



***IMPACT ASSESSMENT  
Researcher's Night 2010***

**Krasimira Dimitrova**

## **Introduction**

In the framework of “Researcher's Night 2010”, Club of the Young Scientists conducted a survey which main goal was to examine the impact of the events and the level of satisfaction among the participants. Other targets of the research were:

1. To find out whether the event “Researcher's night 2010” was a success or not.
2. To identify the most effective type of activities for reaching the objective with a view to future potential similar even
2. To find out the level of satisfaction among the participants.
5. To examine the public perception of the Bulgarian scientists and business organizations and their role within the mobility of researchers.
4. To gather opinion from the business people about the level of Bulgarian science.
5. To looking for researcher's point of view about how the science is applied in Bulgarian productions.

## **Target group:**

The visitors of the Researcher's night.

## **Methodology:**

The descriptive information was gathered by doing a survey. More than 10% of the guests in every town were kindly invited to participate. The data collection was done by doing face-to-face interviews according to a fixed set of questionnaire. The questions were a mixture of closed multiple choice and open questions and were distinguished on the different actors /business, researchers and students/ making distinction between the different goals and interest they have.

## **Duration:**

During the event

## **Training of pollsters:**

A particular effort was undertaken regarding the training of pollsters as to allow them conduct the interviews in the most effective way possible. All partners were using a similar questionnaire, elaborated in cooperation between them and CYS.

It was setting up working group of students, other members of CYS and freelance pollsters. They were trained by “researcher's night” key experts on effective /attractive/ way of conducting interviews and collecting questionnaires.

### Analyses:

After collecting and entering all the data into the database (Google docs) it was possible to make simple frequencies distributions and dependencies between the different variables. We received information, which gives us a clear concept of the satisfaction of the visitors, their expectations, suggestions and opinion about the Bulgarian science and business organizations. The results will be disseminated amongst the partners and more broadly outside the partnership.

The underlying objective of this analysis is to examine the impact of the events and the level of satisfaction among the participants of the Researcher's night 2010. The final objective is to assess researcher's views on Bulgarian science reality as well as their perceptions of actors involved in business and technology as well how the science is applied in Bulgarian productions

For each theme addressed, our analysis looks at the:

- The event in Bulgaria as general;
- Individual towns;
- Individual locations in Sofia;
- Demographic variables;

Other variables which we systematically cross-tabulated with the results for each question include:

1. The evaluation of the event and the level of satisfaction /how the events were organized and the quality of the program/ (Q3, Q4, Q5, Q10, Q11, Q12)
2. The image of Bulgarian researchers and relation between sciences, business and the state(Q6,Q7, Q8, Q9)
4. What is the policy of firms investing in science, do they work with trainees do they have financial support, etc. (Q14, Q15, Q16).

The event were attending of more than 5 000 people. In each city were interviewed about 10% of them, namely:

Sofia Architecture's house /Archit. house/	53 respondents
Sofia Technical university /TU/	41 respondents
Sofia National Politechnical museum.	59 respondents
Plovdiv	73 respondents
St. Zagora	75 respondents
Russe	86 respondents

The amount of the all respondents for each town we consider as 100% .

In relation to more easily understand the results of analysis looking at all the cities are grouped into common tables on issues as including only the rate of respondents.

One of the main goal of the project "Researcher's night" this year was to create successful contacts between business and scientific community. It is important actually to examined how many business representatives were participated in the survey.

In every location the amount of respondents from the businesses was different. In Sofia they were most then 20% of the all visitors and Plovdiv only 7%. This can be consequence of the activities in the programs of the different towns, but the fact is that there weren't so many business people.

<u>Q1. You are ...</u>	<b>Sofia /Archit. house/</b>	<b>Sofia TU</b>	<b>Sofia Museum</b>	<b>Plovdiv</b>	<b>St. Zagora</b>	<b>Russe</b>
1. Researcher	17%	35%	7%	12%	44%	41%
2. Student	37%	30%	14%	59%	12%	43%
3. School student	9%	7%	47%	18%	24%	0%

<sup>1</sup>In addition with the analysis are 13 appendixes for every town: Questionnaire in English, Excel tables and linear analyze.

