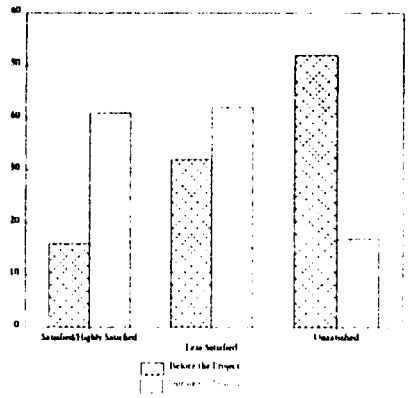

**Figure 2.** Level of Satisfaction Indicator values before the beginning of the Demonstration Project and after 6 months.

## 5 The Dynamic Relationship of the Integral Appraisal and Level of Satisfaction Indicators

Although both indicators showed marked improvement, the Level of Resident Satisfaction increased more than the Integral Appraisal. In the context of the Demonstration Project Monitoring, these two indicators complement rather than duplicate one another. Whereas the level of satisfaction is determined to a greater extent by the respondent's emotional attitudes, tolerance, personal demands, and even socioeconomic position, the "integral appraisal" is more representative of the real problems perceived.

While the values were close before the beginning of the Demonstration Project, under the private property management company's direction the satisfaction level increased by a net shift up of 35 points, whereas the integral appraisal increased by 23 points.

In order to plot the behavior of the two indicators in relation to each other, the survey team constructed a common weighted value for each, multiplying the percentage proportions of "good", "fair", and "poor" scores for the integral appraisal by factors of 4, 3, and 2; and the percentage proportions of "satisfied", "somewhat satisfied", and "unsatisfied" for the level of satisfaction indicator by the same factors:

- The weighted values for the integral appraisal indicator were 2.77 before the Demonstration Project, and 3.03 after 6 months.
- The weighted values for the level of satisfaction indicator were 2.64 before the Demonstration Project, and 3.24 after 6 months.

According to this weighted value, the Level of Resident Satisfaction increased by 22%, while the integral appraisal increased by 9% Figure 3 shows the behavior of the two indicators in relation to each other in the course of the Demonstration Project.

The behavior of these indicators confirms the survey team's predictions at the outset of the Demonstration Project (see Working Paper No. 6, *Management and Maintenance of*

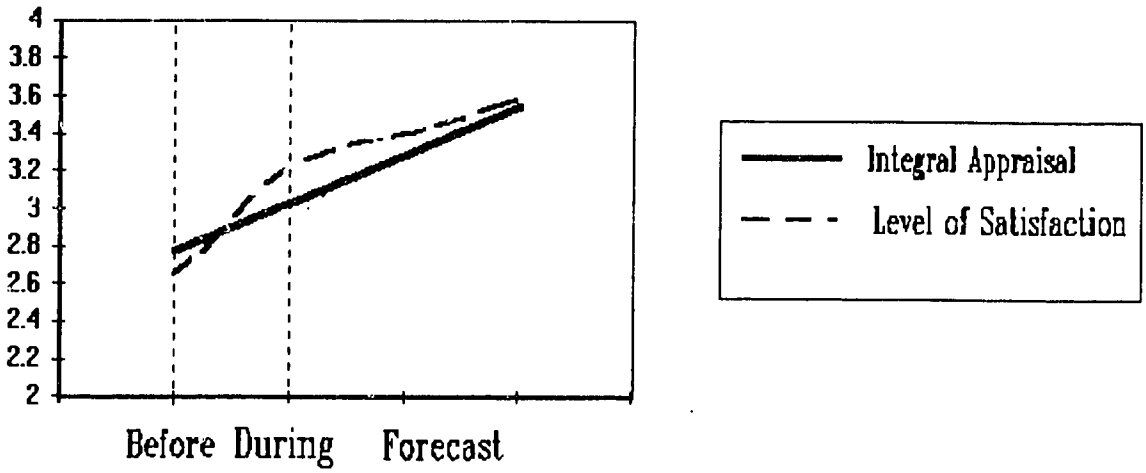


**Figure 3.** The Behavior of the Integral Appraisal Indicator and the Level of Satisfaction Indicator during the first 6 months of the Demonstration Project, and the survey team's forecast for their behavior.

*Municipal Housing Stock in Novosibirsk: Present Condition and Public Opinion*, section 3.4). In the early period of the private management company's operation the level of satisfaction rose dramatically as the residents began to feel that their needs were being attended to and that new forms of organization and service were taking shape, while the integral appraisal reflecting the pace of real change increased more gradually, lagging behind resident expectations.

