

# **EUROSTAT**

<p><b>Services Classification System: Classification of Services Functions</b></p>
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**Paper based on Mr Marco Martini's study  
"Statistical Implications of the Business Services Market  
Analysis: Identification and Classification Criteria"**

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## INTRODUCTION AND SUMMARY

### A. Summary

This paper presents two interrelated documents on the classification of services.

The first describes EUROSTAT'S work on the creation of a data base on service classifications.

The second presents a study compiled for EUROSTAT by Professor Marco Martini of Milan University on: "Statistical Implications of the Business Services Market Analysis: Identification and Classification Criteria".

EUROSTAT would like the VOORBURG group's advice on the following points:

1. How to proceed in linking different service classifications. Are other studies similar to those of Mr Flottum and Mr Martini available on a national or international level?
2. Whether it would be possible to have summary reports on remarks, proposals and requests for clarification of classifications, which would help in the elaboration of recommendations concerning classifications.
3. How to follow and complement the approach and criteria proposed by Mr Martini for the identification and classification of services.
4. How to proceed in order to establish a nomenclature of the functions of firms. Should this nomenclature be incorporated into a classification of Outlays of Industries by Purpose (COIP)?

### B. Introduction to the first document: A Data Base on Services Classifications

EUROSTAT would like to inform the Voorburg Group participants of its work on the creation of a data base on services classifications and to receive the group's advice and contributions which could then be incorporated into this project.

The data base will result from the joint effort of two EUROSTAT units: B5 "Classifications" and D4 "Services, Transport Statistics".

This joint effort should increase and consolidate the dialogue between the officials in charge of classifications (unit B5) and the users of these classifications (unit D4).

The data base, which is currently running in a PC using the AGENDA software by LOTUS, should be regarded as an "input or output interface" utility, leading eventually to a more centralized data base on classifications which EUROSTAT is planning to create in collaboration with the UNSO.

The classifications contained in the data base follow five different approaches: product, activity, function, outlay and transaction. The main idea is to try to link all the classifications to the detailed items of the CPC, in order to increase comprehensiveness and improve consistency. In so doing, EUROSTAT is following the United Nations recommendation to place the CPC at the centre of the classification system.

The detailed items (or building blocks), which will result from this work will then be aggregated using different criteria to establish the different classifications.

The second objective of the data base is to trace and process the increasing number of remarks, proposals and requests for clarification, coming from international organisations, countries and professional associations.

A further objective of the data base, which will be multilingual, is to facilitate linguistic comparisons.

In order to establish the links between classifications, EUROSTAT will use official documents and Mr Flottum's study, which was presented at the last meeting of European Commission Service Statistics groups in Geneva.

EUROSTAT will be interested to hear from Voorburg Group participants whether similar studies are available on a national or international level.

As concerns the management of remarks, proposals and requests for clarification, EUROSTAT is planning to input into the data base, among others, all the suggestions contained in Voorburg Group papers. Summary reports should then be made available to the Voorburg Group participants. Assistance to EUROSTAT from those participants making such remarks and proposals is requested in order to check the output of the database and to avoid misunderstandings.

C. Introduction to the second document: Statistical Implications of Business Services Market Analysis - Identification and Classification Criteria

The second document presents a study compiled for EUROSTAT by Professor Marco Martini of Milan University.

The study focuses mainly on business services classifications using five criteria for the identification of services: type of client for whom the action is intended, function or need which this meets, way in which the producer interacts with the user, means used for the action, period of time needed for the action.

Supply of and demand for business services are described. Proposals for changes of activity and product classification are made. Annex 1 contains a proposal for a nomenclature of functions of firms and Annex 2 a nomenclature of working methods.

The original study was written in Italian and translation delays together with other work priorities have meant that there has not been enough time for a detailed discussion of the study within EUROSTAT or with Commission services and users of information.

There is, at the Commission, a general consensus on the main proposals of the study, which follows an economic model also used in two other ongoing EUROSTAT studies: one on "short term services indicators" and the other on "user requirements". Cross-referencing between the three studies would help to better clarify and complement the descriptions of criteria used in the Martini study. EUROSTAT intends to carry out this work and kindly requests the assistance of the Voorburg Group.

A suggestion put forward by the end users of information is that the analyses of the enterprise should not be limited to its business services but that the scope of the classification should be enlarged so as to cover the rest of enterprise activities by enumerating and complementing what Mr Martini calls technical resources.

In the meantime, we have been informed that a draft Classification of Outlays of Industries by Purpose (COIP) was elaborated in 1975 by the UN without any follow up decision at that time. Recently, proposals have been made within the framework of SNA revision to continue the work started in 1975.

The advice of Voorburg Group participants on how to proceed in establishing a nomenclature of functions of firms and on how to link this with (or incorporate this into) a classification of outlays of industries by purpose is kindly requested. Are studies similar to that of Mr Martini available on a national or international level?

The detailed proposals made by Mr Martini concerning amendments of activity and product classifications have not yet been fully examined by the Commission for the reasons mentioned above. Thus they should be regarded as initial proposals made by the author. EUROSTAT will input them into the service classification database and they will be processed with other remarks, proposals or requests for clarification (Voorburg Group proposals, feedback from pilot surveys, proposals of professional associations, etc).

In any case, the final decision concerning classifications will be taken by the competent group of the UN. At community level a decision will be taken in accordance with the procedure defined in the Council Regulation (EEC N°3037/90) of 9 October 1990 in which a "Common Statistical Classification of Economic Activities within the European Community" is established.

## DATA BASE ON SERVICES CLASSIFICATION

### Current situation

As various different economic agents have indicated, it is becoming increasingly necessary to improve the coherence and consistency between nomenclatures at world-wide and European level, as well as their comprehensiveness.

This requirement arises because for most forms of macro-economic analysis based on industries or sectors, users need to be able to associate data on output, cost structure, employment, foreign trade and so on this is especially true for the services sector, taking into consideration both the growth and innovation performed by services industries recently, and the intensification of international competition in this field.

The classification problems for services products derive from their specific characteristics:

- \* services are produced and consumed simultaneously, and
- \* different services are often offered together in packaged formula or in conjunction with goods<sup>1</sup>;

These characteristics make their definition very difficult. In fact they are usually described by specifying what they are not: tangible, material, transportable, stockable, durable,<sup>2</sup> and "... one of the questions that immediately come up when discussing services is: what is the borderline between services and income or transfers..."<sup>3</sup>.

In addition, Eurostat's Methodological "...Manual does not contain a precise definition of services. It rather follows a pragmatic approach consisting in defining the services entity as a list of relevant activities in terms of the NACE activity classification. A highly heterogeneous nature of service sectors made it necessary to establish ... methodological approaches aimed at specific services sectors."<sup>4</sup> Anyway we can at least say that services are "...transitive actions performed by one person (the provider) for another person (the client)"<sup>5</sup>.

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<sup>1</sup> DG III Activity nomenclatures for services Document prepared for the Statistical Office of the European Communities. PMS III.A.4 April 27, 1989, page 2.

<sup>2</sup> M. Martini, Statistical implications of the business services market analysis. Identification and classification criteria, December 1990, page 2

<sup>3</sup> Michael M. Beekman, Activities of the Voorburg group Paper prepared for the Work session on Statistics of Services (Geneva, 18-21 March 1991), page 5.

<sup>4</sup> Report of the Meeting on Statistics of Services (Geneva, 18-21 March 1991), Doc. CES/AC.67/12, page 2.

<sup>5</sup> M. Martini, Statistical implications of the business services market analysis. Identification and classification criteria, December 1990, page 2.

