

**CONFERENCE ON IMPLEMENTATION OF OECD METHODOLOGIES FOR  
R&D/S&T STATISTICS IN CENTRAL AND EASTERN EUROPEAN COUNTRIES**

**S&T STATISTICAL SYSTEMS IN CENTRAL AND EASTERN EUROPEAN COUNTRIES:  
1996 NATIONAL PROFILES**

**ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT**

**Paris**

**51945**

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**OECD, 1997**

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## FOREWORD

The development of reliable, market-oriented and internationally comparable statistics is a priority activity of the OECD Centre for Co-operation with the Economies in Transition (CCET). The OECD, a leading organisation in the development of standard methodology in the area of science and technology statistics and indicators, has co-operated for several years with central and eastern European countries (CEECs) to harmonize their S&T statistical systems with international standards.

This document presents the status of reforms undertaken by 15 CEECs to apply OECD recommendations contained in the *Frascati Manual – Proposed Standard Practice for Surveys of Research and Experimental Development*, and the *Oslo Manual – OECD Proposed Guidelines for Collecting and Interpreting Technological Innovation Data*. It consists of country profiles, which are introduced by a summary analysis.

This work was prepared by Laudeline Auriol (Directorate for Science, Technology and Industry) in the framework of the CCET programme.

This document is published on the responsibility of the Secretary-General of the OECD.

## ACRONYMS

ISCED	International standard classification of education
ISCO	International standard classification of occupations
ISIC	International standard industrial classification
NABS	Nomenclature for the analysis and comparison of scientific programmes and budgets
NACE	General industrial classification of economic activities within the European Communities
SNA	System of national accounts
BEL	Belarus
BUL	Bulgaria
CRO	Republic of Croatia
CZE	Czech Republic
EST	Estonia
HUN	Hungary
KAZ	Republic of Kazakhstan
LAT	Latvia
LIT	Lithuania
POL	Poland
ROM	Romania
RUS	Russian Federation
SLK	Slovak Republic
SLV	Republic of Slovenia
UKR	Ukraine

## **SCIENCE AND TECHNOLOGY STATISTICAL SYSTEMS IN CENTRAL AND EASTERN EUROPEAN COUNTRIES: 1996 NATIONAL PROFILES**

This document has been prepared following the Conference on the implementation of OECD methodologies for R&D/S&T statistics in central and eastern European countries, which was held in Budapest on 6-8 November 1996. The information here presented was supplied by national authorities in reply to a questionnaire sent by the OECD Secretariat and gives the status, at the end of 1996, of the S&T statistical systems in every country which participated in the conference: Belarus, Bulgaria, the Republic of Croatia, the Czech Republic, Estonia, Hungary, the Republic of Kazakhstan, Latvia, Lithuania, Poland, Romania, the Russian Federation, the Slovak Republic, the Republic of Slovenia and Ukraine. It takes stock of the progress made by central and eastern European economies in transition in implementing international statistical standards as recommended by the OECD in the field of science and technology.

This document consists of country files describing each national situation in the field of R&D/S&T statistics. A table summarising information drawn from the country files is analysed below and is followed by the national profiles.

### **Agencies responsible for R&D/S&T statistics**

In central and eastern European countries, R&D/S&T statistics fall under the responsibility of central statistical offices. This situation differs to some extent from OECD Member countries, where for some of them this work is conducted by the ministries in charge of scientific affairs. The exception to this rule among central and eastern European countries is the Russian Federation: in this country the Centre for Science Research and Statistics (CSRS), which was established by and is subordinated to the State Committee for Science and Technology and the Academy of Sciences, is responsible for methodological developments, database management, analysis and publication of R&D/S&T statistics. The State Committee for Statistics (GOSKOMSTAT) is entrusted with data collection only. In some other countries, i.e. Poland, Romania and Slovenia, close co-operation exists between central statistical offices and ministries in charge of scientific affairs, which has a positive impact on the quality of statistics.

The number of persons working on R&D/S&T statistics in each country varies from 0.5 in small countries to 24 in the Russian Federation. The average number of persons comes to 2.5 in full-time equivalent (FTE), excluding this latter country for which the number is particularly high. Poland comes after Russia in terms of staff resources devoted to work on R&D/S&T statistics, with 8.5 FTE, i.e. 7 at the central statistical office (GUS) and 1.5 at the State Committee for Scientific Research (KBN).

### **General statistical framework**

OECD international standards for R&D/S&T statistics, which are described in the *Frascati Manual*, draw on a more general international statistical framework and in particular make use of certain international standard classifications. Implementing OECD standards thus involves statistical reforms

reaching beyond R&D/S&T statistics: in particular, compatibility between the national statistical system and, for example, the System of National Accounts (SNA) or certain international standard classifications.

At the end of 1996, the SNA was in force in all countries, except Kazakhstan where it is under development, and Croatia. NACE Revision 1, while approved, is not yet in force in Russia. It is currently being introduced in Belarus, Kazakhstan, Ukraine and Croatia. Russia, Kazakhstan and Latvia do not yet make use of the ISIC Revision 3. The ISCO is not yet in force in Russia, Belarus, Kazakhstan and Croatia. The ISCED is only partly introduced in the region, the reason probably being that this classification is currently under revision. Only Russia and Slovenia make use of the NABS. Republics of the former Soviet Union, especially Russia itself, are the countries for which the biggest efforts are still needed in order to ensure compatibility with international standard classifications.

### **Business registers**

Business registers, which are often used to collect R&D/S&T statistics, exist in all countries, except Russia. These registers are still under development in Bulgaria and Kazakhstan. In the Russian Federation, a special register of R&D/S&T units is used to compile statistics. Such registers also exist in half the countries under survey.

### **R&D surveys**

New national R&D surveys fully based on the *Frascati Manual* have been introduced in the latest years in half the countries under survey. When this was not the case, some of the recommendations of the *Frascati Manual* were nevertheless introduced in all already existing surveys. Most countries use only one questionnaire for all R&D units, which means that contrary to OECD Member countries, there are no differentiated surveys for different sectors of the economy as defined in the *Frascati Manual* – i.e. the public sector, the business enterprise sector, the higher education sector and the private non-profit (PNP) sector – except for Hungary, Romania and Slovakia. The number of units covered by the survey depends on both the size of the country and the register used. There are some questions about the extent to which the business enterprise sector is covered. It is not covered at all in two Baltic States, namely Estonia and Lithuania (due to lack of resources though business registers do exist), as well as in Kazakhstan and Ukraine. This may be partly explained by the fact that there are remaining differences in the organisational system of research in centralised economies. The PNP sector, which formerly did not exist in such economies is growing steadily from one year to the next.

