Experiences in starting measurement of services in Poland
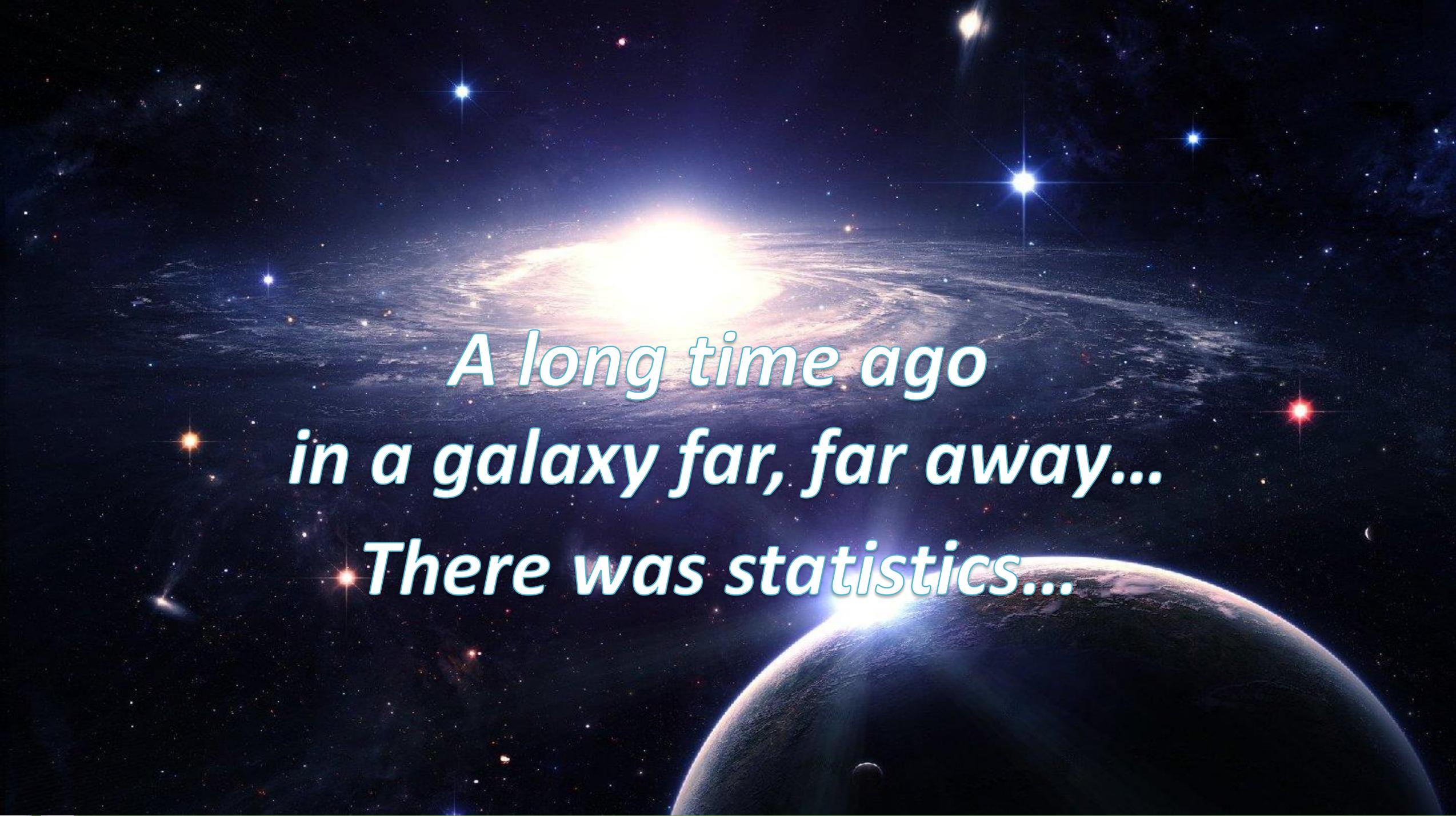
31ST VOORBURG GROUP MEETING

CROATIA, 19-23 SEPTEMBER, 2016
CENTRAL STATISTICAL OFFICE OF POLAND
TRADE AND SERVICES DEPARTMENT
AGNIESZKA MATULSKA-BACHURA

A long time ago
in a galaxy far, far away...
There was statistics...

