

***Project "SME Innovation Capacity Boost" №: BMP1/1.2/2481/2017  
Transnational Cooperation Programme Interreg V-B  
"Balkan-Mediterranean 2014-2020"***

# **SURVEY ON INNOVATION ACTIVITY OF SMEs - METHODOLOGY**

# Survey on innovation activity of SMEs - Methodology

## Methodological recommendations

- ❖ **Target population** (*NACE and size class coverage, statistical unit, reference period*)
- ❖ **Survey methodology** (*type of survey, sampling frame, stratification variables*)
- ❖ **Basic concepts and definitions** (*innovation, innovative/non-innovative enterprise, innovation activities*)
- ❖ **Collecting and processing of data** (*survey questionnaire, data collection, data editing*)
- ❖ **Data quality** (*response rate, imputation, weighting*)
- ❖ **Output data** (*type of data, output tabulation scheme, technical format, deadlines*)

# Survey on innovation activity of SMEs - Methodology

## Objective

To discuss and to agree on the **methodological recommendations** for the implementation of the survey on innovation activity of SMEs in order to secure high level of harmonization of the survey results and production of comparable data of good quality for the three participating countries- AL, BG and FYROM

# Target population

## *Coverage of target population*

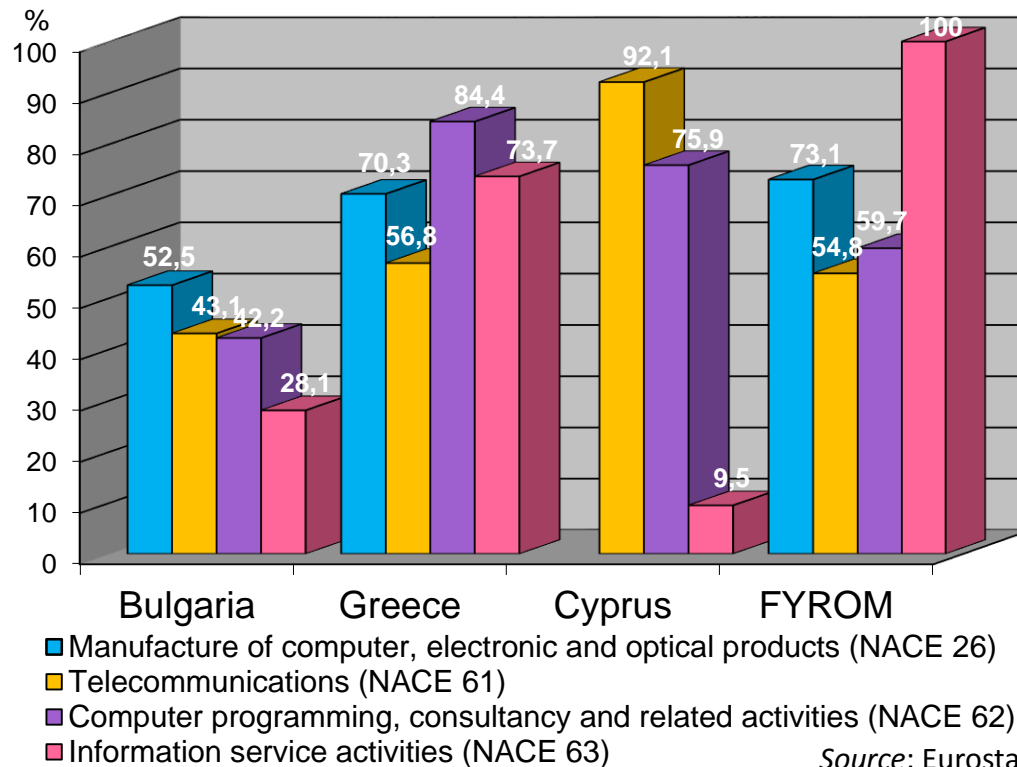
### Economic activities coverage

Four NACE Rev.2 divisions of ICT sector:  
*(obligatory required by CR (EU) № 995/2012)*

- **NACE 26:** Manufacture of computer, electronic & optical products
  - **NACE 61:** Telecommunications
  - **NACE 62:** Computer programming, consultancy and related activities
  - **NACE 63:** Information service activities
- } ICT Manufacturing
- } ICT Services

## Target population

Innovative enterprises by economic activity (NACE 26, NACE 61, ACE 62, NACE 63); BG, EL, CY and FYROM; CIS 2014