Nevertheless the absence of a clear distinction does not seem to impede the attempt to classify services. There are five main approaches:

- The product approach (the breakdown of services output by type of services: CPC, CPC.COM, CPA).
- The activity approach (a set of homogeneous business units with similar cost structures and production system engaged in the production and distribution of comparable products for the same purpose): ISIC Rev. 3, NACE Rev. 1.
- The functional approach (the breakdown of services taking into consideration which enterprise functions/needs they meet - intermediate consumption, Martini and Ruysen proposals, and the breakdown of services with regard to household consumption function-final consumption, that is, Procome, CH(G)S -).
- The draft classification of outlays of industries by purpose (COIP).
- The transaction approach (the classification of invisible trade, developed by the IMF, and jointly by EUROSTAT and the OECD).

#### EUROSTAT's action

In an effort to respond to this situation, Eurostat Units B5 "classifications", and D4 "Statistics on Services and Transport" are jointly creating a classifications data base with the objective of preparing a general framework to organise a future classification system at a European level, possibly consistent with other existing classifications at world level.

The project particularly concerns the services sector aiming:

- to increase the comprehensiveness of classifications concerning this sector,
- to improve their consistency,
- to make their management easier with regard to linguistic comparison problems and the increasing number of remarks, proposals and requests for clarification coming from international organizations, countries and professional associations.

Eurostat's main idea is to try to link all the nomenclatures concerned in its project, to the detailed items of the CPC (Central Products Classification) which will assume a central position in this system of information (see Annex 1).

The approach adopted follows the United Nations recommendation on nomenclatures which defines the CPC as the core classification in such a system. This will allow the establishment of relationships between each "CPC-linked nomenclature" with any other "CPC-linked" one.

Although both the ISIC and the CPC are "central" classifications, in view of the fact that the nomenclatures concerned in the pilot phase of this exercise (namely NACE rev.1, CPC and SICTA) are officially connected to the ISIC, it is this one which has been chosen as a temporary pivot. So, service sections of the aforementioned classifications have been entered into a computer program (Agenda) to create a data base. Links between each item (section, division, group or class) of each classification and each item of the ISIC have been entered, following the official documents statements. As soon as the opposite cross reference ISIC by CPC has been recalled by means of an Agenda macro, links between CPC and other classifications will be available.

### Agenda tool

The printed version of the classifications offer:

- the link with ISIC, or NACE, or CPC, but rarely more than one link at a time, and
- almost always links in the "detailed towards aggregate" direction. To obtain relationships in the "aggregate towards detailed" or the "detailed towards detailed" direction, it is necessary to cross-reference the nomenclatures by hand, which is time-consuming, prone to error and repetitive.

Agenda allows:

- the collection of various nomenclatures into one file and their combination into a network including many different links or relationships, even if these are not direct links. If, for instance, all the items of NACE rev. 1, CPC and SICTA referring to the same ISIC rev. 3 class are listed next to each other on the same page, with their codes and definitions (see Annex 4), it becomes quite easy to connect NACE to CPC and vice-versa, and to study probable links between NACE and SICTA or vice-versa.
- the reverse reference, that is, aggregate towards detailed (see Annex 6) as well as cross references between nomenclatures having one reference in common, by means of an Agenda macro specifically created for this purpose.
- the creation of common files grouping the items or articles of a chosen nomenclature, and listed in their two or three official languages (see Annex 5). Terminologists can then compare the translations more easily in order to revise, correct and amend them when necessary.



### Operational procedure

The following steps have been undertaken:

- a) conceptual analysis of the existing nomenclatures, that is:
  - coding system
  - tree structure
  - level
  - any other structural classification characteristic;
- b) conception of a framework common to all nomenclatures;
- c) input into Agenda of the common framework as a category manager, including name, levels, codes (N.B.: one file per nomenclature and per language);
- d) input into Agenda of the various definitions and codes of the nomenclature as "items" in the appropriate file (see Annex 2). The code is separated from the definition by a closing bracket. Such a structure together with the appropriate programming of the category manager, will allow Agenda to automatically classify the article as a definition (by convention this is named "Current"); the number of digit or the structure of the separators will give the level of the item:

1)                               = division  
 11)    or       1.11       = section  
 111)   or       1.11.22 = class

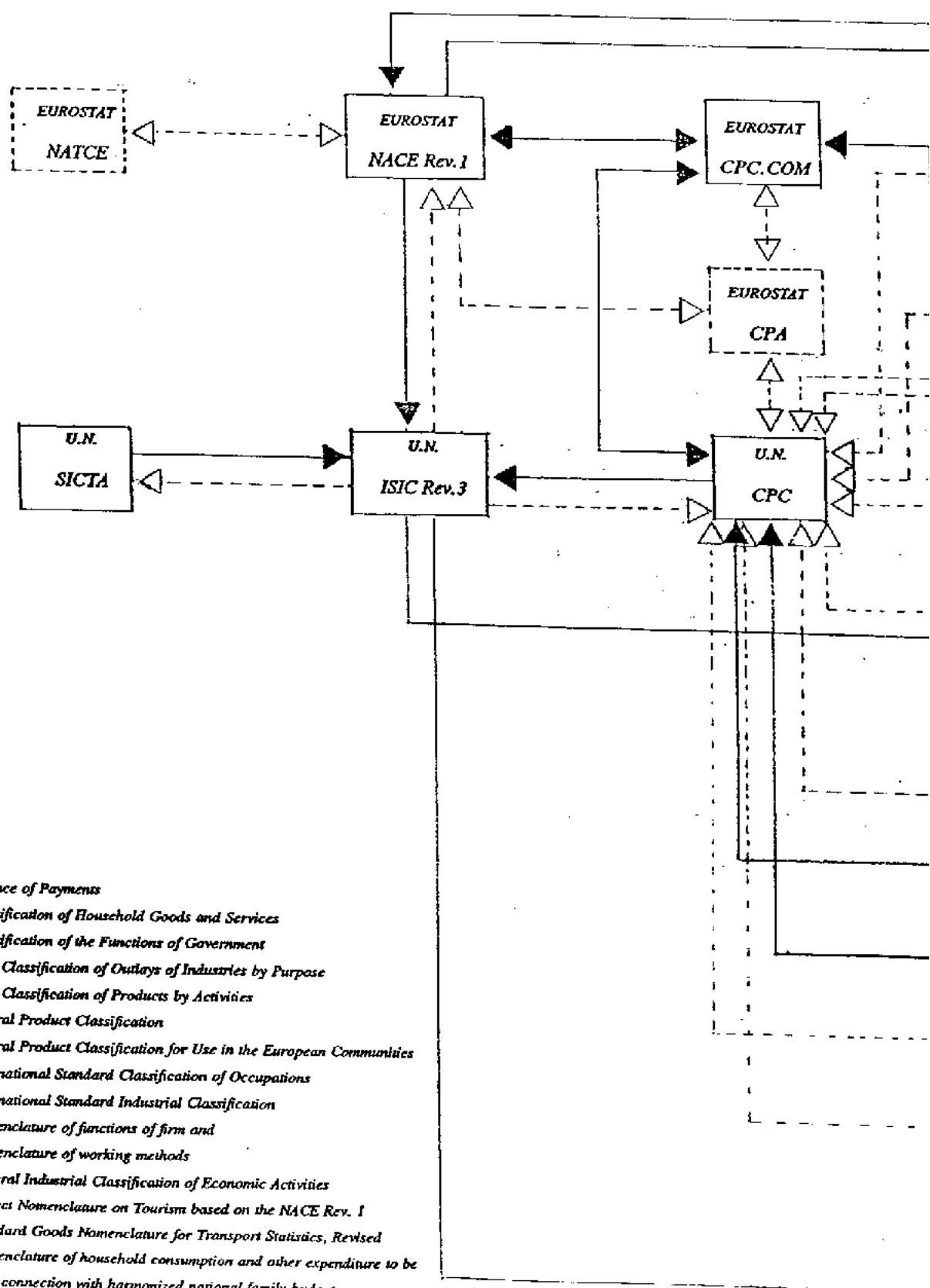
It is also possible to enter some proposals, questions or remarks about each definition simply by changing the separating character after the code (see Annexes 2 and 4). To enable Agenda to automatically identify these distinctive kinds of notes, it is necessary to establish a different character and a macro for each of them.