### **Main Frascati definitions**

Defence R&D is not covered in Belarus, Croatia, Lithuania and Slovenia and only partly covered in Hungary, Poland, Slovakia and Kazakhstan. The best covered indicators are expenditures by type of costs and source of financing and data on personnel, in head counts and EPT.

### **Innovation surveys**

Only six countries among 15 conduct innovation surveys, and these are based on the Oslo Manual to varying extent. Seven other countries plan to conduct such surveys in the coming years.

CURRENT STATUS IN R&D/S&T STATISTICS

COUNTRY	BEL	BUL	CRO	CZE	EST	HUN	KAZ	LAT	LIT	POL	ROM	RUS	SLK	SLV	UKR
<b>BACKGROUND STATISTICAL FRAMEWORK</b>															
SNA	Yes	1991	No	Yes	1992	Yes	Under dev.	1992	1992	1990	Yes	Yes	1992	Yes	1991
NACE Rev. 1	1997-98	1996	1997	1992	1996	Expected	Under dev.	1996	1992	1991	Yes	Approved	1992	1995	1997
ISIC Rev. 3	No	1996	1997	1992	1992	Expected	No	No	1992	1991	Yes	Approved	1992	1995	1997
ISCO	No	1996	1997	1992	1996	Yes	No	No	1992	1995	Yes	No	1993	1996	1996
ISCED	Yes	Yes	1991	No	1992	Partly	No	1993	Partly 1995	No	Yes	No	No	1993	No
NABS	No	No	No	No	No	No	No	No	No	No	No	Yes	No	Yes	No
<b>BUSINESS REGISTER</b>															
Existence	Yes	Under dev.	Yes	1980	1991	1989	Under dev.	1991	1995	Yes	Yes		Yes	Yes	1996
Used for R&D/S&T statistics	Yes	1996	1991	1980	1992	1990	Yes	1992	1995	Yes	1995	Yes	Yes	Yes	1996
Special register for R&D units		No	Yes	No	No	1953	Yes	No	No	No	1995	Yes	1992	Yes	1991
<b>R&amp;D SURVEYS</b>															
New R&D survey(s) fully based on Frascati	No	1995	1991	No	1992	Pilot	No	No	1997	1994	Yes	1994	1994	1993	No
Survey(s) with some Frascati recommend.	Yes	1997	1979	1995	No	Yes	Yes	1993	No	1963	Yes	1	No	1978	1994
Survey(s) based on other methodology	Yes	No	1979	No	No	3	Yes	No	2	1	3	1	No	1964	1991
Total number of surveys	1	2	1	2	1	3	2	92	230	1130 in	569	4059 in 95	364 in 95	343 in 94	1
Total number of units covered	324	436	148	667	72	1450	287	49	230	96	118	1193 in 95	127 in 95	58 in 94	1453
Number in the public sector	108	219	63	134	67	105	240	49	230	190 in 96	41	511 in 95	55 in 95	40 in 94	1178
in the higher education sector	38	102	59	40	5	1150	47	18	2	140 in 96	41	10 in 95	1 in 95	85 in 94	145
in the PNP sector		4		0	0			2		100 in 96	410	2345 in 95	181 in 95	160 in 94	
in the business enterprise sector	178	111	26	493	0	275	700 in 96	23		700 in 96					
<b>MAIN FRASCATI DEFINITIONS</b>															
Defense R&D	No	1995	No	1995	1993	Partly 1980	Partly	1992	No	Partly	Yes	1994	Partly 1994	No	No
Expenditure by type of costs	Yes	1980	1991	1991	1992	1963	Partly	No	Partly 1992	1994	Yes	1994	Partly 1994	1993	No
Expenditure by source of funds	Partly	Partly 1980	Revenues	1995	1992	Partly 1963	Partly	Yes	Partly 1992	1994	Yes	1994	1994	1993	No
Expenditure by socio-economic objective		No	Revenues	No	1993	No	No	No	No	1994	Partly	1994	No	1994	No
Total GBAORD	No	No	No	No	No	No	No	1992	Partly 1992	No	Partly	Partly 1993	No	No	Yes
GBAORD by socio-economic objective	No	No	No	No	No	No	No	No	No	Estim.	Partly	Partly 1993	1994	No	Yes
Personnel in full-time equivalents	1992	1995	Partly	Yes	1992	1981	No	1993	Partly 1992	1990	Yes	1994	1994	1993	
Personnel in head counts	Yes	1980	1993	Yes	1950	1953	Yes	1993	Partly 1992	1994	Yes	1989	1997	Yes	
<b>INNOVATION SURVEYS</b>															
Existence	Yes	No	No	No	No	1994	No	No	No	1980	Pilot	1995	No	No	Yes
Planned		No		Yes	1998 ?	1997	Yes	1998	1997	1996	1995	Partly 1995	Yes	1997	Yes
Based on Oslo Manual	No	No		Yes	1998 ?	1994	Yes	1998	1998	8000 in	2220	17000	Yes	2044	Yes
Number of enterprises covered						110 in 94		100	1000	96			150 ?		2200

## CURRENT SITUATION IN R&D/S&T STATISTICS

**COUNTRY:** Belarus

<b><u>NAME OF AGENCY(IES) RESPONSIBLE FOR R&amp;D/S&amp;T STATISTICS</u></b>					
Department of Social Statistics of the Ministry of Statistics and Analysis of the Republic of Belarus.					
<b><u>NUMBER OF PERSONS WORKING FULL-TIME ON R&amp;D/S&amp;T STATISTICS</u></b>					
2 person-years.					
<b><u>BACKGROUND STATISTICAL FRAMEWORK</u></b>					
	<b>National system compatible with</b>			<b>Used for R&amp;D/S&amp;T statistics</b>	
	<b><u>Yes</u></b>	<b><u>No</u></b>	<b><u>Since</u></b>	<b><u>Yes</u></b>	<b><u>No</u></b>
SNA	X			X	
NACE Rev. 1	X		1997-98		
ISIC Rev. 3					
ISCO	X				
ISCED	X			X	
NABS					X
<b><u>BUSINESS REGISTER</u></b>					
			<b><u>Yes</u></b>	<b><u>No</u></b>	<b><u>Since</u></b>
Existence			X		
Used for R&D/S&T statistics			X		
Special register for R&D units					
<b><u>R&amp;D SURVEYS</u></b>					
			<b><u>Yes</u></b>	<b><u>No</u></b>	<b><u>Since</u></b>
New R&D survey(s) fully based on Frascati				X	
R&D survey(s) with some Frascati recommend.			X		
R&D survey(s) based on other methodology			X		