Source: Eurostat

## Target population

**NACE 26** includes manufacture of:

- *Electronic components (NACE 2611)*
- *Loaded electronic boards (NACE 2612)*
- *Computers and peripheral equipment (NACE 2620)*
- *Communication equipment (NACE 2630)*
- *Consumer electronics (NACE 2640)*
- *Instruments and appliances for measuring, testing and navigation (NACE 2651)*
- *Watches and clocks (NACE 2652)*
- *Irradiation, electromedical and electrotherapeutic equipment (NACE 2660)*
- *Optical instruments and photographic equipment (NACE 2670)*
- *Magnetic and optical media (NACE 2680)*

## Target population

**NACE 61** includes:

- *Wired telecommunications activities (NACE 61.10)*
- *Wireless telecommunications activities (NACE 61.20)*
- *Satellite telecommunications activities (NACE 61.30)*
- *Other telecommunications activities (NACE 61.90)*

## Target population

### NACE 62 includes:

- *Computer programming activities (NACE 62.01)*
- *Computer consultancy activities (NACE 62.02)*
- *Computer facilities management activities (NACE 62.03)*
- *Other information technology and computer service activities (NACE 62.09)*



## Target population

### NACE 63 includes:

- *Data processing, hosting and related activities (NACE 63.11)*
- *Web portals (NACE 63.12)*
- *News agency activities (NACE 63.91)*
- *Other information service activities n.e.c. (NACE 63.99)*

# Target population

## *Coverage of target population*

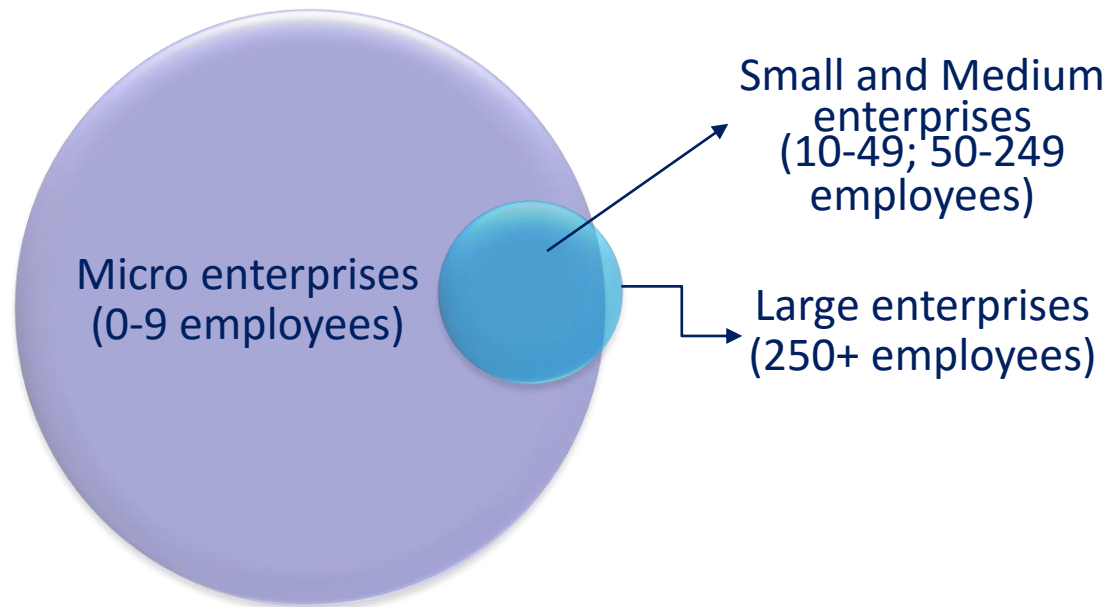
### Size class coverage - SMEs

Three size classes:

- **Micro** enterprises: 0 to 9 employees
- **Small** enterprises: 10 to 49 employees
- **Medium** enterprises: 50 to 249 employees
- ☞ Large enterprises (250+ employees) are excluded

## Target population

Number of enterprises in Bulgaria, in 2016  
(NACE 26 + NACE 61 + NACE 62 + NACE 63)



## Target population

***Statistical unit*** - enterprise;  
as defined in CR (EEC) No 696/93  
on statistical units or in statistical  
Business Register