- e) input into Agenda of the links between a central nomenclature and each of the others (see Annex 3);
- f) combination of more files into a "cross-file" which will allow the direct comparison, by proximity, of items from different nomenclatures, or from different linguistic versions (see Annexes 4 and 5).

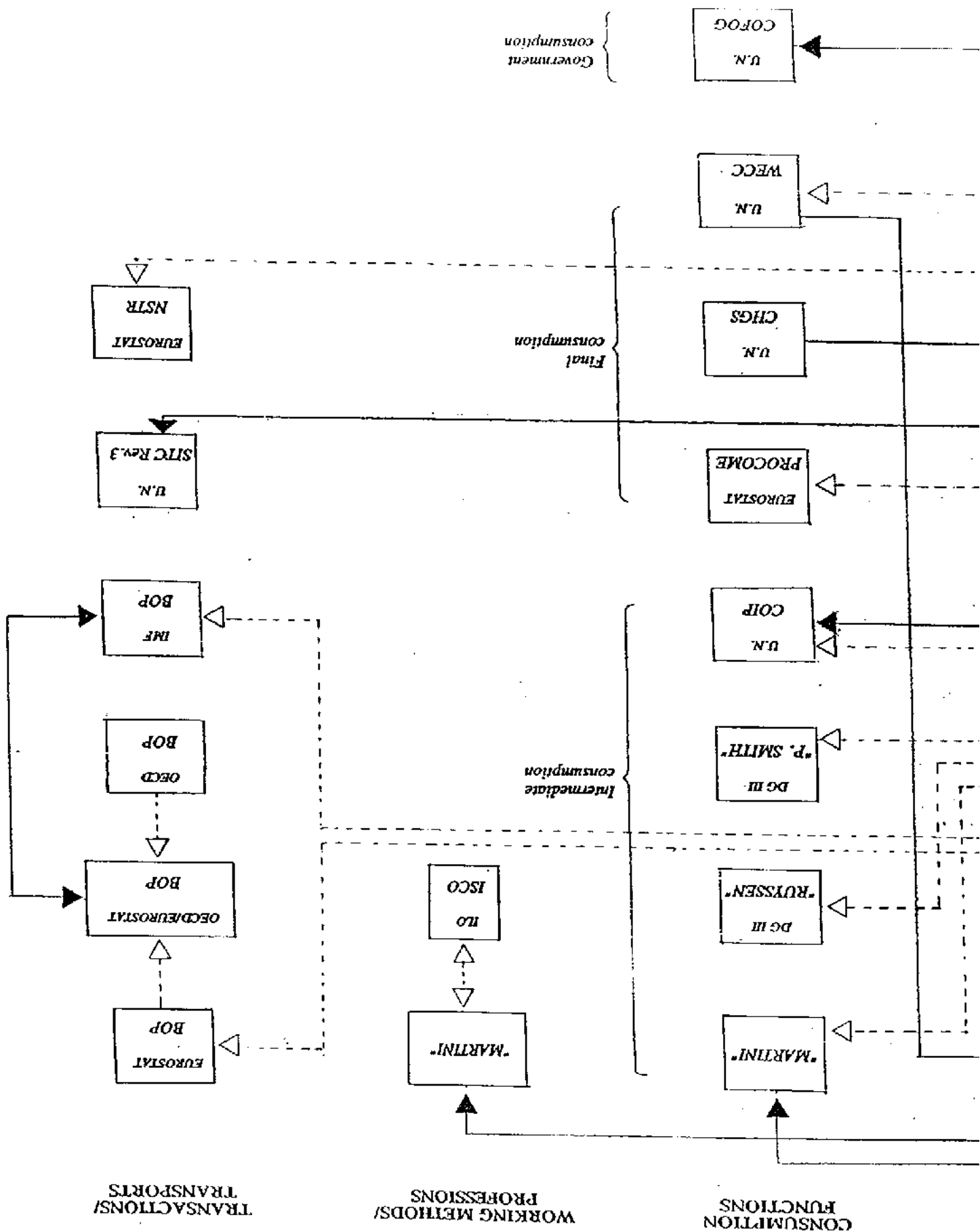
TOURISTIC  
ACTIVITIES

## ACTIVITIES

## PRODUCTS



- BOP = Balance of Payments  
 CHGS = Classification of Household Goods and Services  
 COFOG = Classification of the Functions of Government  
 COIP = draft Classification of Outlays of Industries by Purpose  
 CPA = draft Classification of Products by Activities  
 CPC = Central Product Classification  
 CPC.COM = Central Product Classification for Use in the European Communities  
 ISCO = International Standard Classification of Occupations  
 ISIC Rev.3 = International Standard Industrial Classification  
 "MARTINI" = Nomenclature of functions of firm and  
 "MARTINI" = Nomenclature of working methods  
 NACE Rev.1 = General Industrial Classification of Economic Activities  
 NATCE = project Nomenclature on Tourism based on the NACE Rev. 1  
 NSTR = Standard Goods Nomenclature for Transport Statistics, Revised  
 PROCOME = Nomenclature of household consumption and other expenditure to be used in connection with harmonized national family budget surveys  
 "RUYSEN" = Main list of Business services activities  
 SICTA = draft of Standard International Classification of Tourism Activities  
 SITC Rev.3 = Standard International Trade Classification  
 "SMITH, P." = study on activity nomenclatures  
 WECC = World Expenditure Category Classification



NACE1 Level	NACE1 Code	G	NACE1 Mode
Section	G	* G) COMMERCE DE GROS ET DE DETAIL; REPARATIONS AUTOMOBILES ET DOMESTIQUES	Current
Division	50	* 50) COMMERCE ET REPARATION AUTOMOBILE	Current
Group	50.1	* 50.1) Commerce de véhicules automobiles	Current
Class	50.10	* 50.10) Commerce de véhicules automobiles	Current
Group	50.2	* 50.2) Entretien et réparation de véhicules automobiles	Current
	50.2	* 50.2+ ...	Proposal
	50.2	* 50.2! ...	Remark
	50.2	* 50.2? ...	Question
	50.2	* 50.2> ...	Reply
	50.2	* 50.2: ...	Other
Class	50.20	* 50.20) Entretien et réparation de véhicules automobiles	Current
Group	50.3	* 50.3) Commerce de pièces et accessoires de véhicules	Current
Class	50.30	* 50.30) Commerce de pièces et accessoires de véhicules	Current
Group	50.4	* 50.4) Commerce, entretien, et réparation de motocycles et accessoires	Current
Class	50.40	* 50.40) Commerce, entretien et réparation de motocycles et accessoires	Current
Group	50.5	* 50.5) Commerce de détail de carburant pour automobiles	Current
Class	50.50	* 50.50) Commerce de détail de carburant pour automobiles	Current
Division	51	* 51) COMMERCE DE GROS ET INTERMEDIAIRES DU COMMERCE, SAUF DE VEHICULES AUTOMOBILES ET DE MOTOCYCLES	Current
Group	51.1	* 51.1) Activités d'intermédiaires du commerce en gros	Current
Class	51.11	* 51.11) Intermédiaires du commerce en matières premières agricoles, animaux vivants, matières premières textiles et en demi-produits	Current
	51.11	* 51.11+ ...	Proposal
	51.11	* 51.11! ...	Remark
	51.11	* 51.11? ...	Question
	51.11	* 51.11> ...	Reply
	51.11	* 51.11: ...	Other
Class	51.12	* 51.12) Intermédiaires de commerce en combustibles, minéraux et produits chimiques pour l'industrie	Current
Class	51.13	* 51.13) Intermédiaires de commerce en bois et matériaux de construction	Current
Class	51.14	* 51.14) Intermédiaires de commerce en machines, équipement industriels, navires et avions	Current
Class	51.15	* 51.15) Intermédiaires de commerce en meubles, articles de ménage et quincaillerie	Current
Class	51.16	* 51.16) Intermédiaires de commerce en textiles, habillement, chaussures et articles en cuir	Current
Class	51.17	* 51.17) Intermédiaires de commerce en denrées alimentaires, boissons et tabacs	Current
Class	51.18	* 51.18) Intermédiaires de commerce spécialisés dans la vente de produits particuliers ou de variétés de produits n.c.a.	Current