The complex relationship between residents' subjective perceptions and objective changes in the level of services provided should be borne in mind in planning further reform. Overall satisfaction rose at first out of proportion to the pace at which residents' individual problems were being resolved. But additional improvement will take time, and the results of the private property management company's efforts may not be felt as soon as the residents expect. For this reason, the level of satisfaction indicator may turn downward or even dip below the level of the integral appraisal indicator. As time passes and improvements accumulate the two indicators will become more closely correlated. Strong tenant relations, particularly in information sharing, will enable the property management company to maintain reasonable resident expectations, neither too high nor too low.

## 6 Changes in the Rate and Character of Repair Requests

Discussions and interviews with administrators and practitioners in Novosibirsk's housing sector suggest that they set themselves the goal of measuring and analyzing repair requests and complaints as a means of diagnosing the condition of the housing sector. One of the primary tasks of the monitoring project was to develop methods for "objectifying" repair requests as a strict sociological indicator, representative of subjective discontent with the services.

The survey team differentiated 3 types of repair requests that reflect the perceived degree of urgency of a specific problem, in the initial survey report, Working Paper No. 6, *Management and Maintenance of Municipal Housing Stock in Novosibirsk: Present Condition and Public Opinion* (sections 3.5 and 3.6):

- **Repair Requests.** Residents refer their maintenance problem directly to the management company. It should be noted that such repair requests are the reason management companies exist.
- **"Active" or "Red Flag" Complaints**. This is the strongest form of repair request, where residents appeal not to the management company, but to higher-level organizations and other institutions not directly concerned with housing services, such as deputies, local authorities, and the media. This type of repair request usually results when repeated requests to maintenance organizations are ignored and residents believe higher level attention will resolve the problem.
- **"Latent" or "Hidden" Repair Requests**. These are repair request wish lists voiced by residents when asked in the course of the initial survey whether there existed problems in the operation of elevators, garbage chutes, heating and water supply, the upkeep of the yards, and the technical condition and cleanliness of the entries. Latent repair requests signify less pressing problems to which the residents have become accustomed and about which they have put off calling the management company. However, latent repair requests constitute a reservoir that gradually accumulates and feeds repair requests and red flag complaints.

Repair requests and red flag complaints will be compared only at the end of the project, in order to evaluate seasonal fluctuations. The survey team intends to elaborate the repair request and red flag complaint indicators in the course of the monitoring to include the substance of the problem reported. Information on the frequency and type of problems is a crucial resource for a property management company in planning for its short- and long-term budget and materials needs, as well as an excellent indicator of the company's performance.

The number of Latent Repair Requests decreased from 3.6 to 2.6 per family in the course of the first 6 months of the Demonstration Project. In the initial survey this value was calculated on the basis of responses to direct questions. In the current survey, the number of "unsatisfied" responses under question 5, "How well are you satisfied with the current performance of the maintenance organization with respect to [each of the areas under examination]?" was correlated with the total number of households. The total number of latent repair requests elicited was 7,463 in the initial survey, and 3,096 in the current survey.

The decrease in latent repair requests is consistent with the survey team's forecast in the initial survey report, and seems to be related to the rise in the level of satisfaction indicator. The predicted absorption of latent repair requests and red flag complaints into the repair requests category would indicate that, on the one hand, residents' dissatisfaction with unsolved problems is decreasing, and their confidence in the new company's ability to solve these problems is increasing. A decrease in the rate of red flag complaints would mean that the company is able to cope with the requests received.

Figure 4 illustrates the Repair Request Indicator at the time of the initial survey, the results of the current survey, and the survey team's forecast for its future behavior.