**Total number of surveys: 1**

**Description (according to sectors covered):**

**Total number of units covered: 324**

**Number of units covered in the government sector: 108**

**in the higher education sector: 38**

**in the private non-profit sector:**

**in the business enterprise sector: 178**

**Criteria used to identify business enterprises:**

**MAIN FRASCATI DEFINITIONS**

	<u>Covered</u>	<u>Not covered</u>	<u>Partly covered</u>	<u>Since</u>
Defense R&D		X		
Expenditure by type of costs	X			
Expenditure by source of funds			X	
Expenditure by socio-eco. objective				
Total GBAORD		X		
GBAORD by socio-eco. objective		X		
Personnel in full-time equivalents	X			1992
Personnel in head counts	X			

**INNOVATION SURVEY**

	<u>Yes</u>	<u>No</u>	<u>Since</u>
Existence	X		
Planned			
Based on Oslo Manual		X	

**Number of enterprises covered: 80**

**Criteria used to identify enterprises:** enterprises producing and testing experimental products.

## CURRENT SITUATION IN R&D/S&T STATISTICS

**COUNTRY: Bulgaria**

<b><u>NAME OF AGENCY(IES) RESPONSIBLE FOR R&amp;D/S&amp;T STATISTICS</u></b>					
The Social Statistics Division and the Statistics on Services Division of the National Statistical Institute.					
<b><u>NUMBER OF PERSONS WORKING FULL-TIME ON R&amp;D/S&amp;T STATISTICS</u></b>					
3 persons.					
<b><u>BACKGROUND STATISTICAL FRAMEWORK</u></b>					
	National sytem compatible with			Used for R&D/S&T statistics	
	<u>Yes</u>	<u>No</u>	<u>Since</u>	<u>Yes</u>	<u>No</u>
SNA	X		1991	X	
NACE Rev. 1	X		1996 (experiment)	X	
ISIC Rev. 3	X		1996 (experiment)	X	
ISCO	X		1996	X	
ISCED	X			X	
NABS					X
<b><u>BUSINESS REGISTER</u></b>					
	<u>Yes</u>	<u>No</u>	<u>Since</u>		
Existence	X		(under development)		
Used for R&D/S&T statistics	X		1996		
Special register for R&D units			X		
<b><u>R&amp;D SURVEYS</u></b>					
	<u>Yes</u>	<u>No</u>	<u>Since</u>		
New R&D survey(s) fully based on Frascati	X		1995		
R&D survey(s) with some Frascati recommend.	X		1997		
R&D survey(s) based on other methodology			X		
<b>Total number of surveys:</b> 2 (see details below).					

**Description:** there is a specific survey on R&D personnel; data on R&D expenditures originate from a new specific survey, the so-called "Report on R&D expenditures".

**Total number of units covered:** 436

**Number of units covered in the government sector:** 219

**in the higher education sector:** 102

**in the private non-profit sector:** 4

**in the business enterprise sector:** 111

**Criteria used to identify business enterprises:** enterprises which are market producers of goods and services.

**MAIN FRASCATI DEFINITIONS**

	<u>Covered</u>	<u>Not covered</u>	<u>Partly covered</u>	<u>Since</u>
Defense R&D	X			1995
Expenditure by type of costs	X			1980
Expenditure by source of funds			X	1980
Expenditure by socio-eco. objective		X		
Total GBAORD			X	1980
GBAORD by socio-eco. objective		X		
Personnel in full-time equivalents	X			1995
Personnel in head counts	X			1980

**INNOVATION SURVEY**

	<u>Yes</u>	<u>No</u>	<u>Since</u>
Existence		X	
Planned		X	
Based on Oslo Manual		X	

**Number of enterprises covered:**

**Criteria used to identify enterprises:**

## CURRENT SITUATION IN R&D/S&T STATISTICS

**COUNTRY: Republic of Croatia**

<b><u>NAME OF AGENCY(IES) RESPONSIBLE FOR R&amp;D/S&amp;T STATISTICS</u></b>						
Department for Statistics on Education, Central Bureau of Statistics.						
<b><u>NUMBER OF PERSONS WORKING FULL-TIME ON R&amp;D/S&amp;T STATISTICS</u></b>						
One person is working on data collection and preparation for publishing for 1/3 of his time. Two other persons are working occasionally on R&D/S&T statistics. Altogether, this makes about 0.5 FTE.						
<b><u>BACKGROUND STATISTICAL FRAMEWORK</u></b>						
	National system compatible with			Used for R&D/S&T statistics		
	<u>Yes</u>	<u>No</u>	<u>Since</u>	<u>Yes</u>	<u>No</u>	
SNA		X			X	
NACE Rev. 1	X		1997	X		
ISIC Rev. 3	X		1997	X		
ISCO		X			X	
ISCED	X		1991		X	
NABS					X	
<b><u>BUSINESS REGISTER</u></b>						
			<u>Yes</u>	<u>No</u>	<u>Since</u>	
Existence			X			
Used for R&D/S&T statistics			X		1991	
Special register for R&D units			X (at Ministry of Science and Technology)			
<b><u>R&amp;D SURVEYS</u></b>						
			<u>Yes</u>	<u>No</u>	<u>Since</u>	
New R&D survey(s) fully based on Frascati				X		
R&D survey(s) with some Frascati recommend.	X				1991	
R&D survey(s) based on other methodology	X				1979	

**Total number of surveys:** 1

**Description (according to sectors covered):** the survey covers institutions entered in the register of the Ministry of Science and Technology, higher education institutions from the same register, as well as R&D institutions which are not in the register of the Ministry of Science and Technology. These are then arranged according to the UNESCO system of classification.

**Total number of units covered:** 160 in 1994 and 148 in 1995.

**Number of units covered in the government sector:** 63 in 1995

**in the higher education sector:** 59 in 1995

**in the private non-profit sector:**

**in the business enterprise sector:** 26 in 1995

**Criteria used to identify business enterprises:** according to the reporting unit.

**MAIN FRASCATI DEFINITIONS**

	<u>Covered</u>	<u>Not covered</u>	<u>Partly covered</u>	<u>Since</u>
<b>Defense R&amp;D</b>		X		
<b>Expenditure by type of costs</b>	X			1991
<b>Expenditure by source of funds</b>	X (revenues)			1991
<b>Expenditure by socio-eco. objective</b>	X (revenues)			1992
<b>Total GBAORD</b>		X		
<b>GBAORD by socio-eco. objective</b>		X		
<b>Personnel in full-time equivalents</b>			X	1993
<b>Personnel in head counts</b>	X			1979

**INNOVATION SURVEY**

	<u>Yes</u>	<u>No</u>	<u>Since</u>
<b>Existence</b>		X	
<b>Planned</b>			
<b>Based on Oslo Manual</b>			
<b>Number of enterprises covered:</b>			
<b>Criteria used to identify enterprises:</b>			