## CPC by ISIC/3 Div.

CPC Code	50	ISIC/3 Code
61111	• 61111) Wholesale trade services of motor vehicles	5010
61112	• 61112) Retail sales of motor vehicles	5010
6112	• 6112) Maintenance and repair services of motor vehicles	5020
61120	• 61120) Maintenance and repair services of motor vehicles	5020
6113	• 6113) Sales of parts and accessories of motor vehicles	5030
61130	• 61130) Sales of parts and accessories of motor vehicles	5030
6121	• 6121) Sales of motorcycles and snowmobiles and related parts and accessories	5040
61210	• 61210) Sales of motorcycles and snowmobiles and related parts and accessories	5040
6122	• 6122) Maintenance and repair services of motorcycles and snowmobiles	5040
61220	• 61220) Maintenance and repair services of motorcycles and snowmobiles	5040
613	• 613) Retail sale of motor fuel	5050
6130	• 6130) Retail sale of motor fuel	5050
61300	• 61300) Retail sale of motor fuel	5050

## NACE/1 by ISIC/3 Div.

NACE/1 Code	50	ISIC/3 Code
50.1	• 50.1) Sale of motor vehicles	501
50.10	• 50.10) Sale of motor vehicles	5010
50.2	• 50.2) Maintenance and repair of motor vehicles	502
50.20	• 50.20) Maintenance and repair of motor vehicles	5020
50.3	• 50.3) Sale of motor vehicle parts and accessories	503
50.30	• 50.30) Sale of motor vehicle parts and accessories	5030
50.4	• 50.4) Sale, maintenance and repair of motorcycles and related parts and accessories	504
50.40	• 50.40) Sale, maintenance and repair of motorcycles and related parts and accessories	5040
50.5	• 50.5) Retail sale of automotive fuel	505
50.50	• 50.50) Retail sale of automotive fuel	5050

## EuroStat SICTA subset by Isic/3

Name	5232	ISIC/3	NACE/1	CPC	SICTA
ISIC/3	• 5232) Retail sale of textiles, clothing, footwear and leather goods	5232			
NACE/1	• 52.41) Retail sale of textiles	5232	52.41		
NACE/1	• 52.42) Retail sale of clothing	5232	52.42		
NACE/1	• 52.43) Retail sale of footwear and leather goods	5232	52.43		
CPC	• 63221) Retail sales of textiles	5232		63221	
CPC	• 63222) Retail sales of articles of clothing, articles of fur and clothing accessories	5232		63222	
CPC	• 63223) Retail sales of footwear	5232		63223	
CPC	• 63224) Retail sales of leather goods and travel accessories	5232		63224	
SICTA	• 5232) Retail sales, clothing etc	5232			5232
SICTA	• 5232*	5232			5232

## NOTE:

1. It seems odd to include travel clothing in SICTA 52322.
2. If the clothing element were removed from the SICTA heading and sub-heading 1 and 2 consolidated, a heading comprising "retail trade in luggage and travel accessories" identical to that of the CPC would remain.
3. NACE/Rev1 takes no account of travel articles.

SICTA	• 5232+	5232			5232
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## Proposal:

Although the CPC should allow a separate analysis of the consumption of leather goods and travel accessories with a good approximation to the results desired, one could suggest that a fifth-digit level sub-heading "leather articles and travel articles" be incorporated into 5243. This proposal could be reconsidered in a future revision of the NACE.

SICTA	• 52321) Retail sales, luggage	5232			52321
SICTA	• 52322) Retail sales, travel wear and accessories	5232			52322

## NACE/Rev1 in French, English & German

50	NACE/1
• 50) COMMERCE ET REPARATION AUTOMOBILE	-50
• 50) SALE, MAINTENANCE AND REPAIR OF MOTOR VEHICLES AND MOTOR-CYCLES; RETAIL SALE OF AUTOMOTIVE FUEL	-50
• 50) KRAFTFAHRZEUGHANDEL; INSTANDHALTUNG UND REPARATUR VON KRAFTFAHRZEUGEN; TANKSTELLEN	-50
• 50.1) Commerce de véhicules automobiles	-50.1
• 50.1) Sale of motor vehicles	-50.1
• 50.1) Handel mit Kraftwagen	-50.1
• 50.10) Commerce de véhicules automobiles	-50.10
• 50.10) Sale of motor vehicles	-50.10
• 50.10) Handel mit Kraftwagen	-50.10
• 50.2) Entretien et réparation de véhicules automobiles	-50.2
• 50.2) Maintenance and repair of motor vehicles	-50.2
• 50.2) Instandhaltung und Reparatur von Kraftwagen	-50.2
• 50.20) Entretien et réparation de véhicules automobiles	-50.20
• 50.20) Maintenance and repair of motor vehicles	-50.20
• 50.20) Instandhaltung und Reparatur von Kraftwagen	-50.20
• 50.3) Commerce de pièces et accessoires de véhicules	-50.3
• 50.3) Sale of motor vehicle parts and accessories	-50.3
• 50.3) Handel mit Kraftwagenteilen und Zubehör	-50.3
• 50.30) Commerce de pièces et accessoires de véhicules	-50.30
• 50.30) Sale of motor vehicle parts and accessories	-50.30
• 50.30) Handel mit Kraftwagenteilen und Zubehör	-50.30
• 50.4) Commerce, entretien, et réparation de motocycles et accessoires	-50.4
• 50.4) Sale, maintenance and repair of motorcycles and related parts and accessories	-50.4
• 50.4) Handel mit Krafträdern, Teilen und Zubehör, Instandhaltung und Reparatur von Krafträdern	-50.4
• 50.40) Commerce, entretien, et réparation de motocycles et accessoires	-50.40
• 50.40) Sale, maintenance and repair of motorcycles and related parts and accessories	-50.40
• 50.40) Handel mit Krafträdern, Teilen und Zubehör, Instandhaltung und Reparatur von Krafträdern	-50.40
• 50.5) Commerce de détail de carburant pour automobiles	-50.5
• 50.5) Retail sale of automotive fuel	-50.5
• 50.5) Tankstellen	-50.5
• 50.50) Commerce de détail de carburant pour automobiles	-50.50
• 50.50) Retail sale of automotive fuel	-50.50
• 50.50) Tankstellen	-50.50