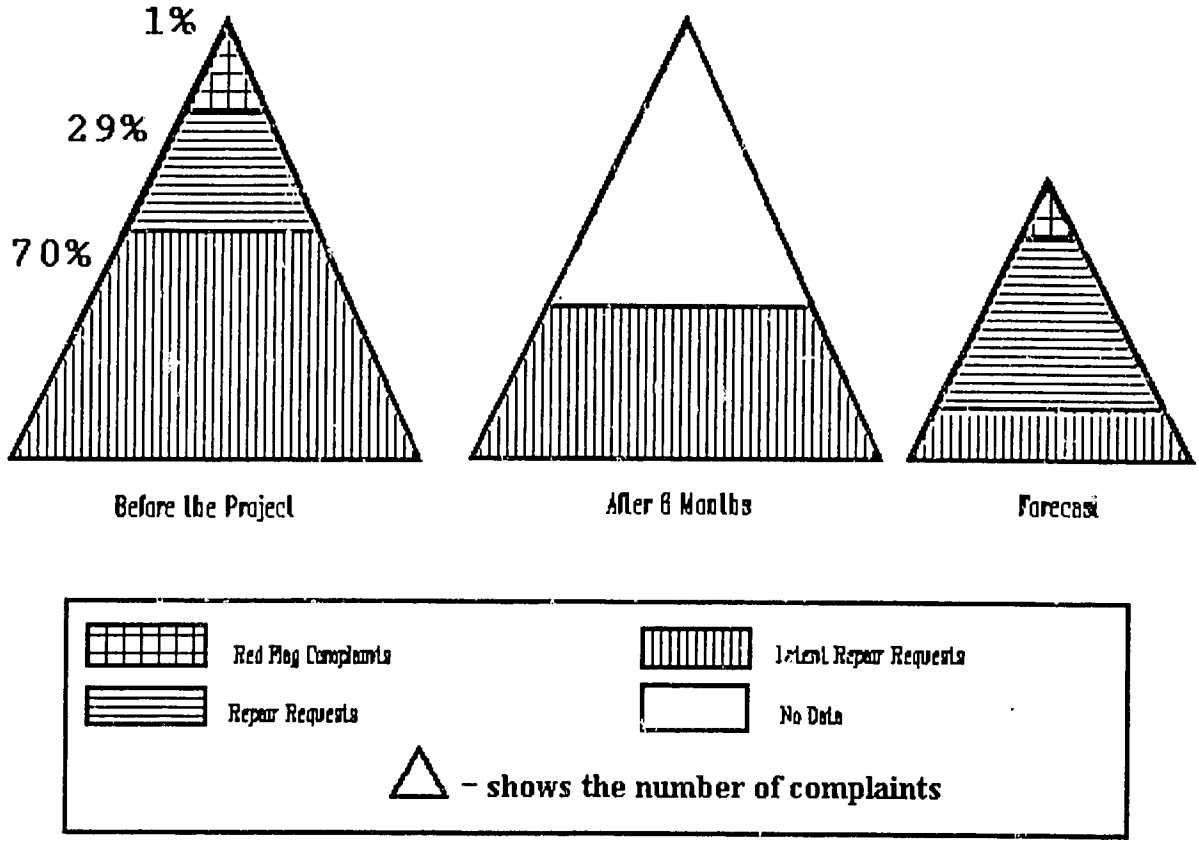


**Figure 4.** The Repair Request Indicator before the Demonstration Project, after 6 months, and the survey team's forecast for its behavior.

## 7 Changes in Resident Alienation from the Services

Some of the new company's main objectives are to encourage personnel/resident cooperation, and organize their interaction in order to resolve problems within its area of responsibility.

The initial survey revealed that the residents were estranged from the HMU (Housing Maintenance Unit). Even in the case of plumbing or electrical problems, the residents avoided calling the HMU in 31% of the cases and tried to resolve them in some other way. Six months into the Demonstration Project the percentage of such cases remained unchanged: 30.5%.

The survey team intends to elaborate the methods for constructing an Alienation Indicator, which is an important test of the company's performance in such a way as to exclude the effect of external changing factors on the private property management company's activities, such as higher rents and payment for services. An Alienation Indicator could increase in the

near-term as resident calls to the company decrease due to declining living standards and increasing prices for services, and if equipment deterioration outstrips the private property management company's ability to obtain parts and supplies.

However, the new channels of communication between residents and management that the company has opened in the course of the Demonstration Project, such as general meetings of the residents devoted to the initiation of the new company, and talks with managers of housing services of the city and prefecture, have had a positive effect on relations.

# 8 Project Staff Effectiveness and Work Style

## 8.1 Repair Request Completion Rates

Resident satisfaction with the management company's service depends to a great extent both on whether repair requests are completed satisfactorily and on the personnel's attitude when doing the work.

In questions 2 and 3 of the current survey residents were asked "If you experienced some problems, in what way did you manage to solve them?" and "How effectively were your problems dealt with?" Table 3 compares the various responses before the Demonstration Project and after 6 months.

During the Demonstration Project the percentage of requests fulfilled immediately and effectively increased by 3 percentage points, while the percentages of repeated requests and appeals to the management demanding the fulfillment have decreased (by 6 and 2 percentage points, respectively).