The starting and development of services statistics
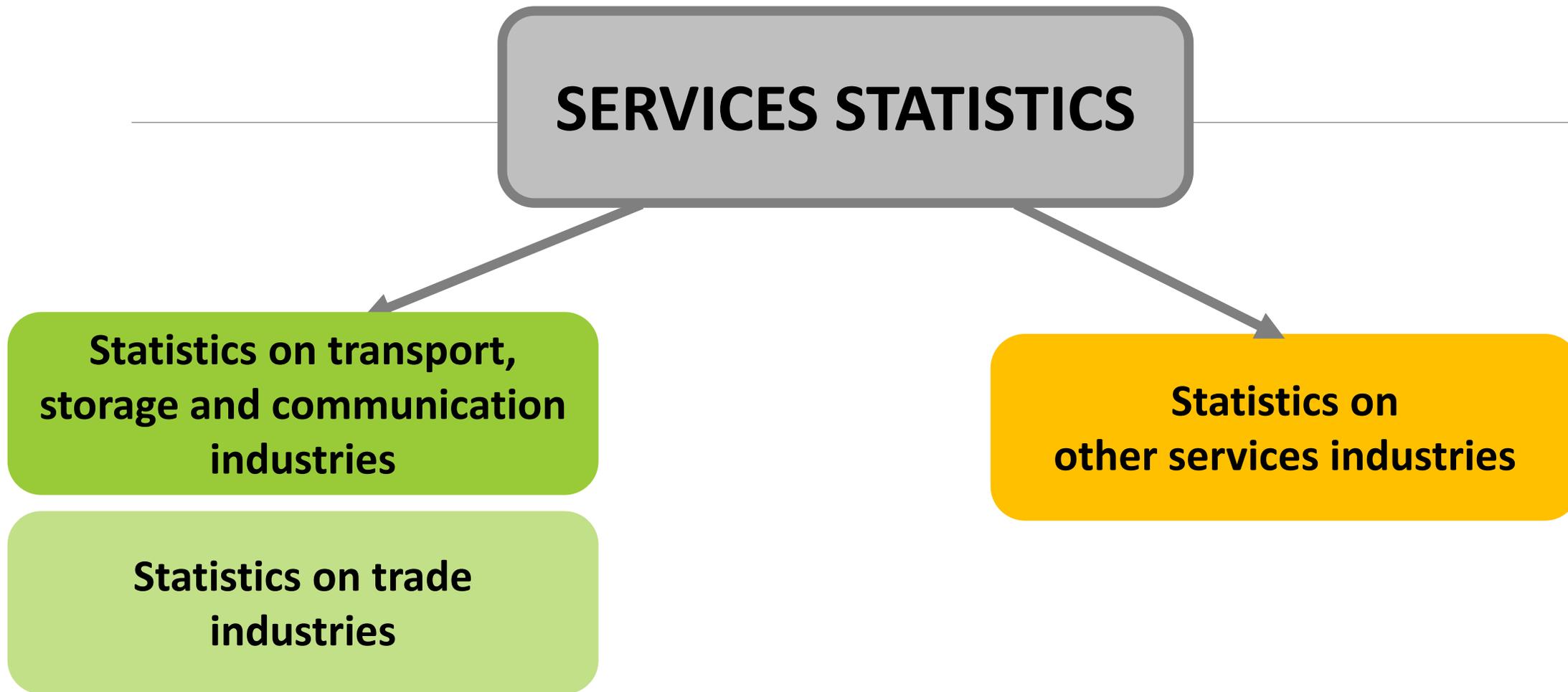
Two parallel aspects

data accessibility

- data existed since the official statistics was established
- data on transport, storage, communication and trade – available even before 1990
- data on other services existed but limited