## Cross: ISIC/3 to CPC

Name	ISIC/3 Code	CPC Code	ISIC/3 Code
-ISIC/3	• A) AGRICULTURE, HUNTING AND FORESTRY		-A
-ISIC/3	• 01) AGRICULTURE, HUNTING AND RELATED SERVICE ACTIVITIES		-01
-ISIC/3	• 011) Growing of crops; market gardening; horticulture		-011
-ISIC/3	• 012) Farming of animals		-012
-ISIC/3	• 013) growing of crops combined with farming of animals (mixed farming)		-013
-ISIC/3	• 014) Agricultural and animal husbandry service activities, except veterinary activities		-014
-ISIC/3	• 0140) Agricultural and animal husbandry service activities, except veterinary activities	-88110 88120	-0140
-CPC	• 88120) Services incidental to animal husbandry	-88120	-0140
-CPC	• 88110) Services incidental to agriculture	-88110	-0140
-ISIC/3	• 015) Hunting, trapping and game propagation including related service activities		-015
-ISIC/3	• 0150) Hunting, trapping and game propagation including related service activities	-88130	-0150
-CPC	• 88130) Services incidental to hunting	-88130	-0150
-ISIC/3	• 02) FORESTRY, LOGGING AND RELATED SERVICE ACTIVITIES		-02
-ISIC/3	• 020) Forestry, logging and related service activities		-020
-ISIC/3	• 0200) Forestry, logging and related service activities	-88140	-0200
-CPC	• 88140) Services incidental to forestry and logging	-88140	-0200
-ISIC/3	• B) FISHING		-B
-ISIC/3	• 05) FISHING, OPERATION OF FISH HATCHERIES AND FISH FARMS; SERVICE ACTIVITIES INCIDENTAL TO FISHING		-05
-ISIC/3	• 050) Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing		-050
-ISIC/3	• 0500) Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing	-88200	-0500
-CPC	• 88200) Services incidental to fishing	-88200	-0500
-ISIC/3	• C) MINING AND QUARRYING		-C
-ISIC/3	• 10) MINING OF COAL AND LIGNITE; EXTRACTION OF PEAT		-10
-ISIC/3	• 11) EXTRACTION OF CRUDE PETROLEUM AND NATURAL GAS; SERVICE ACTIVITIES INCIDENTAL TO OIL AND GAS EXTRACTION EXCLUDING SURVEYING		-11
-ISIC/3	• 111) Extraction of crude petroleum and natural gas		-111
-ISIC/3	• 1110) Extraction of crude petroleum and natural gas		-1110
-ISIC/3	• 112) Service activities incidental to oil and gas extraction excluding surveying		-112
-ISIC/3	• 1120) Service activities incidental to oil and gas extraction excluding surveying	-88300	-1120



<p><b>STATISTICAL IMPLICATIONS OF THE BUSINESS SERVICES MARKET ANALYSIS</b></p>
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**Identification and classification criteria**

**Marco Martini**

## **PREFACE**

The purpose of the research work on "Statistical implications of the business services market analysis" is to reconstruct the conceptual framework relating to the supply of and demand for business services.

It also aims to propose new criteria for the identification of business services and to indicate their effects on the activity and product classifications.

It is based on (see bibliography):

- a) the literature on the services economy;
- b) official documents (of Eurostat and the United Nations) for definitions and classifications;
- c) research carried out in a number of European countries, including Italy in particular.

The report is intended to form a whole, and is set out under the following headings:

- I Definition of services;**
- II Criteria for identifying business services products;**
- III Supply of and demand for services;**
- IV Business services classifications.**

There are annexes containing nomenclatures of functions and sub-functions served by the analysis of the activity classification (NACE Rev. 2) and the product classification (CPC).

## **Part I Definition of services**

1. The tangible conceptual model, set up for the "goods economy", is not suitable for describing the services economy.
2. Neither the "movement of goods" model (production, stock-piling and consumption), nor the "production process" model, in the sense of manufacturing which goes from a project to a product by way of "standard operations" (technological and human), nor the goods identification criteria (physical nature, manufacturing stage, technology, raw materials used), can be used for services.
3. Moreover, it is not sufficient to define what services are not (i.e. tangible, material, transportable, stockable, durable, etc.) and then to fit them into the above models.
4. Services are not the "results of actions" but are "transitive actions performed by one person (the provider) for another person (the client)".
5. For business services there is a basic difference between transitive actions and standard operations.

Operations are planned (in a project) and performed by an individual in accordance with the directions which follow the logical chain of manufacturing. They may therefore be described as a linear scheme which runs from the project to the product.

Actions, on the other hand, are unforeseeable, interactive and in dialogue form. The user expresses a new requirement, the operator listens, interprets it in the light of his theoretical and practical experience (problem-setting) and seeks a solution by assessing the problem against the capacities of the user (problem-solving). He thus involves the user in the action.

The user compares the solution offered with his initial requirements and puts forward further problems, in a continuous dialogue. The actions are described by a circular and repetitive system.

Whereas the logical system for the operations (means and ends) may be pursued in the opposite direction and is therefore, theoretically at least, reversible, the action scheme is intrinsically irreversible.

6. Goods and standard operations are means for the actions which cannot be related to either the former or the latter.
7. The criteria for the identification of a service designed to consist of transitive actions are:
  - a) type of client - for whom the action is intended;
  - b) function or need which this meets;
  - c) way in which the producer interacts with the user;
  - d) means used for the action;
  - e) period of time needed for the action.

## **Part II. Criteria for identifying business services**

8. **First identification criterion: type of client** (individual persons, institutions, businesses).

In applying this criterion a distinction is made between exclusive and non-exclusive services. Exclusive services are:

- a) **services to individual persons** (hotels and catering, personal and social services provided directly to individuals);
- b) **services to institutions** (services not provided directly to individuals);
- c) **services to businesses** (services to enterprises engaged in selling and distribution).

Non-exclusive services, to either individual persons or businesses, are:

- d) **network services** (distributive, financial, information, transport, insurance, etc.);
- e) **intermediation services**.

9. Network and intermediation services are by nature aimed at a number of clients and their aim is to put these clients in touch with each other, thus enabling movement of tangibles and intangibles, information and people.

10. **Second identification criterion: the function**

Individual persons, businesses and institutions are "living systems", with a structure and functions which enable them to survive, develop and establish relationships with their environment (markets and networks), and control their own contacts with it.

The functions are stable over time, although the ways in which their requirements are met may vary (in-house and outside services, types of operation, etc.).

11. **Functions of the business**

In particular, within a business there are a number of **necessary functions** which enable it to:

- a) control the various resources involved;
- b) contact its environment (the networks and the goods and services markets involved).

The necessary functions of the business are:

- 1) **marketing and sales** (advertising, sales and sales promotion): maintains links with the networks for distribution and communications - radio, television, press, etc. - and with users' markets;
- 2) **administration** (management, accountancy, legal and fiscal control): maintains links with government institutions and communal services;

- 3) financial resources (finance and insurance): maintains links with the networks for credit and insurance, with the financial market and with the market for related services;
- 4) human resources: maintains links with the networks for recruitment and guidance and with the market for labour and services to individuals;
- 5) information resources (hardware and software): maintains links with the telecommunications network and the with markets for information and related services;
- 6) technological resources (equipment, plant and materials): maintains links with the supply and transport networks and with the markets for technological products and related services.

12. Diagram of functions as they relate to their environment

FUNCTIONAL SERVICES FOR BUSINESSES (IN-HOUSE - OUTSIDE)		ENVIRONMENT	
A	SERVICES B	MARKETS C	
1. MARKETING/SALES	DISTRIBUTION NETWORK FOR GOODS AND SERVICES	MARKET OUTLET	
2. ADMINISTRATION	COMMUNAL SERVICES		
3. FINANCIAL RESOURCES	FINANCIAL AND INS. NETWORKS - ANCILLARY SERVICES	FINANCIAL MARKET	
4. HUMAN RESOURCES	PLACEMENT AND SELECTION NETWORKS	LABOUR MARKET	
	SERVICES TO INDIVIDUALS (HEALTH, RECREATION, CULTURAL, ETC.)		
5. INFORMATION RESOURCES	TELECOMMUNICATIONS NETWORKS, RELATED SERVICES	INFORMATION MARKET	
6. TECHNICAL RESOURCES	SUPPLY NETWORKS (SALES, LEASING, RENTING, MAINTENANCE, ETC.) AND TRANSPORT NETWORKS	MARKET FOR CAPITAL GOODS, MATERIALS AND TECHNOLOGY TRANSPORT NETWORKS	

13. If they are to survive, all businesses must have access to the functional services they require (column A), because they must be in contact with the services (column B) and the markets (column C).