**Table 3. Repair Request Completion Rates before the Demonstration Project and After 6 Months**

| Request Completion | Before | After 6 Months | Change (percentage points) |
|---|---|---|---|
| Immediately and Effectively | 36% | 39% | + 3 |
| After Repeated Requests | 18% | 12% | - 6 |
| After Complaint Submitted to the Manager | 4% | 2% | - 2 |
| Remains Uncompleted | 42% | 47% | + 5 |

Not too surprisingly, the proportion of uncompleted requests is higher. This figure reflects the ever increasing dilapidation of buildings and infrastructure. This causes repair work to be beyond the powers of the HMU and of the private property management company. Deferred maintenance is typical of the housing maintenance sector in Russia. For example, according to a recent study the proportion of uncompleted repair requests for Moscow in December 1992 was 41%.*

*A. Puzanov, "The Quality of Housing in Moscow and Its Dependence on the Means Available to Households" (*Katchestvo zhilya v Moskve i yevo svyaz s resursami semyei*), *Voprosy Ekonomiki*, No. 7, 1993, p. 97.

The issue of deferred maintenance is indeed a significant and growing problem. The private management company can address this problem only through strong tenant education. Tenants should be informed about what can and cannot be accomplished in the current economic environment and be discouraged from requesting repairs that cannot be completed at present. This will result in a reduction in the number of uncompleted repair requests, but will cause an increase in latent repair requests. But these can be viewed as "educated" or "informed" latent repair requests.

## 8.2 Staff/Resident Relations

The HMU staff's work style before the experiment was "indifferent-passive", according to the opinion of most residents.

Monitoring has shown that at the time of the survey the percentage of residents unsatisfied with the work style of the new management company personnel was as low as 12%, the lowest value of this indicator concerning all aspects of the HMU activity. And the percentage of residents satisfied and highly satisfied with the personnel's style of work is one of the highest, at 52% (see Table 4).

The spread in the percentage of residents satisfied with different aspects of the company's activity runs from 33% to 54%. The share of residents satisfied with the way they are treated by the personnel is near the top of the range, while satisfaction with the personnel's responsiveness is close to the average.

**Table 4. Personnel Attitude Assessments Compared with Other Assessments**

| | Percentage of Residents | |
|---|---|---|
| | Satisfied or Highly Satisfied | Somewhat Satisfied or Unsatisfied |
| Treatment of Residents | 52% | 48% |
| Private Mgmt. Co. Staff Responsiveness | 41% | 59% |
| Minimum for All Areas | 33% | 46% |
| Maximum for All Areas | 54% | 67% |

The difference between the residents' satisfaction with their treatment by the staff, and the staff's responsiveness seems to be associated with repair request completion. Almost half the repair requests filed with the company remain uncompleted, and the residents are, of course, dissatisfied with this situation. The experience of the Demonstration Project has shown that changes in the personnel's attitude—politeness, consideration and exactitude—are manifested more vividly than their responsiveness to repair requests, which is often affected by a lack of materials and replacement parts.

Again, tenant education by the private management company can reduce significantly resident dissatisfaction with uncompleted repair requests. In addition, the management

company should prioritize its work based on the materials and supplies available and inform tenants of these priorities. It is also suggested that the company establish timeframes as goals for completion of certain tasks and inform the tenants of these timeframes. This will require maximum repair staff productivity and efficiency, and achievement of the goals will enhance resident satisfaction.

## 9 Resident Assessments of Changes

Along with the residents' assessments of particular areas of the housing maintenance service provided in the Demonstration Project, they were asked about their impression of the effect of the private management company's activities in each of the areas of service. In question 4 they were asked to assess if the situation had become better, worse, or had remained unchanged for cleanliness of the elevators, garbage chutes, the entry and common areas, and for plumbing and electrical equipment maintenance, the personnel's treatment of the residents and its responsiveness and quality of work. Table 5 shows the overall spread of assessments for the dynamics of the individual service areas.

**Table 5. Dynamics Assessments of Service Areas**

| Range of Assessments | Percentage of residents who said the service was: | | |
|---|---|---|---|
| | better | the same | worse |
| Maximum | 48% | 76% | 13% |
| Minimum | 14% | 45% | 6% |
| Average | 25% | 65% | 10% |

On the average for all service areas a quarter of residents noted improvement, 65% said the situation had not changed, and 10% said it had become worse. These data, together with the data on Specific Assessments before the Demonstration Project and after 6 months presented in Table 1 indicate that the situation has indeed improved.

In order to consolidate the positive and negative values expressed in these assessments into one indicator, the survey team proposes a **Dynamics Indicator** to be used in further monitoring the Demonstration Project. The Dynamics Indicator is calculated according to the following formula:

$$\text{Dynamics Indicator} = \frac{\text{Percentage of "better" answers} - \text{Percentage of "worse" answers}}{\text{Percentage of "no change" answers}}$$

For example, to construct the dynamics indicator for the "treatment of residents", the distribution of responses to Question 4 ("attitude of staff toward residents") were reviewed: 24% said attitudes had changed for the better, 6% said attitudes were worse, and 70% did not see any change. The dynamics indicator was calculated as: (24 - 6)/70 = 0.25.