4. Staff	7%	17%	22%	3%	12%	1%
5. Business representatives	26%	20%	3%	7%	8%	12%

## 1. The evaluation of the event and the level of satisfaction.

It observed a tend that the Researcher's night has fans and regular visitors already. In all cities majority of the respondents (around 44% of every town) do not come for the first time Q2.

As important - that their expectations of enjoyment have come true - Q5. Guests are almost satisfied with the program this year (Sofia– 56% answered with “so-so”, same in St. Zagora – 59% and Plovdiv - 51% . In Politechnical museum 58% are adamant that they liked a lot.

Definitive answers in all towns that visitors surely will come again next year, show the success of the Researcher's night 2010 – Q11. Except Technical University, where 34% answered that they will come if you have time and 10% were confident that they wont come at all, in all cities more than 60% answered that they will come for sure or if they have chance.

<b>Q2. Are you coming for first time on the event?</b>	<b>Sofia /Archit. house/</b>	<b>Sofia TU</b>	<b>Sofia Museum</b>	<b>Plovdiv</b>	<b>St. Zagora</b>	<b>Russe</b>
1. Yes	29%	29%	58%	67%	40%	55%
2. No	44%	44%	36%	32%	59%	44%

<b>Q4. What was your expectations from the evening in general?</b>	<b>Sofia /Archit. house/</b>	<b>Sofia TU</b>	<b>Sofia Museum</b>	<b>Plovdiv</b>	<b>St. Zagora</b>	<b>Russe</b>
1. To meet colleges from abroad	12%	10%	8%	16%	21%	22%
2. To have more astronomy exhibitions	7%	27%	14%	11%	16%	14%
3. To have more demonstration and sky observations	22%	34%	0%	23%	21%	21%
4. To have lecture from famous researchers	15%	12%	27%	29%	13%	10%
5. To have more young people	27%	10%	7%	12%	16%	23%
6. To have bigger concert	15%	7%	10%	4%	8%	8%

<b>Q5 Are you satisfied with the program this year?</b>	<b>Sofia /Archit. house/</b>	<b>Sofia TU</b>	<b>Sofia Museum</b>	<b>Plovdiv</b>	<b>St. Zagora</b>	<b>Russe</b>
1. Yes	24%	41%	58%	41%	27%	66%
2. No	17%	17%	14%	4%	9%	3%
3. So-so	56%	22%	22%	51%	59%	24%

<b>Q11. Will you come to the “Night of science” next year again?</b>	<b>Sofia /Archit. house/</b>	<b>Sofia TU</b>	<b>Sofia Museum</b>	<b>Plovdiv</b>	<b>St. Zagora</b>	<b>Russe</b>
1. Yes, for sure	73%	37%	69%	49%	48%	62%
2. Yes, if I have a chance	17%	34%	22%	21%	21%	14%
3. Depend of the theme	5%	5%	0%	10%	7%	2%
4. I don't know, I can't say from now	0%	7%	0%	3%	11%	6%
5. No I wont come for sure	2%	10%	0%	1%	0%	0%

Despite the positive feedback we need to address the comments which the visitors gave us about the

organization for the next year.<sup>2</sup> Here we can see that the problem with better advertising is leading. For comparison, last year: 5% of Sofia replied that there were lack of information, such a background of 28% in Architecture's house and 17% from TU this year.

The advice that there must be information about “what is happening, where” it is very interesting and should also be taken seriously in mind - 39% of TU have mentioned it.

In fact, each council must be taken into consideration, independence of its percentage terms, because it will help for better realization of the event in the future.