## CURRENT SITUATION IN R&D/S&T STATISTICS

**COUNTRY:** Czech Republic

<b><u>NAME OF AGENCY(IES) RESPONSIBLE FOR R&amp;D/S&amp;T STATISTICS</u></b>					
R&D Unit of the Investment, Construction and Energy Division, Czech Statistical Office.					
<b><u>NUMBER OF PERSONS WORKING FULL-TIME ON R&amp;D/S&amp;T STATISTICS</u></b>					
3 posts (of which 2 occupied).					
<b><u>BACKGROUND STATISTICAL FRAMEWORK</u></b>					
	<b>National system compatible with</b>			<b>Used for R&amp;D/S&amp;T statistics</b>	
	<b><u>Yes</u></b>	<b><u>No</u></b>	<b><u>Since</u></b>	<b><u>Yes</u></b>	<b><u>No</u></b>
SNA	X			X	
NACE Rev. 1	X		1992	X	
ISIC Rev. 3	X		1992	X	
ISCO	X		1993	X	
ISCED		X			
NABS					X
<b><u>BUSINESS REGISTER</u></b>					
		<b><u>Yes</u></b>	<b><u>No</u></b>	<b><u>Since</u></b>	
Existence		X		1980	
Used for R&D/S&T statistics		X		1980	
Special register for R&D units			X		
<b><u>R&amp;D SURVEYS</u></b>					
		<b><u>Yes</u></b>	<b><u>No</u></b>	<b><u>Since</u></b>	
New R&D survey(s) fully based on Frascati			X		
R&D survey(s) with Frascati recommend.		X		1995	
R&D survey(s) based on other methodology			X		
<b>Total number of surveys: 2</b>					

**Description:** the main questionnaire covers units of 25 employees or more. A smaller and simpler questionnaire covers units of less than 25 employees.

**Total number of units covered:** 667

**Number of units covered in the government sector:** 134

**in the higher education sector:** 40

**in the private non-profit sector:** 0

**in the business enterprise sector:** 493

**Criteria used to identify business enterprises:** SNA sector.

**MAIN FRASCATI DEFINITIONS**

	<u>Covered</u>	<u>Not covered</u>	<u>Partly covered</u>	<u>Since</u>
Defense R&D	X			1995
Expenditure by type of costs	X			1991
Expenditure by source of funds	X			1995
Expenditure by socio-eco. objective		X		
Total GBAORD		X		
GBAORD by socio-eco. objective		X		
Personnel in full-time equivalents	X (average recalculated			
Personnel in head counts	X	number of personnel)		

**INNOVATION SURVEY**

	<u>Yes</u>	<u>No</u>	<u>Since</u>
Existence		X	
Planned	X		
Based on Oslo Manual	X		

**Number of enterprises covered:**

**Criteria used to identify innovative enterprises:**

## CURRENT SITUATION IN R&D/S&T STATISTICS

**COUNTRY: Estonia**

<b><u>NAME OF AGENCY(IES) RESPONSIBLE FOR R&amp;D/S&amp;T STATISTICS</u></b>					
Education, Science, Culture and Justice Statistics Section of the Statistical Office of Estonia.					
<b><u>NUMBER OF PERSONS WORKING FULL-TIME ON R&amp;D/S&amp;T STATISTICS</u></b>					
0.5 person-year.					
<b><u>BACKGROUND STATISTICAL FRAMEWORK</u></b>					
	National system compatible with			Used for R&D/S&T statistics	
	<u>Yes</u>	<u>No</u>	<u>Since</u>	<u>Yes</u>	<u>No</u>
SNA	X		1992		X
NACE Rev. 1	X		1996	X	
ISIC Rev. 3	X		1992	X	
ISCO	X		1996		X
ISCED	X		1992	X	
NABS					X
<b><u>BUSINESS REGISTER</u></b>					
	<u>Yes</u>	<u>No</u>	<u>Since</u>		
Existence	X		1991		
Used for R&D/S&T statistics	X		1992		
Special register for R&D units		X			
<b><u>R&amp;D SURVEYS</u></b>					
	<u>Yes</u>	<u>No</u>	<u>Since</u>		
New R&D survey(s) fully based on Frascati	X		1992		
R&D survey(s) with some Frascati recommend.					
R&D survey(s) based on other methodology					
Total number of surveys: 1					

**Description (according to sectors covered):**

the survey covers only the government, higher education and PNP sectors; the business enterprise sector is not covered, because of lack of resources.

**Total number of units covered: 72**

**Number of units covered in the government sector: 67**

**in the higher education sector: 5**

**in the private non-profit sector: 0**

**in the business enterprise sector: 0**

**Criteria used to identify business enterprises:**

business enterprises are not covered.

**MAIN FRASCATI DEFINITIONS**

	<u>Covered</u>	<u>Not covered</u>	<u>Partly covered</u>	<u>Since</u>
Defense R&D	X			1993
Expenditure by type of costs	X			1992
Expenditure by source of funds	X			1992
Expenditure by socio-eco. objective	X			1993
Total GBAORD		X		
GBAORD by socio-eco. objective		X		
Personnel in full-time equivalents	X			1992
Personnel in head counts	X			1950

**INNOVATION SURVEY**

	<u>Yes</u>	<u>No</u>	<u>Since</u>
Existence		X	
Planned	X		1998?
Based on Oslo Manual	X		1998?

**Number of enterprises covered:**

**Criteria used to identify enterprises:**

## CURRENT SITUATION IN R&D/S&T STATISTICS

**COUNTRY:** Hungary

<u>NAME OF AGENCY(IES) RESPONSIBLE FOR R&amp;D/S&amp;T STATISTICS</u>					
Department of Living Standards and Human Resources Statistics, Hungarian Central Statistical Office.					
<u>NUMBER OF PERSONS WORKING FULL-TIME ON R&amp;D/S&amp;T STATISTICS</u>					
2 persons.					
<u>BACKGROUND STATISTICAL FRAMEWORK</u>					
	National system compatible with			Used for R&D/S&T statistics	
	<u>Yes</u>	<u>No</u>	<u>Since</u>	<u>Yes</u>	<u>No</u>
SNA	X				
NACE Rev. 1	X		(expected)		
ISIC Rev. 3	X		1992	X	
ISCO	X				
ISCED	X (partly)				
NABS					X
<u>BUSINESS REGISTER</u>					
			<u>Yes</u>	<u>No</u>	<u>Since</u>
Existence			X		1989
Used for R&D/S&T statistics			X		1990
Special register for R&D units			X		1953
<u>R&amp;D SURVEYS</u>					
			<u>Yes</u>	<u>No</u>	<u>Since</u>
New R&D survey(s) fully based on Frascati			X	(pilot survey)	1996
R&D survey(s) with some Frascati recommend.			X		1989
R&D survey(s) based on other methodology			X		
<b>Total number of surveys: 3</b>					
<b>Description (according to sectors covered):</b> a questionnaire to R&D units in the higher					

education sector, a second questionnaire to government and non-profit R&D units, a third questionnaire to business enterprises.