The value of the indicator will be positive if the number of "better" answers is greater than the number of "worse" answers, and the larger the gap between them the higher the value. Table 6 shows the values for the Dynamics Indicator for each of the service areas.

Like the indicator of satisfaction, the Dynamics Indicator reflects more subjective perceptions, but it includes an additional element of comparison with the previous level; the greater the positive change in the residents' view, the higher is its value.

**Table 6. Dynamics Indicators by Service Area**

| Area (from highest to lowest value) | Dynamics Indicator | Rank |
|---|---|---|
| Grounds Maintenance | 0.91 | 1 |
| Entries Maintenance | 0.43 | 2 |
| Treatment of Residents | 0.25 | 3 |
| Garbage Chute | 0.21 | 4 |
| Personnel's Responsiveness | 0.21 | 5 |
| Elevator Cleanliness | 0.21 | 6 |
| Elevator Operation | 0.09 | 7 |
| Electrical Equipment Maintenance | 0.05 | 8 |
| Plumbing Equipment Maintenance | 0.04 | 9 |
| Average | 0.23 | |

All areas of service show positive change. The greatest changes in relation to the situation before the Demonstration Project were in the condition of the grounds and entries. Plumbing and infrastructure maintenance present a more challenging problem, due to the lack of materials and supplies. Therefore, the focus of the private management company should be on prioritizing repair requests based on materials availability, and improving productivity and efficiency in responding to these requests. A key component of this approach is keeping tenants informed (by posting notices in entries and communicating regularly with tenant leaders) of the types of repairs the management company is and is not able to complete on a timely basis.

## 10 Conclusions and Recommendations

1. In summary, monitoring of the private property management maintenance company Demonstration Project in its first half-year of operation has shown that positive changes in the services rendered to the residents are already apparent:
   — **Specific Assessments** of individual private property management company activities showed a net improvement of 3 percentage points in the level of housing maintenance services provided, although the dynamics of the change differed according to the area of service. Positive changes were observed in the

condition of the grounds, entries, and elevators, while the condition of garbage chutes and the performance of plumbers and, especially, electricians changed for the worse. The survey team attributes this discrepancy to the disproportionately negative effect of the lack of materials and supplies on plumbing and electrical maintenance.

— For the current survey, the team elaborated this indicator into **Differentiated Specific Assessments** for each of the areas of service, to analyze contradictory changes in housing maintenance observed in individual buildings. The variation among the buildings is greatest for entry maintenance, while the assessments for other areas are more consistent.

— An **Integral Assessment** of the operation of the private property management company as a whole, compiled as a composite of the Specific Assessments for each of the areas of service, showed marked improvement in the first 6 months of the private property management company's operation. The number of "good" scores (including the small proportion of "excellent" scores in the initial survey) increased from 21% to 24% for a net change of +3 points, the number of "fair" scores increased from 33% to 55% for a net change of +20 points, while these positive net changes depleted the "poor" category, which decreased by 23 points from 44% to 21%.

— The **Level of Resident Satisfaction** with the private property management company's overall performance, given in response to a direct question, showed even more marked improvement. The number of "satisfied" and "highly satisfied" scores increased from 16% to 41% for a net change of +25 points, the number of "somewhat satisfied" scores increased from 32% to 42% for a net change of +10 points, while the "unsatisfied" category decreased by 35 points from 52% to 17%.

— **Repair requests.** The number of Latent Repair Requests, that is, of less pressing problems to which the residents have become accustomed and about which they have put off calling the management company, decreased from 3.6 to 2.6 per family in the course of the first 6 months of the Demonstration Project.

Repair requests and red flag complaints will be compared only at the end of the project, in order to evaluate seasonal fluctuations. The survey team intends to elaborate the repair request and red flag complaint indicators in the course of the monitoring to include the substance of the problem reported. Information on the frequency and type of problems is a crucial resource for a property management company in planning for its short- and long-term budget and materials needs, as well as an excellent indicator of the company's performance.

During the Demonstration Project the percentage of requests fulfilled immediately and effectively in the residents' estimation increased by 3 percentage points, while the percentages of repeated requests and direct appeals to the management demanding attention have decreased by 6 and 2 percentage points, respectively.

— An **Alienation Indicator** gauging the extent to which residents avoided contacting the company and tried to solve problems on their own did not show perceptible change. However, the percentage of residents who said they were satisfied or highly satisfied with the personnel's style of work is one of the highest values

among all the aspects of the company's activity evaluated, at 52%, within a spread of 33% to 54%.