<b>Q10. Could you give a advice about the organization of the event?</b>	<b>Sofia /Archit. house/</b>	<b>Sofia TU</b>	<b>Sofia Museum</b>	<b>Plovdiv</b>	<b>St. Zagora</b>	<b>Russe</b>
1. I have no comments, the organization has a very high level	23%	11%	31%			37%
2. Be conducted in collaboration with more museums	5%	6%	6%			4%
3. To have more information on what, where it happens	13%	39%	6%			11%
4. More advertising	28%	17%	6%			0%
5. Be conducted outdoors	10%	0%	17%			4%
6. To have more stands	10%	11%	8%			0%
7. Better sound	0%	0%	6%			7%
8. Visitors are treated with soda and coffee	3%	0%	3%			0%
9. Anything to happen in one place	8%	0%	14%			4%
10. To sound all the time background music	5%	0%	3%			4%
11. More coordinators to guide people	0%	28%	6%			0%
12. To be in a later hour	0%	0%	3%			22%

There are interesting proposals on what should be included in the program next year – Q12. In almost all cities the majority thinks that the scientists should be more active of doing presentations and demonstrations (20% Architecture's house in Sofia; 33% Plovdiv, 20% St.Zagora).

33% of TU wish presentations to be made by business representatives, 20% in St.Zagora and 13% of Rouse want to lessen lectures of foreign professors.

It is interesting that 27% of museum visitors want to affect the theme of “Researcher's night 2011”, namely chemistry and physics.

For the first time this year mentioning Scientific popular movies / 25% of the respondents in Russe /, which would be an interesting activity in the future events.

<b>Q12 What do you want to see in the program next year?</b>	<b>Sofia /Archit. house/</b>	<b>Sofia TU</b>	<b>Sofia Museum</b>	<b>Plovdiv</b>	<b>St. Zagora</b>	<b>Russe</b>
1. Students to be more actively involved with presentations and demonstrations	20%	17%	10%	21%	0%	0%
3. Lectures by experts, business representatives	11%	0%	19%	17%	13%	6%
2. Demonstrations of inventions	11%	33%	4%	17%	0%	13%
4. Discussions between scientists, businessmen and students	20%	0%	0%	33%	20%	19%
5. Presentation of various software	6%	8%	4%	4%	27%	6%
6. Entertainment	6%	17%	0%	8%	27%	13%
7. Lectures by scientists from abroad	9%	0%	0%	8%	20%	13%
8. Company presentations	17%	33%	10%	8%	7%	0%
9. Developments and inventions by young people	0%	0%	13%	4%	7%	0%
10. Scientific popular movies	3%	0%	8%	4%	7%	25%
11. Biology and Medicine	3%	0%	0%	4%	7%	0%

<sup>2</sup>Fields of Plovdiv and St. Zagora are not filled, because these questions are not filled in the questionnaires.

12. Chemistry and Physics	0%	0%	27%	4%	0%	0%
13. Lazar and Electronics	0%	8%	2%	4%	0%	6.00%

## 2. The image of Bulgarian researchers and relation between sciences, business and the state

Question № 6 gives suggestions for Bulgarian reality and try to find the best relation between the above components in this way that they can developed successfully together.

Looking at responses by cities, we see how the majority believe that “Businesses must be directly involved in the development of scientific technology and innovation ” - 63% in St. Zagora, 59% in Architecture's house and Plovdiv, 44% in TU and 53% in Russe.

Fewer are the percentages of those who say tha “Businesses must contribute indirectly” and almost nobody thinks “Businesses should not participate in any way in science”/ Architecture's house – 0%, TU – 2%, Museum – 0%, St. Zagora – 4%, Russe 6%.

Q6. Which of the following statements is closest to your opinion?	Sofia /Archit. house/	Sofia TU	Sofia Museum	Plovdiv	St. Zagora	Russe
1. Businesses must be directly involved in the development of scientific technology and innovation (through material and technical support to academic institutions)	59%	44%	39%	59%	63%	53%
2. Businesses must contribute indirectly (through the creation of lobbies, sponsorship, scholarships, etc.).	39%	27%	49%	22%	33%	34%
3. Businesses should not participate in any way in science.	0%	2%	0%	11%	4%	6%