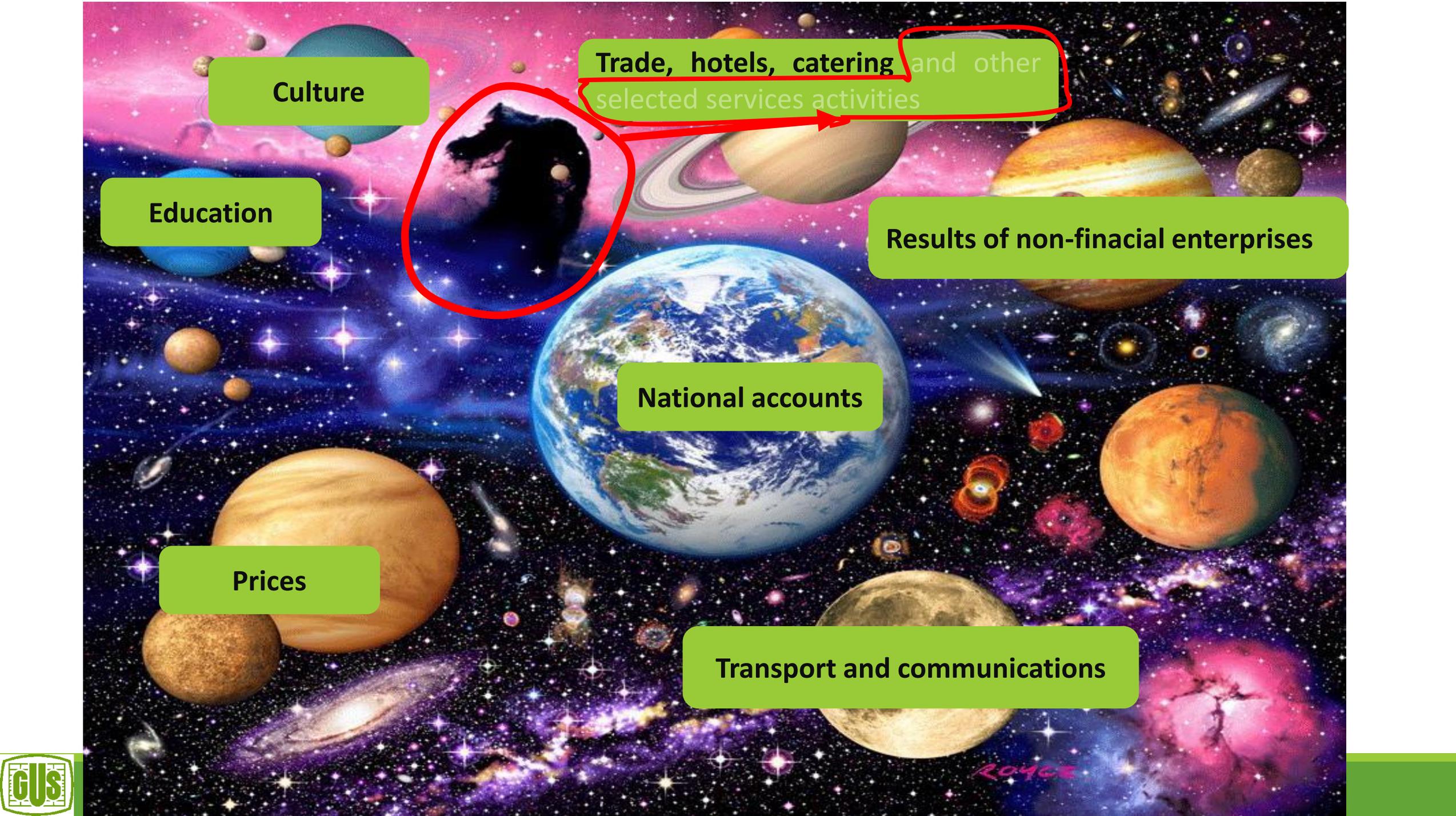### methodology for compilation of data on services industries

- for transport, storage, communication and trade methodology developed and data reguarly disseminated
- for other services methodology not developed well

The starting and development of services statistics

SERVICES STATISTICS

Statistics on transport, storage and communication industries

Statistics on trade industries

Statistics on other services industries

The system of statistical surveys of official statistics in Poland

	Name of domain		Name of domain
1.	Environmental protection	16.	Market of raw materials, fuels and energy
2.	Organization of the State, local government	17.	Agriculture and forestry
3.	National defence, public safety, justice	18.	Industry
4.	Social economy	19.	Construction
5.	Population, demographical processes	20.	Transport and communications
6.	Religion, ethnic groups	21.	Trade, hotels, catering and other selected services activities
7.	Labour market	22.	International economical relationships
8.	Wages and salaries and social benefits	23.	Results of non-financial enterprises
9.	Family, living conditions of population and social welfare	24.	Financial market
10.	Dwellings, municipal infrastructure	25.	Prices
11.	Education	26.	Public finance
12.	Culture	27.	Material fixed assets and investments
13.	Health and health care	28.	National accounts
14.	Tourism and sport	29.	Regional studies
15.	Science, technology and information society	30.	Statistical frameworks