— On average for all aspects of the company's activity, 25% of residents noted improvement, 65% said the situation had not changed, while 10% said it had become worse. A **Dynamics Indicator** calculated on the basis of these perceptions indicates that all areas of service show positive change. The greatest improvements were in the condition of the grounds and entries, and the smallest changes were in plumbing and electrical equipment maintenance.

The Demonstration Project has brought about the greatest improvement in the areas the residents perceived as the worst before the project was implemented. In the initial survey the lowest Specific Assessments and the lowest Level of Resident Satisfaction were for elevator operation and grounds and entry maintenance, which they rate as the best after 6 months of the Demonstration Project.

2. The most vivid positive changes are in the service areas that do not require considerable material expenditures and which are more dependent on personnel management and work organization. Grounds and entry maintenance belong to this category.

Improvement in engineering infrastructure maintenance presents a more difficult problem, under conditions of increasing building and equipment wear. The monitoring has shown in particular that, although in general residents note a small improvement in the performance of plumbers and electricians, they believed that the overall condition of this service area had declined since the beginning of the Demonstration Project.

To help reverse this trend, the materials and supply problem should be addressed globally, through the privatization of supply networks and encouragement of competition, such as soliciting suppliers by competitive bid.

In the interim, the management company should focus on prioritizing its work based on the availability of materials and supplies, working around the situation by improving staff productivity and efficiency in concentrating on areas that either do not require supplies or for which they are available. Alternatively, staff may be directly assigned to "forage" for materials from various sources. These efforts should be accompanied by a program to keep tenants informed of economic constraints.

4. In general, the residents have positive attitudes toward the Demonstration Project. In fact, the Level of Resident Satisfaction with the project even outstrips their assessments of performance in the individual service areas. The complex relationship between residents' subjective perceptions and objective changes in the level of services provided should be borne in mind in planning further reform. Overall satisfaction rose at first out of proportion to the pace at which residents' individual problems were being resolved. But additional improvement will take time, and the

results of the private property management company's efforts may not be felt as soon as the residents expect. For this reason, the level of satisfaction indicator may turn downward or even dip below the level of the integral appraisal indicator. As time passes and improvements accumulate the two indicators will become more closely correlated. Strong tenant relations, particularly in information sharing, will enable the property management company to maintain reasonable resident expectations, neither too high nor too low.

5. The methods employed in monitoring the Demonstration Project have permitted the survey team to concretely measure and evaluate its effect on the complex network of subjective and objective factors and static and dynamic processes of Novosibirsk's housing sector. The streamlined set of indicators will provide useful feedback to Russian practitioners and advisers alike in monitoring changes in the housing sector and in planning future developments. The survey/monitoring team will continue to fine-tune these indicators in the course of future monitoring of the Novosibirsk Housing Management Demonstration Project.

# Appendix A

## Questionnaire Form

---

Street ___
Building No. ___
Apartment No.___

Dear Resident:

As you know, since April 1 your building has been serviced by a private property management company, Sirena (HMU 1). We would like to know whether you find that things have become better. Please have a member of your household complete the questionnaire on the other side of this paper.

This survey is being conducted by members of the Institute of Economics. They will come to you to collect the completed questionnaire during the week of 6 -12 Sept. If you have any problem completing the questionnaire they will be happy to assist you at that time.

Or you can leave the completed questionnaire with the HMU dispatcher or with your neighbors to be conveyed to the members of the Institute.

Thank you in advance for your cooperation in evaluating new forms of housing services.

Please underline or circle the statement you find right.

1. Have you experienced any problems in your apartment in plumbing or electricity during this time (from April 1)?
   1. No problems
   2. There were some problems

2. If you experienced some problems, in what way did you manage to solve them?
   1. No problems
   2. Managed to settle them within the family (or with the help of friends or relatives)
   3. Called the management office
   4. By direct arrangement with the plumber (electrician)
   5. Used other organizations or individuals

3. How effectively were your problems dealt with?
   1. No problems
   2. Resolved quickly and effectively
   3. Resolved only after repeated requests
   4. Resolved only after complaining to the Management Office
   5. Problems remain unresolved

4. Please evaluate if the situation has gotten:

| | Better | Unchanged | Worse |
|---|---|---|---|
| Operation of elevators | 1 | 2 | 3 |
| Cleanliness of elevators | 1 | 2 | 3 |
| Cleanliness near the garbage chute | 1 | 2 | 3 |
| Cleanliness of entrances | 1 | 2 | 3 |
| Cleanliness of courtyards | 1 | 2 | 3 |
| Plumbers' efficiency | 1 | 2 | 3 |
| Electricians' efficiency | 1 | 2 | 3 |
| Attitude of staff toward residents | 1 | 2 | 3 |
| Responsiveness of staff toward residents | 1 | 2 | 3 |