Depending on its specific field, each firm carries out an activity in a particular way, listed in columns A or B (main activity). For instance, manufacturing businesses perform a manufacturing function in their own technical field (A.6), financial firms activity B.3, the firms which provide services to individuals (e.g. health) activity B.4, government departments activity B.2, and so on.

14. Business services meet the inherent exclusive needs of businesses.

They form an interface between internal functional needs and the need to be in contact with the networks or markets which constitute the environment. Their development can be attributed to the savings resulting from specialization and learning.

15. Each function of a business may be broken down into sub-functions which, in complex businesses, can acquire some degree of autonomy: e.g. the marketing/sales function may be broken down into advertising, sales, marketing and sales promotion; the administrative function into management control, accounting, legal and fiscal matters, etc. (cf. Annex 1).

Over a period the relative importance of the individual sub-functions may change - for example, less advertising and more direct marketing.

16. Third identification criterion: working mode

Business services consist of operations carried out for a client. These can take various forms, viz.:

1. Consultancy and studies to support the decisions of the client:  
analysis and consultancy (problem setting/solving); projects; studies and research (collection and structuring of information).
2. Organizational changes which modify the client's working methods:  
systems and procedures (which modify the firm's working methods); training (which affects the human resources).
3. Operational changes (which do not modify the client's working methods and which perform operations already planned by the firm):  
standard operations, maintenance operations.
4. Monitoring or certification operations (in addition to those forming part of the system):  
inspection, testing, certification  
(cf. Annex 2).

17. The interplay between functions (or sub-functions) and modes (or sub-modes) gives rise to various types of service products. For example, marketing consultancy (mode 1, function 1), installation of computer systems (mode 2, function 5), plant design (mode 1.3, function 6), etc.

18. Each service "product" is thus identified by client, function and mode.

19. Fourth identification criterion: resources

Every service (a transitive action characterized by a client, a functional need and a mode) when performed involves specific resources, e.g. telephone equipment for communications, physical equipment for hotels and catering, etc.).

20. The main specific resource used by business services is people (a stock of theory and experience capable of meeting the functional requirements of businesses).

21. The human resources used may be classified by level, i.e. by depth of knowledge, and by the range of the client's needs/problems which they can tackle.

22. The point of intersection between the client's functions (or sub-functions), mode and level indicates the professional competence involved in business services, e.g. senior computer analyst (mode: analysis/consultancy; function: computer resources; level: senior).

23. Fifth identification criterion: period of time.

Time is a basic factor in any action, and therefore in any transitive action and any service.

24. The period of time during which the resources concerned are used is the characteristic measure of the "volume of action" contained in a service (e.g. the period for which a means of transport, hotel equipment, etc. is used).

25. The period of use of the human resources (by type of profession) is the main measure of the volume of actions in business services.

26. The charges or fees for business services are usually commensurate with the period of use of the human resources, depending on the type of profession.

27. Summary of identification criteria

The five criteria: C (client), F (function), M (mode), L (level), and P (period of time) may be combined to give the following definitions:

- classes of exclusively business services (C);
- functional units (CF);
- service products (CFM);
- professions (CFML);
- volume of action (CFMLP).

### **Part III Supply of and demand for business services**

28. The actions constituting the services are neither "juxtaposed" nor "mixed" (NACE), but rather they are coordinated in relation to:

- a) the regularity of the client's needs;
- b) the provider's capacity to adapt to changing circumstances.

29. The organizational structure of the client firm is not unchanging. Firms are constantly adjusting their own strategies regarding what they sell and to whom, what they should do in-house and what they should buy-in.

The market and the firm's own organization may be regarded as either an alternative factor or a complementary factor. The chameleon-like ability to change the shape of its organization is what enables the business to adapt to the changing environment.

30. The demand for business services may therefore be reduced to three types of providers of these services, viz.:

- a) internal functional units (ancillary activities, as NACE describes them);
- b) functional units of external enterprises which operate on the market (business services, as NACE describes them);
- c) functional units belonging to "subsidiaries" which serve the "parent" firm or group exclusively (local units, as NACE describes them).

Business services are often provided jointly by in-house staff employed on a particular function, and external resources (firms offering business services or subsidiaries).

31. The clients for the services may be several (multi-client) or, in extreme cases, a single person (single client), as for subsidiaries and for the functional units.

32. The services offered by the three groups of units are of the same type (CFM) and they are often performed jointly by the three; they use the same type of human resources and are therefore in competition on the same professional market (CFML); they are measurable in terms of the same volume of action (CFMLP).

They differ only in the amount of accountancy data available: these are obligatory for functional units belonging to external firms and "subsidiaries", and must be reconstructed for internal functional units by means of analytical accounts.

33. Coordination of services by firms offering business services

Business services firms also operate consciously chosen strategies concerning what they sell and to whom (objective of firm), and what they do in-house and what they buy-in (organization of the firm). Every business services firm is continually making decisions on its own product range and its own market.



34. The objectives of the firm depend on its capacity to specialize and adapt. This may take various forms over a period of time:

- single function/single mode (market studies, recruitment, etc.);
- multi-function/single mode (e.g. consultancy, training);
- single function/multi-mode (e.g. computerization, engineering).

A multi-mode service is not a simple juxtaposition of individual service products (single-function/single-mode). It can be seen as the capacity to respond and take action on the whole range of problems which can arise vis-à-vis a function, and can therefore be regarded as a more complex product which requires the ability to coordinate at a higher level.

## Part IV Classifications

The criteria set out so far suggest a number of improvements regarding:

- a) the classification of economic activities;
- b) the classification of products;
- c) the business services group

### A - Classification of economic activities

35. Activities are different from products. An activity is a set of uniform units as regards cost structure and production systems used in the production and selling of products for the same end users and the same functions. The same service products can be offered in connection with various activities.
36. The main activity of a business services firm can change as time goes on, depending on supply and demand: from single- to multi-mode, from single- to multi-function, etc.  
An over-detailed definition of activities which includes, for example, all the individual products deriving from the combinations of functions or sub-functions and modes or sub-modes would create difficulties for the classification of firms which offer multi-mode or multi-function services.  
In addition, the firms engaged in single-mode or single-function activities often tend to extend their activities to other modes in the same function (e.g. marketing) or other functions in the same mode (e.g. consultancy), thus acquiring new specialist resources, either with the work contract or by consulting professionals.
37. The NACE Rev.1 classification<sup>(1)</sup> lists business services under the headings:
  72. Computer and related activities
  74. Other business activities.
 However, financial and insurance services to businesses are classified under headings 65.2 (Other financial intermediation) and 67 (Activities auxiliary to financial intermediation).
38. As regards business services of a non-financial nature, at the four-digit level the criteria are not uniform, and some important headings are missing (see Annex 3); at the three-digit level there is over-aggregation of services of various kinds.

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(1) Doc. NACE 138, Luxembourg, 1 June 1990.

39. Heading 72, Computer and related activities, is satisfactory. It is built up in accordance with a single-function/multi-mode criterion.

Headings 72.1 and 72.2 correspond to two sub-functions while headings 72.3, 72.4 and 72.5 combine functions and single modes.

Heading 74, Other business activities, covers all the business services other than information and financial services.

Some four-digit headings meet the multi-mode/function or sub-function criterion:

Nace	Function	or	Sub-function
74.40	1.1 Advertising		
74.11	2.4 Legal activities		
74.12	2.2/13 Accounting/ tax consultancy		
74.20-74.30			6.0 Technological resources

Heading 74.14, Business and management consultancy activities, covers two types (consultancy or study and organizational), carried out in connection with all the functions. The services arising from this activity are offered in the context of others, e.g. computer consultancy is also classified under headings 72.1 and 72.2 and tax consultancy also falls under 74.12.