Annual turnover at the industry level

DATA SOURCES
for enterprises with no of persons employed

10 and more

Annual survey on enterprises (SP)
- covers Sections (by NACE Rev.2): A – F, **G, H, I, J** (except for for cultural units with legal personality), **K** (except for for banks, co-operative savings and credit unions, insurance companies, brokerage companies, investments unions and funds, pension unions and funds**), L, M, N, P** (except for for university education), **Q** (except for for independent public health care units), **R** (except for for cultural units with legal personality), **S** (divisions 95 and 96);
- collects annual information reported in the financial statements: balance sheet and the profits and losses account as well as some additional information, for example no of persons employed
- full survey

9 and less

Survey of small enterprises (SP-3)
- covers Sections (by NACE Rev.2): A – F, **G, H, I, J** (except for cultural units with legal personality), K (divisions 64 and 66), **L, M, N, P** (except for university education), Q (except for independent public health care units), **R** (except for cultural units with legal personality), **S** (divisions 95 and 96).
- collects annual information on: revenues, costs, the kind of book-keeping, number of persons employed, salaries, the value of fixed assets, outlays on their modernization and purchase, taxes, etc.
- sample survey (about 5%)

Annual turnover at the industry level

SP-3

- pilot study - as regards services covered the enterprises with no of persons employed 5 and less classified by NACE Rev.1 into Sections : G, H, I, J (65 and 67), K, M (except for 80.3), N and O (except for 91);

- population frame comprised enterprises with no of persons employed 9 and less

data compiled at the class level of NACE Rev.2

1990 … **1993** **1994** **1995** … **1999** … **2004** … **2008** …

SP

pilot study

- first data collection comprised all enterprises with no of persons employed 200 and more classified as regards services into Sections: G, H, I and K (by NACE Rev.1) ;

- population frame widened by enterprises with no of persons employed between 6 and 199

- population frame comprised enterprises with the no of persons employed 10 and more

- population frame widened by Sections: M, N, O (by NACE Rev.1.1.)

data compiled at the class level of NACE Rev.2

Annual turnover at the product level

DATA SOURCES

Report on the sale of business services (BS)
- comprises all enterprises with the number of persons employed 10 and more classified by NACE Rev.2 into: Software publishing (58.2), Computer programming, consultancy and related activities (62), Data processing, hosting and related activities; web portals (63.1), Legal activities (69.1), Accounting, bookkeeping and auditing activities; tax consultancy (69.2), Management consultancy activities (70.2), Architectural and engineering activities and related technical consultancy (71.1), Technical testing and analysis (71.2), Advertising (73.1), Market research and public opinion polling (73.2), Employment activities (78).
- collects annual data on turnover from the sale of services with the breakdown into product, type of consumer as well as their residence.
- full survey.

Annual survey on enterprises (SP)
- as a proxy for data at the product level
- collects data on the revenues from sale of products, commodities and materials by kind of activity at the NACE class level;

GUS

Annual turnover at the product level

II pilot study:
- comprised following industries by the NACE Rev.1.1: 74.11, 74.13, 74.3 74.5
- all enterprises with no of persons employed 10 and more and 45% sample of enterprises with no of persons 9 and less

- first reference period for regular survey

2003   **2004**   **2005**   …   **2008**   **2009**   …

I pilot study:
- comprised following industries by the NACE Rev.1.1: 72, 74.12, 74.14, 74.2 and 74.4
- all enterprises with no of persons employed 50 and more and 25% sample of enterprises with no of persons 49 and less

- for 2005-2008 data on turnover with the breakdown into product and residence of client were estimated basing on the structure of turnover compiled within the pilot studies and data on turnover compiled on the base of data from SP

Short-term turnover at the industry level

DATA SOURCES

Monthly report on business activity (DG-1)
- comprises all enterprises with the number of persons employed 50 and more and the 10% sample of enterprises with the number of persons employed between 10 and 49.
- covers the following industries classified by NACE Rev.2 into Sections: A (Division 2, class 0311), B - F, **G, H, I, J, L, M** (except for divisions 72 and 75), **N, R, S** (divisions 95 and 96).
- collects monthly information on net revenues from the sale of products, net revenues from the sale of commodities and materials, number of persons employed, value of retail trade, value of wholesale, subsides, salaries, excise, etc. for the responding month and for period from the beginning of year.