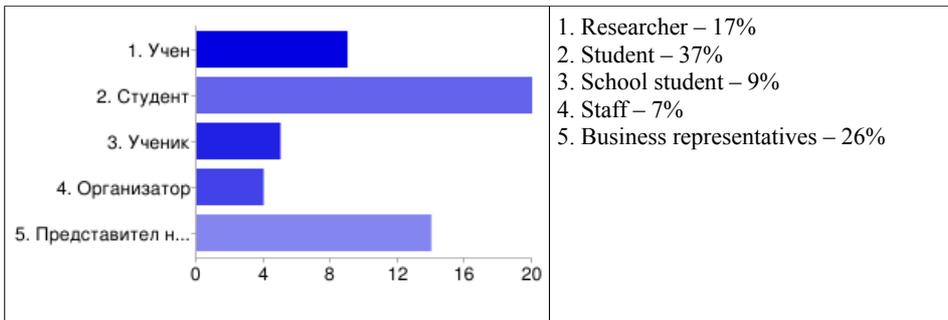
Question # 7 is somehow more complicated in terms of its presentation.

We noted only the opinion with the highest % For the rest of the responses can be consulted in the applied dimensional tables for each city.

Q7. Could you tell me to what extent do you think the fowling aspects meet the Bulgarian scientific space?	Sofia /Archit. house/	Sofia TU	Sofia Museum	Plovdiv	St. Zagora	Russe
Fully comply .....1						
Correspond somewhat .....2						
Rather meet .....3						
Did not meet .....4						
I do not know .....9						
1. There is adequate flow of competent researchers	2 - 32%	3 - 32%	2 - 46%	2 - 58%	2 - 41%	2 - 24%
2. Iintegrated, networked and accessible to the research teams from across Europe and the world.	4 - 51%	2 - 34%	3 - 36%	2 - 49%	3 - 33%	4 - 23%
3. Excellent research institutions engaged in effective public-private cooperation and partnerships.	4 - 59%	2 - 37%	2 - 41%	2 - 53%	2 - 43%	3 - 23%
4. Effective knowledge-sharing notably between public research and businesses and the general public.	2 - 39%	2 - 39%	2 - 37%	2 - 51%	2 - 40%	4 - 28%
5. Well-coordinated research programs and priorities, including significant co-planned investments in public research system in Europe	4 - 51%	4 - 51%	2 - 32%	2 - 55%	2 - 39%	3 - 30%

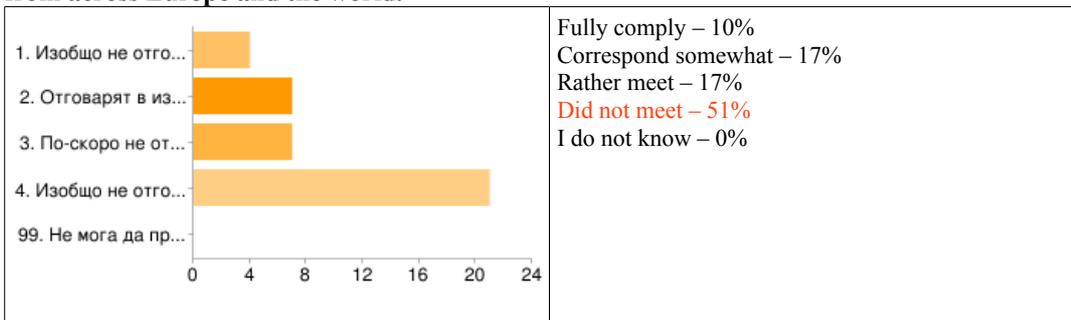
In the Architecture's house the negative views on Bulgarian scientific are dominated. This was also the place with the most business representatives - 26% of the visitors. For comparison, in Polytechnic Museum in Sofia, only 3% of respondents were business representatives. For us is more interesting of the viewpoint of the businessman about Bulgarian science and we will pay more attention to this location in Sofia.