**Total number of units covered:** 1 400 to 1 500

**Number of units covered in the government sector:** 100 to 110

**in the higher education sector:** 1 100 to 1 200

**in the private non-profit sector:**

**in the business enterprise sector:** 250 to 300

**Criteria used to identify business enterprises:**

**MAIN FRASCATI DEFINITIONS**

	<u>Covered</u>	<u>Not covered</u>	<u>Partly covered</u>	<u>Since</u>
Defense R&D			X	1980
Expenditure by type of costs	X			1963 <sup>1</sup>
Expenditure by source of funds			X	1963 <sup>1</sup>
Expenditure by socio-eco. objective		X		
Total GBAORD		X		
GBAORD by socio-eco. objective		X		
Personnel in full-time equivalents	X			1981
Personnel in head counts	X			1953

<sup>1</sup> revised several times.

**INNOVATION SURVEY**

	<u>Yes</u>	<u>No</u>	<u>Since</u>
Existence	X		1994
Planned	X		1997
Based on Oslo Manual	X		1994

**Number of enterprises covered:** 110 in 1994; 2 000 in 1997 (planned survey).

**Criteria used to identify innovative enterprises:** enterprises having R&D activities among those above 100 employees and/or having net sales above HUF 300 million or balance sheet above HUF 150 million.

**CURRENT SITUATION IN R&D/S&T STATISTICS**

**COUNTRY:** Kazakhstan

<b><u>NAME OF AGENCY(IES) RESPONSIBLE FOR R&amp;D/S&amp;T STATISTICS</u></b>					
State Committee on Statistics and Analysis.					
<b><u>NUMBER OF PERSONS WORKING FULL-TIME ON R&amp;D/S&amp;T STATISTICS</u></b>					
2 persons.					
<b><u>BACKGROUND STATISTICAL FRAMEWORK</u></b>					
	<b>National system compatible with</b>			<b>Used for R&amp;D/S&amp;T statistics</b>	
	<b><u>Yes</u></b>	<b><u>No</u></b>	<b><u>Since</u></b>	<b><u>Yes</u></b>	<b><u>No</u></b>
SNA			under development		
NACE Rev. 1			under development		
ISIC Rev. 3			X		
ISCO			X		
ISCED			X		
NABS					X
<b><u>BUSINESS REGISTER</u></b>					
		<b><u>Yes</u></b>	<b><u>No</u></b>	<b><u>Since</u></b>	
Existence				first stage completed	
Used for R&D/S&T statistics		X			
Special register for R&D units		X			
<b><u>R&amp;D SURVEYS</u></b>					
		<b><u>Yes</u></b>	<b><u>No</u></b>	<b><u>Since</u></b>	
New R&D survey(s) fully based on Frascati			X		
R&D survey(s) with some Frascati recommend.	X				
R&D survey(s) based on other methodology	X				
<b>Total number of surveys: 2</b>					
<b>Description (according to sectors covered):</b> Covers government and higher education sectors					

(according to the national system of classification).

**Total number of units covered:** 287 independent scientific organisations (plus 813 small organisations in the branch "Science and scientific services").

**Number of units covered in the government sector:** 240  
**in the higher education sector:** 47  
**in the private non-profit sector:**  
**in the business enterprise sector:**

**Criteria used to identify business enterprises:**

**MAIN FRASCATI DEFINITIONS**

	<u>Covered</u>	<u>Not covered</u>	<u>Partly covered</u>	<u>Since</u>
Defense R&D			X	
Expenditure by type of costs			X	
Expenditure by source of funds			X	
Expenditure by socio-eco. objective		X		
Total GBAORD		X		
GBAORD by socio-eco. objective		X		
Personnel in full-time equivalents		X		
Personnel in head counts	X			

**INNOVATION SURVEY**

	<u>Yes</u>	<u>No</u>	<u>Since</u>
Existence		X	
Planned	X		
Based on Oslo Manual	X		

**Number of enterprises covered:**

**Criteria used to identify enterprises:**

## CURRENT SITUATION IN R&D/S&T STATISTICS

**COUNTRY:** Latvia

<b><u>NAME OF AGENCY(IES) RESPONSIBLE FOR R&amp;D/S&amp;T STATISTICS</u></b>					
Culture, science, health, education statistics section of the Central Statistical Bureau.					
<b><u>NUMBER OF PERSONS WORKING FULL-TIME ON R&amp;D/S&amp;T STATISTICS</u></b>					
0.5 person-year.					
<b><u>BACKGROUND STATISTICAL FRAMEWORK</u></b>					
	National system compatible with			Used for R&D/S&T statistics	
	<u>Yes</u>	<u>No</u>	<u>Since</u>	<u>Yes</u>	<u>No</u>
SNA	X		1992		
NACE Rev. 1	X		1996	X	
ISIC Rev. 3		X			
ISCO	X		1994		X
ISCED	X		1993	X	
NABS					X
<b><u>BUSINESS REGISTER</u></b>					
	<u>Yes</u>	<u>No</u>	<u>Since</u>		
Existence	X		1991		
Used for R&D/S&T statistics	X		1992		
Special register for R&D units			X		
<b><u>R&amp;D SURVEYS</u></b>					
	<u>Yes</u>	<u>No</u>	<u>Since</u>		
New R&D survey(s) fully based on Frascati		X			
R&D survey(s) with some Frascati recommend.	X		1993		
R&D survey(s) based on other methodology		X			
Total number of surveys: 1					
Description (according to sectors covered):					

same questionnaire to all sectors of economy (the business enterprise sector is only partly covered).

**Total number of units covered: 92**

**Number of units covered in the government sector: 49**

**in the higher education sector: 18**

**in the private non-profit sector: 2**

**in the business enterprise sector: 23**

**Criteria used to identify business enterprises:** enterprises defined as producing and distributing goods and services for sale.