Short-term turnover at the industry level

- comprised all enterprises with no of persons employed 20 and more and 10% sample of enterprises with no of persons between 6 and 20 classified by NACE Rev.1 into Sections: G, H, I, K *(except for 73, 74.11)*, 90, 92.1 and 92.2, 93;
- for Sections: G, H, I data compiled at the group level, for other sections – at the division level, both with the breakdown into voivodships.

- data for industries classified by NACE Rev.2 into Sections: G, H, I, M and N calculated at the group level while for other services sections at the division level.

before 1990 … **1993** **1994** … **2000** … **2006** … **2008** **2009** …

first reference month

- population frame widened by enterprises classified by NACE Rev.1 into: 74.11, 92.3, 92.4, 92.5, 92.6, 92.7;

- change in population frame: all enterprises with no of persons employed 50 and more and 10% sample of enterprises with no of persons employed between 10 and 49;

- representatives were ensured the groups of 72 and 74 (by NACE Rev.1.1)

- representatives ensured for classes of 74.8 and 92.2 (by NACE Rev.1.1);
- data series compiled for both: NACE Rev.1.1 and NACE Rev.2

Deflators – producer prices for services

DATA SOURCES

Transport, storage and communication

Report on producer prices of goods and services C-01

- comprises enterprises with the number of persons employed 10 and more classified by the NACE Rev.2 into Sections: A (division 2), B, C, D, E, **H and 61 (Section J);**
- collects monthly information on producer prices of goods and services;
- a purposive sample - for 2016 there are about 290 enterprises for Section H and about 20 enterprises for division 61 (Section J).
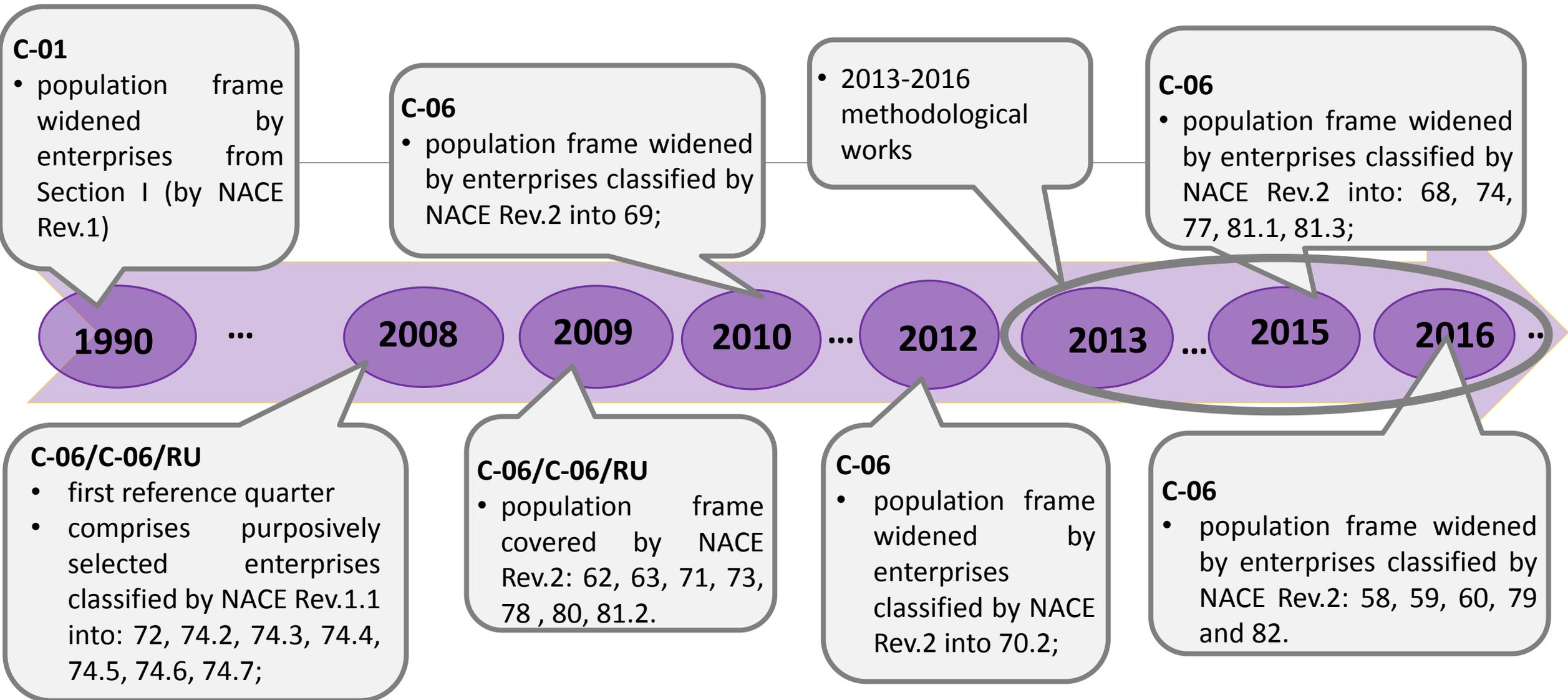
- price lists, decisions or regulations on uniform prices binding in the all or a part of country