### Architecture's house:

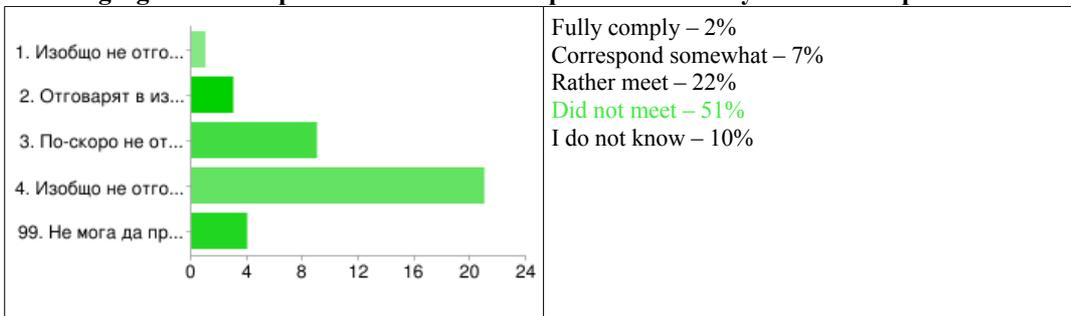


51% of them believe that in Bulgaria there is not “Well-coordinated research programs and priorities” and “research world-class infrastructures”

### 7.2 There is research world-class infrastructures, integrated, networked and accessible to the research teams from across Europe and the world.

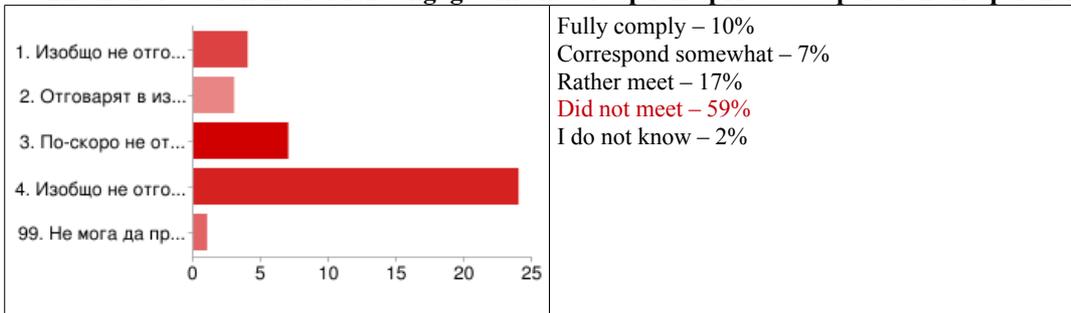


### 7.5 Well-coordinated research programs and priorities, including significant co-planned investments in public research system in Europe



Even larger group – 59% thinks that “Excellent research institutions engaged in effective public-private cooperation and partnerships.” doesn't meet the Bulgarian reality either

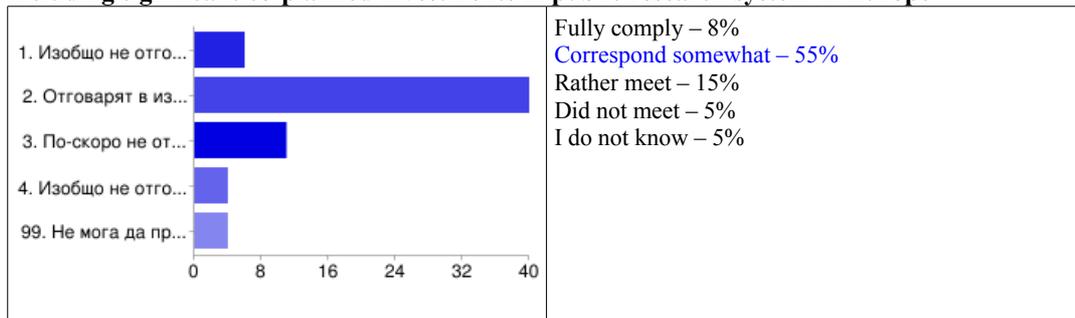
### 7.3 Excellent research institutions engaged in effective public-private cooperation and partnerships.