**MAIN FRASCATI DEFINITIONS**

	<u>Covered</u>	<u>Not covered</u>	<u>Partly covered</u>	<u>Since</u>
<b>Defense R&amp;D</b>	X			1992
<b>Expenditure by type of costs</b>		X		
<b>Expenditure by source of funds</b>	X			
<b>Expenditure by socio-eco. objective</b>		X		
<b>Total GBAORD</b>	X			1992
<b>GBAORD by socio-eco. objective</b>		X		
<b>Personnel in full-time equivalents</b>	X			1993
<b>Personnel in head counts</b>	X			1993

**INNOVATION SURVEY**

	<u>Yes</u>	<u>No</u>	<u>Since</u>
<b>Existence</b>		X	
<b>Planned</b>	X		1998
<b>Based on Oslo Manual</b>	X		1998

**Number of enterprises covered: 100**

**Criteria used to identify enterprises:**

## CURRENT SITUATION IN R&D/S&T STATISTICS

**COUNTRY:** Republic of Lithuania

<b><u>NAME OF AGENCY(IES) RESPONSIBLE FOR R&amp;D/S&amp;T STATISTICS</u></b>					
Division of Production and Innovation of the Lithuanian Department of Statistics.					
<b><u>NUMBER OF PERSONS WORKING FULL-TIME ON R&amp;D/S&amp;T STATISTICS</u></b>					
2.5 person-year since 1996.					
<b><u>BACKGROUND STATISTICAL FRAMEWORK</u></b>					
	National system compatible with			Used for R&D/S&T statistics	
	<u>Yes</u>	<u>No</u>	<u>Since</u>	<u>Yes</u>	<u>No</u>
SNA	X		1992	X	
NACE Rev. 1	X		1992	X	
ISIC Rev. 3	X		1992	X	
ISCO	X		1993	X	
ISCED	X		1995 partly	X	
NABS					X
<b><u>BUSINESS REGISTER</u></b>					
	<u>Yes</u>	<u>No</u>	<u>Since</u>		
Existence	X		1995		
Used for R&D/S&T statistics	X		1995		
Special register for R&D units		X			
<b><u>R&amp;D SURVEYS</u></b>					
	<u>Yes</u>	<u>No</u>	<u>Since</u>		
New R&D survey(s) fully based on Frascati	X		1997		
R&D survey(s) with some Frascati recommend.	X		1992		
R&D survey(s) based on other methodology		X			
Total number of surveys: 2					

**Description (according to sectors covered):**

**Total number of units covered:** 230

**Number of units covered in the government sector:**

**in the higher education sector:**

**in the private non-profit sector:**

**in the business enterprise sector:**

**Criteria used to identify business enterprises:** information on whether the enterprise had R&D expenditures in 1995 or whether it performed R&D.

**MAIN FRASCATI DEFINITIONS**

	<u>Covered</u>	<u>Not covered</u>	<u>Partly covered</u>	<u>Since</u>
<b>Defense R&amp;D</b>		X		
<b>Expenditure by type of costs</b>			X	1992
<b>Expenditure by source of funds</b>			X	1992
<b>Expenditure by socio-eco. objective</b>		X		
<b>Total GBAORD</b>			X	1992
<b>GBAORD by socio-eco. objective</b>	X			
<b>Personnel in full-time equivalents</b>			X	1992
<b>Personnel in head counts</b>			X	1992

**INNOVATION SURVEY**

	<u>Yes</u>	<u>No</u>	<u>Since</u>
<b>Existence</b>		X	
<b>Planned</b>	X		1997
<b>Based on Oslo Manual</b>	X		1998

**Number of enterprises covered:** 1 000

**Criteria used to identify enterprises:** information on whether the enterprise introduced new products or processes over the last three years or improved products or will allocate funds for the implementation of innovations.

**CURRENT SITUATION IN R&D/S&T STATISTICS**

**COUNTRY:** Poland

<b><u>NAME OF AGENCY(IES) RESPONSIBLE FOR R&amp;D/S&amp;T STATISTICS</u></b>					
R&D/S&T Statistics Division of the Central Statistical Office (GUS). The State Committee for Scientific Research (KBN) provides data on budget funding.					
<b><u>NUMBER OF PERSONS WORKING FULL-TIME ON R&amp;D/S&amp;T STATISTICS</u></b>					
7 persons in GUS and 1.5 persons in KBN.					
<b><u>BACKGROUND STATISTICAL FRAMEWORK</u></b>					
	National system compatible with			Used for R&D/S&T statistics	
	<u>Yes</u>	<u>No</u>	<u>Since</u>	<u>Yes</u>	<u>No</u>
SNA	X		1990		
NACE Rev. 1	X		1991	X	
ISIC Rev. 3	X		1994	X	
ISCO	X		1995	X	
ISCED		X			
NABS					X
<b><u>BUSINESS REGISTER</u></b>					
	<u>Yes</u>	<u>No</u>	<u>Since</u>		
Existence	X				
Used for R&D/S&T statistics	X				
Special register for R&D units				X	
<b><u>R&amp;D SURVEYS</u></b>					
	<u>Yes</u>	<u>No</u>	<u>Since</u>		
New R&D survey(s) fully based on Frascati	X		1994		
R&D survey(s) with some Frascati recommend.					
R&D survey(s) based on other methodology	X		1963		
Total number of surveys: 1					

**Total number of units covered:** 1 130 in 1996.

**Number of units covered in the government sector:** 190

**in the higher education sector:** 140

**in the private non-profit sector:** 100

**in the business enterprise sector:** 700

**Criteria used to identify business enterprises:** The branch R&D units are classified with the OECD business enterprise sector except for those which work on behalf of governmental bodies and are fully financed by them. Among units having R&D as a secondary activity, agriculture and forestry, mining, manufacturing, electricity, gas and water supply, construction, transport, storage and communications are allocated to the OECD business enterprise sector.

**MAIN FRASCATI DEFINITIONS**

	<u>Covered</u>	<u>Not covered</u>	<u>Partly covered</u>	<u>Since</u>
<b>Defense R&amp;D</b>			X	1994
<b>Expenditure by type of costs</b>	X			1994
<b>Expenditure by source of funds</b>	X			1994
<b>Expenditure by socio-eco. objective</b>		X		
<b>Total GBAORD</b>	X (estimated)			1990
<b>GBAORD by socio-eco. objective</b>	X			1996
<b>Personnel in full-time equivalents</b>	X			1994
<b>Personnel in head counts</b>	X			1994

**INNOVATION SURVEY**

	<u>Yes</u>	<u>No</u>	<u>Since</u>
<b>Existence</b>	X		early 60s (regular GUS survey since 1980)
<b>Based on Oslo Manual</b>	X		1996

**Number of enterprises covered:** 8 000 in 1996.

**Criteria used to identify innovative enterprises:** census survey of large enterprises – ie. enterprises employing more than 20 or 50 persons, depending on industries. In the 1996 survey is also covered a representative sample of medium-sized enterprises – ie. enterprises employing 6-20 or 6-50 persons, depending on industries.

**CURRENT SITUATION IN R&D/S&T STATISTICS**

**COUNTRY:** Romania

**NAME OF AGENCY(IES) RESPONSIBLE FOR R&D/S&T STATISTICS**

Department for scientific research and utilisation of resources of the National Commission for Statistics and Department of scientific policy of the Ministry of Research and Technology.