Other services

Report on producer prices of services (C-06)
Report on producer prices of employment services (C-06/RU)

- comprises enterprises with the number of persons employed 10 and more classified by the NACE Rev.2 into **58, 59, 60, 62, 63, 68, 69, 70.2, 71, 73, 74, 77, 78, 79, 80, 81, 82;**
- collects quarterly information on producer prices for services, data compiled at the class, group and division level; .
- a purposive sample - for 2016 there are about 850 enterprises.

Deflators – producer prices for services

C-01
- population frame widened by enterprises from Section I (by NACE Rev.1)

C-06
- population frame widened by enterprises classified by NACE Rev.2 into 69;

- 2013-2016 methodological works

C-06
- population frame widened by enterprises classified by NACE Rev.2 into: 68, 74, 77, 81.1, 81.3;

1990 ... **2008** **2009** **2010** ... **2012** **2013** ... **2015** **2016** ..

C-06/C-06/RU
- first reference quarter
- comprises purposively selected enterprises classified by NACE Rev.1.1 into: 72, 74.2, 74.3, 74.4, 74.5, 74.6, 74.7;

C-06/C-06/RU
- population frame covered by NACE Rev.2: 62, 63, 71, 73, 78 , 80, 81.2.

C-06
- population frame widened by enterprises classified by NACE Rev.2 into 70.2;

C-06
- population frame widened by enterprises classified by NACE Rev.2: 58, 59, 60, 79 and 82.

Deflators – producer prices for services - methodological works

- carried out in years 2013-2016

- main objective - to assess the feasibility for implementing modification in questionnaires used as a tool in regular survey as well as to obtain information on services industries which were going to be covered by survey;

- works conducted:

  ✓ review of international methodological recommendations for compilation of SPPI,

  ✓ review of methods and experiences of other countries in compiling the SPPI,

  ✓ pilot study;

- Pilot study:

  ✓ to obtain information on the characteristics of services rendered by selected services enterprises,

  ✓ as a tool 22 questionnaires (one for each surveyed industry) were used,

  ✓ collected information allow to better understand how the selected services industries work as well as to develop suitable methods for measuring producer prices for services,

  ✓ conducted in two stages: I edition comprised: 62, 63, 69, 70.2, 71, 73, 78, 80 and 81, II edition comprised: 58, 59, 60, 68, 74, 77, 79, 82 (by NACE Rev.2),

- opinion of the *Methodological Commission* (advisory and opinion body of the President of CSO) needed

Deflators – retail prices for service

- according to the recommendations on the compilation of index of services production (ISP) can be applied:
  - ✓ when turnover concerns the provision of services to individual consumers or households or
  - ✓ if turnover concerns the provision of services to other enterprises and there is no producer prices indices for given services industry

    however, some additional calculation are needed, for example eliminating the influence of changes in VAT rates;

- data sources: quotations conducted by price collectors, price lists, regulations and decisions applicable as the uniform prices ruling throughout the country or its part; collected prices of goods and services purchased online,

- methods for adjusting the retail prices into producer prices developed under grant agreement *Development of a methodological and statistical basis for a new indicator of services production.*