5. How well are you satisfied with the current performance of the maintenance organization with respect to:

| | Highly Satisfied | Satisfied | Somewhat Satisfied | Unsatisfied |
|---|---|---|---|---|
| Operation of elevators | 5 | 4 | 3 | 2 |
| Cleanliness of elevators | 5 | 4 | 3 | 2 |
| Cleanliness near the garbage chute | 5 | 4 | 3 | 2 |
| Cleanliness of entrances | 5 | 4 | 3 | 2 |
| Cleanliness of courtyards | 5 | 4 | 3 | 2 |
| Plumbers' efficiency | 5 | 4 | 3 | 2 |
| Electricians' efficiency | 5 | 4 | 3 | 2 |
| Attitude of staff toward residents | 5 | 4 | 3 | 2 |
| Responsiveness of staff toward residents | 5 | 4 | 3 | 2 |

6. Was your apartment privatized during this period? If so, when?
   1. yes, in ____ (month) 199__
   2. no

7. If you have some suggestions to the management company, please write them down here.

8. Your gender:
   1. Male
   2. Female

9. Year of Birth: 19__.

Thank you!

# Appendix B

## Number of Completed Questionnaires by Building

| | | Number of Housing Units | Number of Completed Questionnaires | Percent |
|---|---|---|---|---|
| Kotovskogo | 1 | 100 | 52 | 52 |
| Kotovskogo | 2 | 39 | 20 | 51 |
| Kotovskogo | 3 | 56 | 26 | 46 |
| Kotovskogo | 3/1 | 23 | 14 | 61 |
| Kotovskogo | 4 | 40 | 20 | 50 |
| Kotovskogo | 5 | 63 | 29 | 46 |
| Kotovskogo | 5/1 | 24 | 11 | 46 |
| Kotovskogo | 5/2 | 27 | 11 | 41 |
| Kotovskogo | 6 | 60 | 27 | 45 |
| Kotovskogo | 7 | 64 | 30 | 47 |
| Kotovskogo | 7/1 | 24 | 11 | 46 |
| Kotovskogo | 8 | 40 | 19 | 48 |
| Kotovskogo | 9 | 57 | 27 | 47 |
| Kotovskogo | 10 | 315 | 162 | 51 |
| Kotovskogo | 12 | 80 | 37 | 46 |
| Kotovskogo | 12/1 | 77 | 37 | 48 |
| Kotovskogo | 14 | 81 | 38 | 47 |
| Parchomenco | 30 | 59 | 41 | 69 |
| Permitina | 3 | 56 | 34 | 61 |
| Permitina | 5 | 60 | 48 | 80 |
| Permitina | 12 | 70 | 53 | 76 |
| Permitina | 16 | 70 | 45 | 64 |
| Permitina | 18 | 70 | 41 | 59 |
| Permitina | 20 | 54 | 39 | 72 |
| Permitina | 22 | 54 | 38 | 70 |
| Permitina | 3/2 | 12 | 6 | 50 |
| Planirov. | 1 | 75 | 35 | 47 |
| Planirov. | 1/1 | 90 | 44 | 49 |
| Planirov. | 1/2 | 89 | 45 | 51 |
| Planirov. | 3 | 88 | 41 | 47 |
| Planirov. | 3/1 | 88 | 38 | 43 |
| Vatutina | 1 | 48 | 22 | 46 |
| Vatutina | 1a | 48 | 28 | 58 |
| TOTAL | 2 | 2201 | 1169 | 53 |