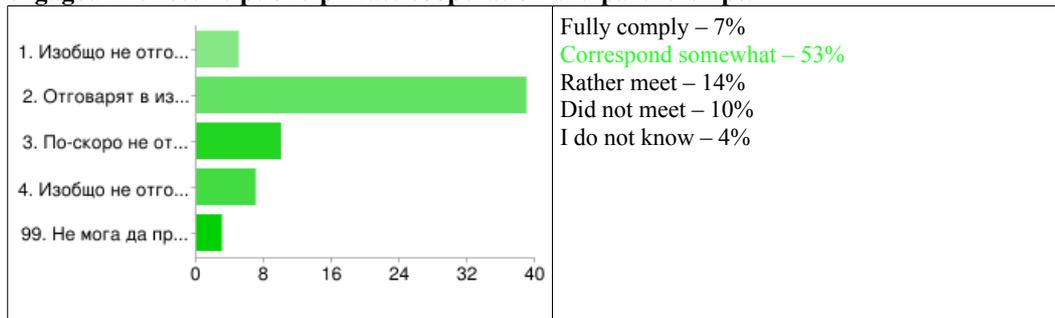
Completely opposite view have in Plovdiv. There respondents are positively to the same questions. Namely: 55% think that “Well-coordinated research programs and priorities, including significant co-planned investments in public research system in Europe”, as well “Excellent research institutions” and “research

world-class infrastructures” fully comply with the Bulgarian scientific reality. / relevant responses were 53% and 49%/

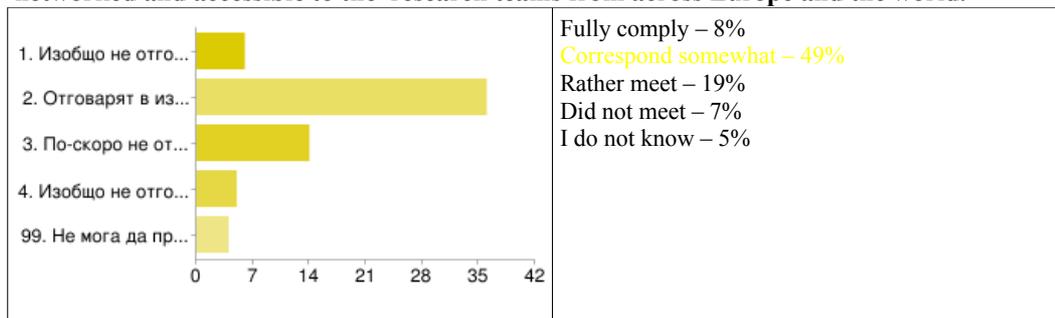
**7.5 Well-coordinated research programs and priorities, including significant co-planned investments in public research system in Europe**



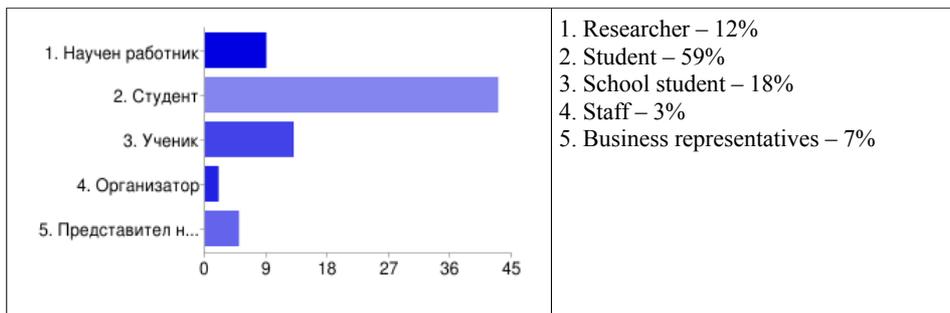
**7.3 Excellent research institutions engaged in effective public-private cooperation and partnerships.**



**7.2 There is research world-class infrastructures, integrated, networked and accessible to the research teams from across Europe and the world.**



But we do not have to forget that majority of respondents are students in Plovdiv - 59% and scientists - 12% versus only 7% of business representatives:



This allows us to conclude that business is skeptical of the development on the Bulgarian science, while researchers claim that the development of knowledge potential in Bulgaria is positive.