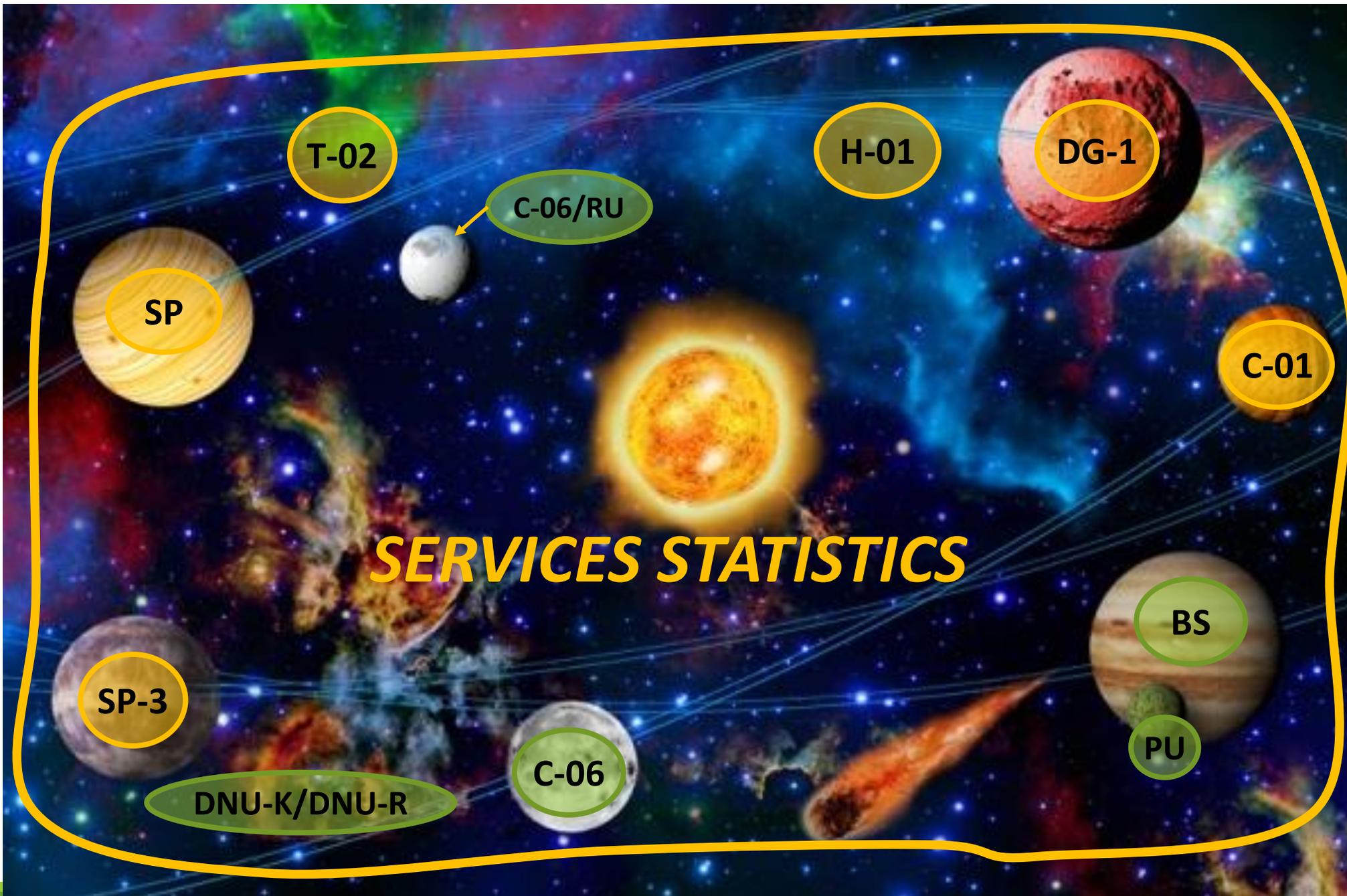# Index of services production (ISP) – methodological works

- started in November 2014
- main objective – to establish the methodology for compilation of ISP which enables to assess the development of services sector in national economy
- works conducted:
  - ✓ review of international methodological recommendations for compilation of ISP,
  - ✓ review of methods and experiences of other countries in obtaining the data necessary for compilation of ISP regarding the characteristics of each services industries,
  - ✓ analysis of accessible data sources, including the administrative data on turnover covered by the IT system of the Ministry of Finance on value added tax (VAT),
  - ✓ experimental compilation of data on ISP with usage of VAT data
  - ✓ comparison of data series calculated with usage of both data sources: statistical data and VAT data - after completion of works undertaken within the grant agreement *Development of a methodological and statistical basis for a new indicator of services production*
- finished in 2015

Index of services production – development works under grant agreement

- carried out with co-financing of the European Commission in the period November 2014 – June 2015.