Other headings, i.e. 74.13, 74.50, 74.60 and 74.81/4, meet the single-mode/single-function criterion (see Annex 3).

40. Among the four-digit headings, service activities (single sub-function/multi-mode) are not explicitly referred to as such when they are:
- services connected with sales and sales promotion and public relations, which together with market research (74.13) and advertising (74.4) comprise all the services for function 1, marketing and sales;
  - services connected with training and organizing human resources, which together with personnel recruitment (74.50) comprise all the services for function 4, human resources;
  - services connected with design, styling and fashion, which support several industries (clothing, textiles, footwear, furniture, ceramics, etc) and which do not coincide with either engineering services (74.20) or technical testing and analysis (74.30);
  - technical services to other firms (agri-food, agriculture, etc.)<sup>(2)</sup>.

(2) See the remarks in the document Activity nomenclatures for services (DG III for SOEC) PMS III A. 4 April, 11, 1988.

Because the classification is by definition complete, these activities will inevitably be included under the residual heading 74.84 (Other business activities n.e.c.) or under Business and management consultancy activities which, being multi-function, are erroneously classified under residual. It becomes obvious that these are ambiguities when we consider the proposals for a five-digit breakdown in Doc. NACE 138<sup>(3)</sup>.

41. The three-digit headings in NACE are not very easy to distinguish.  
In particular, heading 74.1 includes multi-mode services, for the sub-functions administration (accounting and tax consultancy - 74.12, legal activities - 74.11) and marketing and sales (market research - 74.13) and multi-function services (consultancy - 74.14).  
In addition, other services connected with the marketing/sales function are included in heading 74.4 (advertising).
42. The following slight amendments to the three- and four-digit NACE codes (see Annex 4) in heading 74 would avoid the ambiguities and the excess number of items in the residual headings:
  - a) remove headings 74.13 (Market research) and 74.14 (Business and management consultancy activities) from class 74.1, which could be entitled:
 

74.1 Administration services  
including the sub-headings:

74.11 Legal services;  
74.12 Accountancy/book-keeping/auditing/tax consultancy;  
74.15 Management holding companies.
  - b) Expand heading 74.4 (Advertising), which could be entitled:
 

74.4 Advertising - marketing and sales activities  
including the sub-headings:

74.41 Advertising (ex 74.40);  
74.42 Marketing (ex 74.13);  
74.43 Other sales and sales promotion services (new).

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(3) Doc. NACE 138, Luxembourg, 1 June 1990.

Under (a), services connected with sales and sales promotion, the following are proposed: 74.84.3/4/6 (I); 7414.3 (II); 7483.6 (I); 7484.1/2/3/4/5 (DG III); 7484.1/2/3 (D).

Under (b), services connected with training and organizing human resources, the following are proposed: 7414.1 a/b/c (DG III).

Under (c), services connected with design, styling and fashion, the following are proposed: 7484.5 (I); 7484, 4/5 (D) .cw 12.

- c) Expand heading 74.2, which could be entitled:

**74.2 Technical services**

including the sub-headings:

- 74.21 Architectural and engineering services and related technical activities (ex 74.20);
- 74.22 Design, fashion and styling services (new);
- 74.23 Technical testing and analysis (ex 74.30);
- 74.24 Other technical services (new).

- d) Transfer to a separate heading the category:

**74.3 Business and management consultancy (ex 74.14).**

- e) Expand heading 74.5, which could be entitled:

**74.5 Human resources services**

including the sub-headings

- 74.51 Labour recruitment and provision of personnel (ex 74.50);
- 74.52 Training and other human resources services (new).

The other headings in NACE Rev.1 would remain unchanged and, in particular, the residual category 74.8 would cover only operative services not classified elsewhere.

If the NACE coding cannot be amended, it will be necessary to insert the headings:

Other sales and sales promotion services

Design, fashion and styling

Other technical services

Training and other human resources services

in the residual category 74.8 (Other business services n.e.c.) so as to have at least some building blocks for the functional classification.

## B - Classification of products

43. Service products are classified in the United Nations CPC (1988), constructed according to the criteria of the "physical properties" and "intrinsic nature" of the products while "a close relationship with the ISIC is maintained" (classification of economic activities) (CPC 21).

This derives from a conceptual example based on the "res" (things) affected by an ambiguous and inadequate definition of services and makes explicit reference to a number of undesirable characteristics of these, such as the fact that they are "intangible, non-transportable and non-storable", as compared with goods, which are "tangible, transportable and storable" (CPC 27). However, as we have said, this negative criterion only shows what services are not, and in no way clarifies what they are.

44. The conceptual haziness surrounding this basic question makes it difficult to establish identification criteria specific to services and rules out completely that of the "intrinsic nature" of the product which the CPC has however opted for.

It is not surprising therefore that, particularly as regards business services, the only criterion used by the CPC is that of the purely analytical breakdown of the ISIC classification. Paradoxically, the CPC product classification is in many cases less detailed than the five-digit NACE (Doc. NACE 138, Luxembourg, 1 June 1990).

45. With regard to the individual headings, the CPC does not include the groups of services listed in 39 (Sales and sales promotion services; design, styling and fashion; other technical services; training and other human resources services), not even at the level of detail of the residual categories<sup>(4)</sup>.

Furthermore, the individual "service products" are not identified systematically. In some cases (legal and computer services) the breakdown is taken too far, in other cases (marketing services) the degree of aggregation is too high.

46. The classification of the individual products may be reconstructed by systematically cross-referencing the criterion of functions and sub-functions with that of modes and sub-modes as set out in Annexes 1 and 2.

In particular:

- The activity Business and management consultancy services (double-mode/multi-function) may be identified by two activity modes (consultancy and studies and organization) and five sub-modes, and by six business functions and nineteen sub-functions.

Each of the products obtained by cross-referencing modes and functions naturally also occurs in the context of other activities defined in accordance with the functional criterion (multi-mode/single-function).

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(4) Cf. the tables appended to the document "Activity nomenclatures for services" (PMS, III A.4, April 1988).

For example: software analysis and consultancy is a product of the two activities, business consultancy and software consultancy.

- The activities defined by groups of sub-functions (such as engineering) may be subdivided by single sub-functions, relating to various areas of technology (such as architecture, engineering, materials technology, agri-food, design, styling and fashion, other technologies), and by individual modes.
- The activities defined by individual sub-functions, such as advertising, may be defined by individual modes and sub-modes.

47. The definition (and not merely the classification) of service products must be hierarchical. The scope of a service product depends in fact on the needs/functions of the user and the working methods of the firm.

Just as the meaning of a text is not simply the sum of the meaning of the individual sentences which comprise it, the higher-level services cannot be defined as simply the sum of lower-level services, but as a system.

The higher hierarchical levels of the service products classification constitute in themselves a service product of a higher level. Providing these services involves using coordination and control resources which alter the nature of the service itself.

This hierarchy is laid down in the CPC only for "turn-key" engineering services, which are higher-level products and are more complex than simple services such as design, contract documents, discussion on the work, etc. which comprise them.

In the same way, there should be provision for services such as "communication and marketing strategies" comprising advertising, direct marketing, public relations and organizational and training services for the sales force which are more than the sum of their component parts.

Accordingly, in defining service products the different level of complexity should be indicated. In the CPC classification this is given only in a few isolated cases.