The answer of the rest of the towns there is no striking differences and moving averages between 20% and 30%.

<b>Q8. To what extent do you agree or disagree with each of the following statements?</b>	<b>Sofia /Archit. house/</b>	<b>Sofia TU</b>	<b>Sofia Museum</b>	<b>Plovdiv</b>	<b>St. Zagora</b>	<b>Russe</b>
I totally agree ..... 1						
I tend to agree ..... 2						
Rather disagree ..... 3						
Strongly disagree ..... 4						
I do not know ..... 9						
1. One of the issues to develop science in Bulgaria is the lack of staff.	1 - 49%	1 - 39%	1 - 29%	2 - 44%	2 - 36%	3 - 30%
2. One of the issues to develop science in Bulgaria is the lack of money.	1 - 90%	2 - 32%	1 - 76%	1 - 60%	1 - 45%	1 - 30%
3. The businesses find it difficult to form partnerships with universities.	1 - 46%	4 - 29%	2 - 31%	2 - 41%	3 - 24%	3 - 30%
4. National and regional funding is largely uncoordinated and therefore ineffective.	1 - 76%	2 - 32%	1 - 54%	2 - 33%	2 - 48%	2 - 35%
5. SMBs have limited access to innovation.	1 - 44%	3 - 32%	1 - 34%	2 - 37%	2 - 32%	3 - 28%

On direct relations between business and science the opinions in all cities are overlap. There is not major differences in rates. In general, all agree that “One of the issues to develop science in Bulgaria is the lack of money”. For example, 90% of the people in Architecture's house are fully agree with the statement. As a further problem in the implementation of the research mobility is “National and regional funding is largely uncoordinated and therefore ineffective” - 76% totally agree in Architecture house, 54% - from the Museum, 48% tend to agree in St. Zagora.

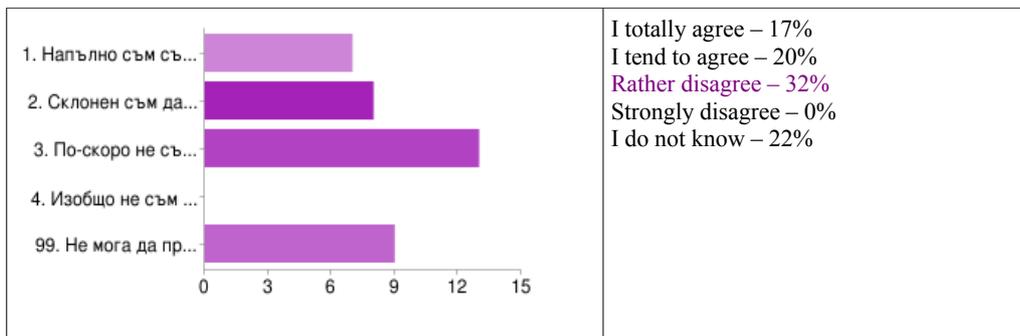
The next serious problem for 44% of the respondents in Plovdiv, 39% of TU and 36% in St. Zagora is: ”the lack of staff”.

But 29% of respondents in the TU does not agree that “The businesses find it difficult to form partnerships with universities and either “SMBs have limited access to innovation” for 32%.

### 8.3 The businesses find it difficult to form partnerships with universities.

	I totally agree – 5% I tend to agree – 10% Rather disagree – 29% Strongly disagree – 29% I do not know – 17%
--	--

### 8.5 SMBs have limited access to innovation.



Another condition for improving the relationship between business and science are transfer of knowledge and intellectual property. As an example of good practice in this direction 60% of respondents in TU listed “Exchange programs for students between schools and universities”. For 33% of Russe, International corporations in general and Erasmus programs also contribute to this development.