**NUMBER OF PERSONS WORKING FULL-TIME ON R&D/S&T STATISTICS**

**BACKGROUND STATISTICAL FRAMEWORK**

	National system compatible with			Used for R&D/S&T statistics	
	<u>Yes</u>	<u>No</u>	<u>Since</u>	<u>Yes</u>	<u>No</u>
	SNA	X			X
NACE Rev. 1	X			X	
ISIC Rev. 3	X			X	
ISCO	X			X	
ISCED	X			X	
NABS					X

**BUSINESS REGISTER**

	<u>Yes</u>	<u>No</u>	<u>Since</u>
Existence	X		
Used for R&D/S&T statistics	X		
Special register for R&D units	X		1995

**R&D SURVEYS**

	<u>Yes</u>	<u>No</u>	<u>Since</u>
New R&D survey(s) fully based on Frascati			
R&D survey(s) with some Frascati recommend.	X		
R&D survey(s) based on other methodology			
Total number of surveys: 3			
Description (according to sectors covered):			

**Total number of units covered: 569**

**Number of units covered in the government sector: 118**

**in the higher education sector: 41**

**in the private non-profit sector:**

**in the business enterprise sector: 410**

**Criteria used to identify business enterprises:** mixed and private property institutions (except for higher education institutions); enterprises having R&D activities in addition to their main activity; specialised R&D institutions organised as autonomous institutions or stock companies.

**MAIN FRASCATI DEFINITIONS**

	<u>Covered</u>	<u>Not covered</u>	<u>Partly covered</u>	<u>Since</u>
<b>Defense R&amp;D</b>	X			
<b>Expenditure by type of costs</b>	X			
<b>Expenditure by source of funds</b>	X			
<b>Expenditure by socio-eco. objective</b>			X	
<b>Total GBAORD</b>			X	
<b>GBAORD by socio-eco. objective</b>			X	
<b>Personnel in full-time equivalents</b>	X			
<b>Personnel in head counts</b>	X			

**INNOVATION SURVEY**

	<u>Yes</u>	<u>No</u>	<u>Since</u>
<b>Existence</b>	X (pilot survey)		
<b>Planned</b>			
<b>Based on Oslo Manual</b>	X		1995

**Number of enterprises covered: 2220**

**Criteria used to identify enterprises:** manufacturing enterprises with more than 50 employees.

**CURRENT SITUATION IN R&D/S&T STATISTICS**

**COUNTRY:** Russian Federation

**NAME OF AGENCY(IES) RESPONSIBLE FOR R&D/S&T STATISTICS**

Center for Science Research and Statistics (CSRS) under the State Committee on Science and Technology of the Russian Federation and the Academy of Sciences.

**NUMBER OF PERSONS WORKING FULL-TIME ON R&D/S&T STATISTICS**

24 persons.

**BACKGROUND STATISTICAL FRAMEWORK**

	National system compatible with			Used for R&D/S&T statistics	
	<u>Yes</u>	<u>No</u>	<u>Since</u>	<u>Yes</u>	<u>No</u>
	SNA	X			
NACE Rev. 1			approved but not introduced	transition key	
ISIC Rev. 3			approved but not introduced	transition key	
ISCO		X			X
ISCED		X			
NABS				X	

**BUSINESS REGISTER**

	<u>Yes</u>	<u>No</u>	<u>Since</u>
Existence			
Used for R&D/S&T statistics			
Special register for R&D units	X		

**R&D SURVEYS**

	<u>Yes</u>	<u>No</u>	<u>Since</u>
New R&D survey(s) fully based on Frascati	X		1994
R&D survey(s) with some Frascati recommend.			
R&D survey(s) based on other methodology			
Total number of surveys: 1			

**Description (according to sectors covered):** same questionnaire to all sectors of the economy.

	<u>1994</u>	<u>1995</u>
<b>Total number of units covered:</b>	3 968	4 059
<b>Number of units covered in the government sector:</b>	1 150	1 193
<b>in the higher education sector:</b>	511	511
<b>in the private non-profit sector:</b>	7	10
<b>in the business enterprise sector:</b>	23 00	2 345

**Criteria used to identify business enterprises:**

**MAIN FRASCATI DEFINITIONS**

	<u>Covered</u>	<u>Not covered</u>	<u>Partly covered</u>	<u>Since</u>
<b>Defense R&amp;D</b>	X			1994
<b>Expenditure by type of costs</b>	X			1994
<b>Expenditure by source of funds</b>	X			1994
<b>Expenditure by socio-eco. objective</b>	X			1994
<b>Total GBAORD</b>			X	1993
<b>GBAORD by socio-eco. objective</b>			X	1993
<b>Personnel in full-time equivalents</b>	X			1994
<b>Personnel in head counts</b>	X			1989

**INNOVATION SURVEY**

	<u>Yes</u>	<u>No</u>	<u>Since</u>
<b>Existence</b>	X		1995
<b>Planned</b>			
<b>Based on Oslo Manual</b>	X		1995

(and national specificities)

**Number of enterprises covered:** 17000 (as a first stage)

**Criteria used to identify enterprises:** enterprises responding to annual industrial surveys.

## CURRENT SITUATION IN R&D/S&T STATISTICS

**COUNTRY:** Slovak Republic

<u>NAME OF AGENCY(IES) RESPONSIBLE FOR R&amp;D/S&amp;T STATISTICS</u>					
Department of Statistics on Main Production Branches of the Statistical Office of the Slovak Republic.					
<u>NUMBER OF PERSONS WORKING FULL-TIME ON R&amp;D/S&amp;T STATISTICS</u>					
4 persons.					
<u>BACKGROUND STATISTICAL FRAMEWORK</u>					
	National system compatible with			Used for R&D/S&T statistics	
	<u>Yes</u>	<u>No</u>	<u>Since</u>	<u>Yes</u>	<u>No</u>
SNA	X		1992	X	
NACE Rev. 1	X		1992		
ISIC Rev. 3	X		1992	X	
ISCO	X		1993	X	
ISCED		X			X
NABS					X
<u>BUSINESS REGISTER</u>					
	<u>Yes</u>	<u>No</u>	<u>Since</u>		
Existence	X				
Used for R&D/S&T statistics	X				
Special register for R&D units	X		1992		
<u>R&amp;D SURVEYS</u>					
	<u>Yes</u>	<u>No</u>	<u>Since</u>		
New R&D survey(s) fully based on Frascati	X		1994		
R&D survey(s) with some Frascati recommend.		X			
R&D survey(s) based on other methodology		X			
<b>Total number of surveys:</b> 3					
<b>Description (according to sectors covered):</b> a questionnaire to small organisations (1 to					

24 employees) having R&D as a principal activity; a questionnaire to business organisations having 25 employees or more and R&D or manufacturing industry, construction, agriculture, transport, communication, forestry and science and technology services as a principal activity; and a questionnaire to governmental organisations and universities.