***Reference period:***

- Length - 3 years
  - Timing: 2016 - 2018
- } consistency with CIS 2018

# Survey methodology

## *Type of survey:*

- Census survey  
*or*
- Sample survey  
*or*
- Combination of census and sample

## Survey methodology

***Sampling frame*** - most up-to-date statistical Business Register

***Stratification variables:***

- Economic activities - four NACE Rev.2 divisions: NACE 26; NACE 61; NACE 62 and NACE 63
- Enterprise size - three size classes (0-9; 10-49 and 50-249 employees)

***Sampling method, sample size*** - no specific recommendations, depending on the country situation

## Basic concepts and definitions

***Methodological framework - Oslo Manual (OM)*** - source of harmonized concepts and definitions on innovation

***OM definition of innovation for measurement purposes:***

“An **innovation** is the implementation of a new or significantly improved product (good or service), or process, new marketing method, or new organisational method in business practices, workplace organisation or external relations.” (OM §146)

## Basic concepts and definitions

**Implementation** ➡ link to the **market**

“A common feature of an innovation is that it must have been **implemented**.

A new or improved product is implemented when it is **introduced** on the market.

New processes, marketing methods or organisational methods are implemented when they are brought into **actual use** in the firm’s operations.” (OM §150)



## Basic concepts and definitions

**Minimum requirement** ➡ the product, process, marketing or organisational methods must be new or significantly improved **to the firm**. They may already have been implemented by other firms.

**“New”** products differ significantly in their characteristics or intended uses from products previously produced.

**“Significant improvements”** - occur through changes in materials, components and other characteristics that enhance performance.

## Basic concepts and definitions

**Innovative enterprise** is an enterprise that had innovation activity during the reference period, including on-going and abandoned activities, i.e. regardless of whether the activity resulted in the implementation of an innovation or not.

**Non-innovative enterprise** had no innovation activity whatsoever during the reference period.

## Basic concepts and definitions

During the reference period, **innovation activities** can be of three kinds:

- **Successful**, in having resulted in the implementation of an innovation;
- **On-going**, with work in progress that has not yet resulted in the implementation of an innovation;
- **Abandoned** before the implementation of an innovation.

## Collecting and processing of data

***Harmonized survey questionnaire*** - to be jointly developed and used for conducting the survey by the statistical offices of AL, BG and FYROM

***Data collection method*** - interviews  
(computer assisted or via paper questionnaire)  
*For example in Bulgaria - CAPI (Computer Assisted Personal Interview)*

***Field work of the survey*** - possibly at the end of 2018  
*(for Bulgaria: planned for October - December 2018)*

## Collecting and processing of data

***Data editing*** - data quality checks to be done at micro- and macro-level of data:

- Completeness checks;
- Out of scope units;
- Data validation checks;
- Routing errors, etc.

➡ *'hard' and 'soft' data validation rules to be implemented*

## Data quality

***Response rates*** - efforts shall be made to minimise unit and item non-response, including timely telephone follow-up or further personal contacts

***Imputation*** - to be done for item non-response

***Weighting*** - the survey results should be weighted (in case of sample survey) in order to produce valid results for total target population

## Output data

***Type of output data*** - aggregated statistics, treated and flagged in accordance with the standard national confidentiality rules

### ***Output tabulation scheme***

- To be jointly developed and agreed after approval of the final version of the harmonized survey questionnaire
- General structure of the tabulation scheme - each table to contain cross breakdown of innovation variables by NACE Rev.2 division level and by 3 enterprise size classes (*consistency with general structure of CIS tabulation scheme*)

# Output data

## *Output tabulation scheme (Table example)*

NACE Rev.2	Size class (by nb of employees)	Variable 1	Variable 2	Variable 3
Total: 26 + 61 + 62 + 63	Between 0 and 9			
	Between 10 and 49			
	Between 50 and 249			
	Total			
26: Manufacture of computer, electronic & optical products	Between 0 and 9			
	Between 10 and 49			
	Between 50 and 249			
	Total			
61: Telecommunications	Between 0 and 9			
	Between 10 and 49			
	Between 50 and 249			
	Total			
62: Computer programming, consultancy and related activities	Between 0 and 9			
	Between 10 and 49			
	Between 50 and 249			
	Total			
63: Information service activities	Between 0 and 9			
	Between 10 and 49			
	Between 50 and 249			
	Total			



## Output data

*Technical format* - Excel tables (*as for CIS*)

*Deadlines for output tabulated data*

➡ **31 March 2019** - end of Work Package 3

***THANK YOU FOR YOUR ATTENTION!***

***QUESTIONS AND COMMENTS  
ARE WELCOME!***