- main objective - to develop the methodology for compilation of index of services production (ISP) using statistical methods which enable to obtain data necessary for calculation of index.

- main result - the algorithms for compiling the trade deflators as well as the ISP were established.

- for years 2010-2013 data series on indices of services production (volume indicators) for services industries classified by NACE Rev.2 into: G, H, I, J, L, M (except for for 70.1, 72 and 75) and N.

  calculated experimentally.

Other surveys with information on services sector

- **transport statistics, trade statistics** – launched before 1990, questionnaires collecting data on different aspects related to industries;

- **education statistics, health statistics** – well developed in the area of quality data, until 2000 mostly public services;

- **international trade in services (DNU-K/DNU-R questionnaires)**:
  - ✓ statistical survey with quarterly and annual frequency launched in 2009,
  - ✓ before implementing regular survey pilot study conducted,
  - ✓ population frame: all residents of national economy who participate in international trade in services, including the units of public financial sector,
  - ✓ information compiled: value of services provided to non-residents and purchased from non-residents as total and with the breakdown into various categories of services and geographical levels (by EBOPS2010).

- **demand for services (PU questionnaire)**:
  - ✓ 5-years cycle survey launched in 2011 for the reference year 2010,
  - ✓ population frame: enterprises with the number of persons employed 50 and more classified by NACE Rev.2 into Sections: C, F, G, H, I, J *(divisions 61-63)*, L, M *and* N,
  - ✓ information compiled: value of services purchased outside company, the place of residence of their main services providers, the barriers perceived in purchasing services or plans for purchase of services.

SERVICES STATISTICS

What data on services sector can be found by data users?

- data on transport, communication and trade disseminated since the beginning of 1990s:
  - ✓ separate publications devoted to transport: *Transport – activity results, Road transport in Poland*, *The maritime economy in Poland* or communication: *Communication – activity results,*
  - ✓ information on trade - yearly publication *Internal market,*
  - ✓ regular monthly/quarterly disseminatation of data in: *Statistical Bulletin* and *Information on socio-economic situation of the country;*
- data on other than transport, communication and trade services as regards any financial results of enterprises – for the first time presented in *Internal market* for 1995:
  - ✓ since 2003 the scope of presented data systematically developed;
- as regards producer prices statistics:
  - ✓ data on transport, storage and communication - available in *Prices in the national economy* from 2001,
  - ✓ data on business services - available in *Prices in the national economy* from 2010;
- data series transmitted to Eurostat: SBS, STS;

Summary:

1) There are two parallel aspects of measurement in services sector in Poland:
   - ✓ data accessibility – data on transport, communication exist while on other services limited – necessity for developing the existing system of surveys in order to get data which enable to monitor the services sector,
   - ✓ development of methodology for compilation of data - has to be developed and implemented in practice.
2) Based on experiences related with launching new surveys on services sector some recommendations can be made:
   - ✓ review of existing data sources as an alternative to statistical surveys,
   - ✓ interview of respondents to get information on their activity or their book-keeping systems as each service requires separate approach,
   - ✓ pilot studies in order to assess the feasibility for collecting necessary data and test the questionnaires strongly advised.

Summary:

3) Based on experiences related with developing the existing surveys on services statistics the following recommendations can be made:
   - ✓ any changes introduced separately in order to be able to assess their influence on the statistical results,
   - ✓ if sample modified analysis of minimal number of respondents has to be conducted,
   - ✓ change of data source - double data series for one or two reference periods in order to ensure the comparability of data recommended.

4) The development of services statistics is definitely the long-term and gradual process.

5) The suitable measurement of production in services sector is very challenging due to dynamic changes and new phenomenon taking place in economy. Therefore, the development of services statistics is ongoing and never-ending process.

Thank you for your attention!!!

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