**Total number of units covered:** 364 in 1995.

**Number of units covered in the government sector:** 127

**in the higher education sector:** 55

**in the private non-profit sector:** 1

**in the business enterprise sector:** 181

**Criteria used to identify business enterprises:** Frascati based code in the questionnaire whereby units classify themselves; SNA code since 1995.

**MAIN FRASCATI DEFINITIONS**

	<u>Covered</u>	<u>Not covered</u>	<u>Partly covered</u>	<u>Since</u>
<b>Defense R&amp;D</b>			X	1994
<b>Expenditure by type of costs</b>			X	1994
<b>Expenditure by source of funds</b>	X			1994
<b>Expenditure by socio-eco. objective</b>		X		
<b>Total GBAORD</b>	X			1994
<b>GBAORD by socio-eco. objective</b>	X			1994
<b>Personnel in full-time equivalents</b>	X			1994
<b>Personnel in head counts</b>	X			1997

**INNOVATION SURVEY**

	<u>Yes</u>	<u>No</u>	<u>Since</u>
<b>Existence</b>		X	
<b>Planned</b>	X		
<b>Based on Oslo Manual</b>	X		

**Number of enterprises covered:** 150?

## CURRENT SITUATION IN R&D/S&T STATISTICS

**COUNTRY:** Republic of Slovenia

<b><u>NAME OF AGENCY(IES) RESPONSIBLE FOR R&amp;D/S&amp;T STATISTICS</u></b>						
Statistical Office and Ministry of Science and Technology of the Republic of Slovenia.						
<b><u>NUMBER OF PERSONS WORKING FULL-TIME ON R&amp;D/S&amp;T STATISTICS</u></b>						
2 persons since 1995.						
<b><u>BACKGROUND STATISTICAL FRAMEWORK</u></b>						
	<b>National system compatible with</b>			<b>Used for R&amp;D/S&amp;T statistics</b>		
	<b><u>Yes</u></b>	<b><u>No</u></b>	<b><u>Since</u></b>	<b><u>Yes</u></b>	<b><u>No</u></b>	
SNA	X					
NACE Rev. 1	X		1995	X		
ISIC Rev. 3	X		1995	X		
ISCO	X		1996	X		
ISCED	X		1993	X		
NABS				X		
<b><u>BUSINESS REGISTER</u></b>						
			<b><u>Yes</u></b>	<b><u>No</u></b>	<b><u>Since</u></b>	
Existence			X			
Used for R&D/S&T statistics			X			
Special register for R&D units			X (at Ministry of Science and Technology)			
<b><u>R&amp;D SURVEYS</u></b>						
			<b><u>Yes</u></b>	<b><u>No</u></b>	<b><u>Since</u></b>	
New R&D survey(s) fully based on Frascati			X		1993	
R&D survey(s) with some Frascati recommend.			X		1978	
R&D survey(s) based on other methodology			X		1964	
<b>Total number of surveys: 1</b>						
<b>Description (according to sectors covered):</b>						
<b>Total number of units covered: 343 in 1994</b>						

**Number of units covered in the government sector: 58**

**in the higher education sector: 40**

**in the private non-profit sector: 85**

**in the business enterprise sector: 160**

**Criteria used to identify business enterprises:** business enterprises registered for R&D at the Ministry of Science and Technology – i.e. those having received government support (grants, interest rate subsidies and other concessions); business enterprises having reported R&D expenditures in annual reports; business enterprises registered for R&D activity in the business register.

**MAIN FRASCATI DEFINITIONS**

	<u>Covered</u>	<u>Not covered</u>	<u>Partly covered</u>	<u>Since</u>
<b>Defense R&amp;D</b>		X		
<b>Expenditure by type of costs</b>	X			1993
<b>Expenditure by source of funds</b>	X			1993
<b>Expenditure by socio-eco. objective</b>	X			1994
<b>Total GBAORD</b>		X		
<b>GBAORD by socio-eco. objective</b>		X		
<b>Personnel in full-time equivalents</b>	X			1993
<b>Personnel in head counts</b>	X			

**INNOVATION SURVEY**

	<u>Yes</u>	<u>No</u>	<u>Since</u>
<b>Existence</b>		X	
<b>Planned</b>	X		1997
<b>Based on Oslo Manual</b>	X		

**Number of enterprises covered: 2 044**

**Criteria used to identify enterprises:** according to Eurostat recommendation.

## CURRENT SITUATION IN R&D/S&T STATISTICS

**COUNTRY:** Ukraine

<b><u>NAME OF AGENCY(IES) RESPONSIBLE FOR R&amp;D/S&amp;T STATISTICS</u></b>					
Division of R&D and Innovation Statistics of the Ministry of Statistics.					
<b><u>NUMBER OF PERSONS WORKING FULL-TIME ON R&amp;D/S&amp;T STATISTICS</u></b>					
<b><u>BACKGROUND STATISTICAL FRAMEWORK</u></b>					
	National system compatible with			Used for R&D/S&T statistics	
	<u>Yes</u>	<u>No</u>	<u>Since</u>	<u>Yes</u>	<u>No</u>
SNA	X		1991		
NACE Rev. 1	X		1997	X	
ISIC Rev. 3	X		1997	X	
ISCO	X		1996	X	
ISCED		X			
NABS					
<b><u>BUSINESS REGISTER</u></b>					
			<u>Yes</u>	<u>No</u>	<u>Since</u>
Existence			X		1996
Used for R&D/S&T statistics			X		1996
Special register for R&D units			X		1991
<b><u>R&amp;D SURVEYS</u></b>					
			<u>Yes</u>	<u>No</u>	<u>Since</u>
New R&D survey(s) fully based on Frascati				X	
R&D survey(s) with some Frascati recommend.	X				1994
R&D survey(s) based on other methodology	X				1991
<b>Total number of surveys: 1</b>					
<b>Description (according to sectors covered):</b>					
<b>Total number of units covered: 1 453</b>					

Number of units covered in the government sector: 1 178  
in the higher education sector: 145  
in the private non-profit sector:  
in the business enterprise sector:

Criteria used to identify business enterprises:

**MAIN FRASCATI DEFINITIONS**

	<u>Covered</u>	<u>Not covered</u>	<u>Partly covered</u>	<u>Since</u>
<b>Defense R&amp;D</b>				
Expenditure by type of costs		X		
Expenditure by source of funds				
Expenditure by socio-eco. objective		X		
<b>Total GBAORD</b>				
<b>GBAORD by socio-eco. objective</b>				
Personnel in full-time equivalents	X			
Personnel in head counts				

**INNOVATION SURVEY**

	<u>Yes</u>	<u>No</u>	<u>Since</u>
Existence	X		
Planned			
Based on Oslo Manual	X		

Number of enterprises covered: 2 200

Criteria used to identify enterprises: sample survey representing 25% of industrial enterprises.