# Attachment C

# Building-Specific Differentiated Special Assessments by Area

## Customer Satisfaction Index

| | Operation of Elevators | Cleanliness of Elevators | Cleanliness near Garbage Chute | Cleanliness of Entrances | Cleanliness of Courtyards | Plumber's Efficiency | Electrician's Efficiency | Staff Attitude | Staff Responsiveness |
|---|---|---|---|---|---|---|---|---|---|
| For all buildings | 4.5 | 4.4 | 4.1 | 4.2 | 5.1 | 4.0 | 4.3 | 5.0 | 4.4 |
| Kotovskovo 1 | | | | 4.1 | 6.0 | 4.3 | 4.5 | 5.4 | 5.3 |
| Kotovskovo 2 | | | | 4.4 | 5.3 | 3.1 | 4.1 | 3.7 | 3.6 |
| Kotovskovo 3 | | | | 4.5 | 5.9 | 4.4 | 4.7 | 4.3 | 3.7 |
| Kotovskovo 3/1 | | | | 2.5 | 6.9 | 4.2 | 4.9 | 4.6 | 4.2 |
| Kotovskovo 4 | | | | 3.9 | 5.4 | 4.0 | 4.8 | 5.6 | 5.4 |
| Kotovskovo 5 | | | | 4.2 | 5.2 | 4.4 | 4.4 | 5.1 | 4.8 |
| Kotovskovo 5/1 | | | | 2.4 | 5.4 | 3.6 | 5.0 | 4.2 | 4.0 |
| Kotovskovo 5/2 | | | | 1.6 | 4.9 | 2.6 | 3.6 | 4.7 | 4.0 |
| Kotovskovo 6 | | | | 4.0 | 4.4 | 3.1 | 3.4 | 5.8 | 5.5 |
| Kotovskovo 7 | | | | 3.9 | 3.4 | 4.1 | 3.7 | 3.7 | 3.5 |
| Kotovskovo 7/1 | | | | 4.1 | 4.9 | 3.5 | 5.0 | 4.9 | 3.7 |
| Kotovskovo 8 | | | | 4.4 | 4.6 | 5.2 | 3.1 | 5.4 | 3.3 |
| Kotovskovo 9 | | | | 4.0 | 3.8 | 5.2 | 4.0 | 4.9 | 5.1 |
| Kotovskovo 10 | 5.2 | 4.4 | 4.4 | 4.4 | 5.1 | 4.1 | 3.9 | 4.7 | 4.2 |
| Kotovskovo 12 | 4.7 | 4.8 | 4.6 | 3.9 | 5.0 | 4.3 | 4.0 | 5.2 | 4.5 |
| Kotovskovo 12/1 | 3.3 | 4.9 | 3.6 | 3.6 | 4.5 | 4.9 | 4.9 | 5.5 | 4.4 |
| Kotovskovo 14 | 4.8 | 5.1 | 4.7 | 4.2 | 4.7 | 4.0 | 4.3 | 4.8 | 4.6 |
| Parchomenco 30 | | | | 5.4 | 6.5 | 3.6 | 3.3 | 3.8 | 3.6 |
| Permitina 3 | | | | 3.8 | 4.6 | 4.6 | 4.4 | 5.7 | 5.4 |
| Permitina 5 | | | | 3.4 | 3.7 | 3.1 | 3.3 | 4.4 | 3.7 |
| Permitina 12 | | | | 5.2 | 5.3 | 4.4 | 5.0 | 5.5 | 5.7 |
| Permitina 16 | | | | 4.7 | 6.1 | 5.3 | 5.4 | 5.8 | 5.1 |
| Permitina 18 | | | | 4.9 | 5.7 | 4.2 | 4.7 | 5.3 | 5.1 |
| Permitina 20 | 3.0 | 3.6 | 3.3 | 3.3 | 4.3 | 3.4 | 4.4 | 4.8 | 3.9 |
| Permitina 22 | 3.5 | 3.4 | 3.5 | 3.6 | 4.6 | 4.4 | 4.4 | 5.1 | 4.2 |

# Customer Satisfaction Index

| | Operation of Elevators | Cleanliness of Elevators | Cleanliness near Garbage Chute | Cleanliness of Entrances | Cleanliness of Courtyards | Plumber's Efficiency | Electrician's Efficiency | Staff Attitude | Staff Responsiveness |
|---|---|---|---|---|---|---|---|---|---|
| rmitina 3/2 | | | | 2.9 | 6.7 | 3.7 | 6.7 | 5.5 | 3.7 |
| ınirov. 1 | | | | 4.6 | 5.1 | 4.7 | 4.1 | 5.6 | 5.0 |
| ınirov. 1/1 | | | | 4.4 | 4.3 | 3.0 | 3.5 | 5.3 | 4.1 |
| ınirov. 1/2 | | | | 3.5 | 5.6 | 4.6 | 4.8 | 5.9 | 5.0 |
| ınirov. 3 | | | | 4.2 | 5.0 | 3.9 | 5.0 | 5.7 | 5.6 |
| ınirov. 3/1 | | | | 4.4 | 4.9 | 2.8 | 3.1 | 3.7 | 3.6 |
| tutina 1 | | | | 4.2 | 5.2 | 3.8 | 4.4 | 2.7 | 2.4 |
| tutina 1a | | | | 5.2 | 4.6 | 4.5 | 5.6 | 5.0 | 4.0 |