## C - Business services group

48. The group Information, communication and other business services defined by EUROSTAT<sup>(5)</sup> contains the following sub-groups:

NACE Rev.1  
(Doc. NACE Lux. 1990)

1. National post activities	64.11
2. Courier activities other than national post activities	64.12
3. Telecommunication activities	64.20
4. Computer and related activities	72.10-72.90
5. Professional activities	74.11-74.12-74.14
6. Marketing activities	74.13-74.4
7. Technical activities	74.20-74.30
8. Renting of movables	71.10-71.30
9. Labour recruitment and provision of personnel	74.50
10. Operational activities	74.60-74.70
11. Other business activities n.e.c.	74.8

49. The group is not uniform, in respect of either the criterion of the user (demand) or that of the supplier.

It comprises:

- A) Non-distributive services exclusively for firms (sub-groups 4,5,6,7,8,9,10 and 11: NACE 72 and 74)
- B) Distribution services and networks to mixed users (sub-group 8: NACE 71.1 and 71.2 and sub-groups 1,2,3: NACE 64.1 and 64.2).

Whereas demand for services under A) comes exclusively from firms and businesses and not from individuals, demand for services under B) comes not only from firms but also from individuals.

In addition, it is not clear why some distributive services for mixed users, such as "renting of automobiles" (NACE 71.1), are included in the group, but similar services for mixed users are omitted, such as "sale of motor vehicles" (NACE 50) or "real estate activities" (NACE 70); nor why it includes "renting of (other) machinery and equipment" (NACE 71.3), which includes investment goods for firms, but does not exclude other distributive services aimed exclusively at firms such as wholesale trade (NACE 51).

Similarly, it is not clear why the postal and telecommunications services are included, but not other network services for mixed users (firms and individuals) such as transport (NACE 60, 61, 62 and 63) or the activities of financial intermediation or insurance (NACE 65, 66 and 67), which are all organized as networks and to a large extent are managed by public undertakings such as the postal and communications services.

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(5) Cf. Document SO/90/05-06 EN, June 1990. This refers to a different NACE coding system from that contained in Document 138, which has been used in the present study.



50. In general, with the exception of the services intended exclusively for individuals and collective services, all the others are used (in some cases exclusively) by firms.

Among these we should distinguish those which have a distributive function (which also belong to renting services) from the others. This gives the following three-column table:

Services to firms

User	Non-distributive	Distributive
Exclusively to firms	72 Computer and related activities 74 Other business activities  71.3 Renting of other machinery and equipment	50 Wholesale trade and commission trade except motor vehicles, etc.
Mixed - firms and individuals	60, 61, 62 Transport 63 Supporting and auxiliary transport activities 64 Post and telecommunication 65 Financial intermediation 66 Insurance intermediation 67 Activities auxiliary to financial intermediation	50 Wholesale and retail trade of motor vehicles, etc. 72 Real estate activities 71.1 Renting of automobiles 71.2 Renting of other transport equipment

51. A strict definition of business services is obtained by taking only the first box in the left-hand column, which comprises non-distributive and non-financial services intended exclusively for firms (NACE 72 and 74).

52. Under business services in the strict sense of the term it is possible to distinguish the following functional sub-groups, regardless of the possibility of changing the NACE classification, as proposed in paragraph <sup>1</sup> 42:

NACE Rev. 1  
(Doc. NACE 138, Lux. 1990)

1. Administration activities	74.11-74.12-74.15
2. Marketing-sales-sales promotion activities	74.13-74.4 (6)
3. Computer and related activities	<sup>72</sup>
4. Human resources activities	74.5 (7)
5. Technical services	74.2-74.3 (8)
6. Business and management activities	74.14
7. Operational activities	74.6-74.7
8. Other business activities	74.8

To this end, however, NACE must contain the missing activities (1,2,3) so as to have the building blocks required.

- 
- (6) With the addition of the supporting activity for sales and sales promotion, not included in NACE.
- (7) With the addition of the activity of training, selection and organization of personnel, not included in NACE.
- (8) With the addition of fashion, styling, design and other technological services, not included in NACE.

**Annex 1****Nomenclature of functions of firms (two-digit)**

1.    Marketing and sales
  - 1.1   Advertising
  - 1.2   Sales
  - 1.3   Marketing
  - 1.2   Sales promotion
  
2.    Administration
  - 2.1   Management control
  - 2.2   Accountancy
  - 2.3   Tax
  - 2.2   Legal matters
  
3.    Financial resources
  - 3.1   Finance
  - 3.2   Insurance
  
4.    Human resources
  - 4.1   Managerial staff
  - 4.2   Executive staff
  
5.    Computer resources
  - 5.1   Hardware
  - 5.2   Software
  
6.    Technical resources
  - 6.1   Architecture, civil engineering, town-planning, transport
  - 6.2   Continuous and discontinuous process engineering
  - 6.3   Materials technology
  - 6.4   Agri-food technology
  - 6.5   Design, styling and fashion

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The first digit indicates the function, the second the sub-function.

The first digit equal to zero indicates all the functions, the second digit equal to zero indicates all the sub-functions relating to the function.

## Annex 2

### Nomenclature of working methods (two-digit)

1. Consultancy or studies
  - 1.1 Consultancy and analysis
  - 1.2 Projects
  - 1.3 Research
2. Organization
  - 2.1 Systems, procedures
  - 2.2 Training
3. Operations
  - 3.1 Standard operations
  - 3.2 Maintenance
4. Monitoring
  - 4.1 Inspections, testing
  - 4.2 Certification operations

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The first digit indicates the mode, the second the sub-mode.

The first digit equal to zero indicates all the modes, the second digit equal to zero indicates all the sub-modes relating to the mode.

**Annex 3****NACE Rev. 1 (four-digit) classification, functions and modes**

Code	NACE Rev.1	Functions and modes	
72	<u>Computer and related services</u>	50	00
72.10	Hardware consultancy	51	10
72.20	Software consultancy	52	10
72.30	Data processing	50	31
72.40	Database activities	50	31
72.50	Maintenance and repair of office, accounting and computing machinery	50	32
72.60	Other computer-related activities	50	-
74	<u>Other business activities</u>		
74.11	Legal activities	24	00
74.12	Accounting, bookkeeping and auditing activities, tax	22/23	00
74.13	Market research and public opinion polling	13	13
74.14	Business and management consultancy services	00	10/20
74.15	Management holding companies	21	00
74.20	Architectural and engineering services	61/62	00
74.30	Technical testing and analysis	63	40
74.40	Advertising	11	00
74.50	Labour recruitment and provision of personnel	40	30
74.60	Investigation and security activities	20	40
74.70	Building cleaning activities	61	31
74.81	Photographic activities	65	31
74.82	Packaging activities	12	31
74.83	Secretarial and translation activities	20	31
74.84	Other business activities	-	-

Annex 4Proposed amendments to the internal classification of activities:74 Other business services (NACE Rev. 1)

New code	Description	Old code	Functions	Modes
74.1	<u>Administration services</u>			
74.11	Legal activities	74.11	24	00
74.12	Accounting, bookkeeping and auditing activities, tax	74.12	22/23	00
74.13	Management holding companies	74.15	21	00
74.2	<u>Technical services</u>			
74.20	Architectural and engineering services and related technical activities	74.20	61/62	00
74.22	Fashion and styling, design and related services	(New)	65	00
74.23	Technical testing and analysis	74.30	63	40
74.24	Other technical services	(New)	63	00
74.3	<u>Business and management consultancy</u>			
74.30	Business and management consultancy services	74.14	16	10
74.4	<u>Marketing/advertising/sales activities</u>			
74.41	Market research and related services	74.13	13	00
74.42	Advertising	74.40	11	00
74.43	Other sales promotion and sales services	(New)	40	30
74.5	<u>Human resources services</u>			
74.51	Labour recruitment and provision of personnel	74.50	40	30
74.52	Training and other human resources activities	(New)	40	10/20/40
74.6	<u>Investigation and security activities</u>	74.6	20	40
74.7	<u>Building cleaning activities</u>	74.7	61	31
74.8	<u>Other business activities n.e.c.</u>	74.8	00	31

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