<b>Q9. Can you give concrete examples of good practice in the management and transfer of knowledge and intellectual property?</b>	Sofia /Archit. house/	Sofia TU	Sofia Museum	Plovdiv	St. Zagora	Russe
1. Euro Programs	10%	0%	7%			33%
2. International corporations	10%	0%	0%			33%
3. The activity of SmartCom in Bulgaria	10%	20%	7%			0%
4. Scholarly journals	14%	0%	20%			0%
5. Company “Ontotekstil ”	10%	20%	7%			0%
6. Erasmus program	24%	0%	0%			33%
7. Exchange programs for students between schools and universities	14%	60%	20%			0%
8. Company Mtell	5%	5%	7%			0%
9. Laboratory photonics and biomedicine Prof. L. Avramov	5%	0%	0%			0%
10. Online Services	0%	0%	20%			0%

### 3. What is the policy of firms investing in science, do they work with trainees do they have financial support, etc. (Q14, Q15, Q16)

Logically, most of the firm which were involve in the project “Researcher's night” are investing in the research. 17% from the business representers in Architecture's house and 15% in TU invest more then 10% from their budget for developing of new technologies.

In the same moment, majority of the business organization do not use EU funding. Only 17% in Architecture's house answer positive, 7% in Plovdiv and Russe, 11% in St. Zagora and no one firm / 0% / in TU.<sup>3</sup>

<b>Q14. What % of the annual budget of your company is devoted to researches and development of new technologies?</b>	Sofia /Archit. house/	Sofia TU	Sofia Museum	Plovdiv	St. Zagora	Russe
0%	9%	6%		1%	4%	3%
Till 5%	6%	10%		3%	0%	3%
Till 10%	7%	4%	2%	4%	1%	5%
More than 10%	17%	15%		1%	0%	0%

<sup>3</sup>We don not put attention to Museum, because the public there were mainly school children and we don't have data for this questions.

<b>Q15. Do your company is funding by European Framework Programs?</b>	<b>Sofia /Archit. house/</b>	<b>Sofia TU</b>	<b>Sofia Museum</b>	<b>Plovdiv</b>	<b>St. Zagora</b>	<b>Russe</b>
1. Yes	17%		0%	7%	11%	7%
2. Not	19%		2%	14%	13%	14%

Opposite of the investing in the science, it's not common that business organizations to work with trainees. 20% from Architecture's house and TU answered like this. 16% of the firm in St. Zagora also said that they don't have trainers, comparing to 7% which work with small group - till 5 trainees. The situation in Russe is almost the same: 14% don't work, and only 1% has young inexperience people in their organization. Actually, there are good results in Plovdiv, where 10% of the firm included trainees.

<b>Q16. How many trainees are working in your organization?</b>	<b>Sofia /Archit. house/</b>	<b>Sofia TU</b>	<b>Sofia Museum</b>	<b>Plovdiv</b>	<b>St. Zagora</b>	<b>Russe</b>
1 – 5 trainees	2%	12%	2%	10%	7%	6%
More then 5	5%	25%	0%	5%	1%	1%
We don't work with trainees	20%	20%	0%	8%	16%	14%

However, responses to question № 16, the young public in general believes that events like this will give them a career opportunity. 24% in architecture's house gives answers that they are sure that will have new possibilities. and 20% hoping this to happen. 37% и 24% are the positive answers in TU, against only 15% which are skeptical

41% in Plovdiv also hope and only 15% who believe that nothing will come from this.

Най-сигурни, че "Researcher's night" for sure отварв нови хоризонти са в Русе, където 49% са отговорили така.

The most sure respondents who believe that "Researcher's night" will open new Horizons are in Rousse, where 49% answered that.

<b>Q13. Do you think this event will give you career opportunity?</b>	<b>Sofia /Archit. house/</b>	<b>Sofia TU</b>	<b>Sofia Museum</b>	<b>Plovdiv</b>	<b>St. Zagora</b>	<b>Russe</b>
1. Yes for sure	24%	24%	25%	16%	29%	49%
2. Not	15%	15%	19%	15%	27%	10%
3. I can not say now, but hopefully	20%	37%	25%	41%	4%	3%