

**RAMI**  
**associazione per la ricerca artistica musicale in Italia**

Il Manuale di Frascati, strumento OCSE nato negli anni '60 - e periodicamente aggiornato - di indirizzo relativo alla ricerca e sviluppo nei paesi avanzati, propone linee guida di settore che sono globalmente riconosciute come uno standard di riferimento per quanto riguarda definizione, implementazione e organizzazione della ricerca nelle varie discipline in esso normate. L'impatto di questo testo è enorme, dal Manuale di Frascati derivano infatti le politiche condivise di sviluppo della ricerca dei vari stati membri. Le arti non sono mai state contemplate, fino all'ultima revisione del 2015, in cui la grande novità è che per la prima volta le arti, la musica e lo spettacolo trovano pieno riconoscimento come settore autonomo di ricerca e sviluppo, con grande dovizia di indicazioni dedicate al tema, e precisione nel tratteggiare l'ampio spazio di possibile lavoro a partire dalla prospettiva delle competenze artistiche, creative e performative. Considerata l'importanza di questo riconoscimento, e in previsione che lo sviluppo della ricerca in AFAM si andrà sviluppando coerentemente con quanto indicato – e fortemente raccomandato - nel Frascati Manual 2015, vi proponiamo di seguito un estratto delle parti significative che riguardano le arti. A breve pubblicheremo sul sito anche una traduzione italiana non ufficiale per meglio diffonderne i contenuti. (LGC)

**ESTRATTO**

**Citazioni significative per l'implementazione della ricerca nel settore delle arti e della musica**

FRASCATI MANUAL 2015. *Guidelines for Collecting and Reporting Data on Research and Experimental Development*. OECD publishing, Paris.

<http://www.oecd-ilibrary.org/docserver/download/9215001e.pdf?expires=1476018348&id=id&accname=guest&checksum=1EF10462C3396ED41E9572A51401C139>

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2.3 R&D is found in the social sciences, humanities and the arts as well as in the natural sciences and engineering. This manual gives greater emphasis than past editions to the social sciences, humanities and the arts. This requires no changes in the definitions and conventions, but it does require greater attention to the boundaries that define what is and what is not R&D.

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**To be based on original, not obvious, concepts and hypotheses (creative)**

2.17 An R&D project must have as an objective new concepts or ideas that improve on existing knowledge. This excludes from R&D any routine change to products or processes and, therefore, a human input is inherent to creativity in R&D. As a result, an R&D project requires the contribution of a researcher (defined in Chapter 5). One area requiring care in assessment is the arts (Section 2.6): there is creativity, but the other criteria have to be confirmed for the activity to qualify as R&D. While routine activity is excluded from R&D, new methods developed to perform common tasks are included. As an example, data processing is not an R&D activity unless it is part of a project to develop new methods for data processing. Vocational training is excluded from R&D, but new methods to deliver training could be R&D. A new method to fix a problem, developed part of a project, could be R&D if the outcome is original and the other criteria are met.

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**2.22 Table 2.1 provides some practical examples of how R&D can be identified by using the five core criteria.**

**Table 2.1. Examples of questions for identifying R&D projects**

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c. What methods are being used to carry out the project? Methods used in scientific and technological research, as well as in research in the social sciences, humanities and the arts, are accepted provided that they address uncertainty about the project's final outcome. The uncertainty could be about how much time and resources will be needed to achieve the planned goal. The choice of method could be part of the project's creativity and a means of dealing with uncertainty (Creativity and uncertainty).

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**Examples of how to differentiate types of R&D in the social sciences, humanities and the arts**

2.41 Another set of examples can be provided with reference to the social sciences, humanities and the arts where, as discussed above, the blurring of boundaries could affect the distinction between basic and applied research. Examples of experimental development in these domains can also be difficult to identify, because of the role played by other domains in the natural sciences and

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engineering. It should be noted that these examples must also meet the basic criteria identified in this chapter to be considered as R&D.

●● In economics and business:

- ❖ Basic research: A review of theories on the factors determining regional disparities in economic growth. Economists conducting abstract research in economic theory that focuses on whether a natural equilibrium exists in a market economy. The development of new risk theories.
- ❖ Applied research: The analysis of a specific regional case for the purpose of developing government policies. Economists investigating the properties of an auction mechanism that could be relevant to auctioning the telecommunications spectrum. The investigation of new types of insurance contracts to cover new market risks or new types of savings instruments.
- ❖ Experimental development: The development of operational models, based upon statistical evidence, to design economic policy tools to allow a region to catch up in terms of growth. The development by a national telecommunications authority of a method for auctioning the telecommunications spectrum. The development of a new method to manage an investment fund is experimental development as long as there is sufficient evidence of novelty.

●● In education:

- ❖ Basic research: Analysis of the environmental determinants of learning ability. The investigation by researchers of the effect of different types of manipulatives on the way first graders learn mathematical strategy by changing manipulatives and then measuring what students have learned through standardised instruments
- ❖ Applied research: The comparative evaluation of national education programmes aimed at reducing the learning gap experienced by disadvantaged communities. The study by researchers of the implementation of a specific math curriculum to determine what teachers needed to know to implement the curriculum successfully.
- ❖ Experimental development: The development of tests for selecting which educational programme should be used for children with specific needs. The development and testing (in a classroom) of software and support tools, based on fieldwork, to improve mathematics cognition for student special education. ●● In

social and economic geography: ❖ Basic research: Researchers seek to understand the fundamental dynamics of spatial interactions. ❖ Applied research: A research study analyses the spatial-temporal patterns in the transmission and diffusion of an infectious disease outbreak.

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- In history:
  - ❖ Basic research: Historians study the history and human impact of glacial outburst floods in a country.
  - ❖ Applied research: Historians examine past societies' responses to catastrophic natural events (e.g. floods, droughts, epidemics) in order to understand how contemporary society might better respond to global climate change.
  - ❖ Experimental development: Using previous research findings, historians design a new museum exhibit on the adaptations of past human societies to environmental changes; this serves as a prototype for other museums and educational installations.
- In language/linguistics:
  - ❖ Basic research: Linguists study how different languages interact as they come into contact with one another.
  - ❖ Applied research: Speech therapists examine the governing neurology of languages and how humans acquire language skills.
  - ❖ Experimental development: Linguists develop a tool for diagnosing autism in children based on their language acquisition, retention and use of signs.
- In music:
  - ❖ Basic research: Researchers develop a transformational theory that provides a framework for understanding musical events not as a collection of objects that have particular relationships to each other but as a series of transformational operations applied to the basic material of the work.
  - ❖ Applied research: Researchers use historical records and the techniques of experimental archaeology to recreate an ancient and long-disappeared musical instrument and to determine how it would have been constructed, how it was played and the types of sounds it would have produced.
  - ❖ Experimental development: Music educators and theorists work to produce new pedagogical materials based on new discoveries in neuroscience that change our understanding of how humans process new sounds and information.

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**Table 2.2. Fields of R&D classification**

<b>Broad classification</b>	<b>Second-level classification</b>
6. Humanities and the arts	6.1 History and archaeology 6.2 Languages and literature 6.3 Philosophy, ethics and religion 6.4 Arts (arts, history of arts, performing arts, music) 6.5 Other humanities

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**R&D and artistic creation**

2.64 Design sometimes tends to be characterised by the use of artistic methods. This is another potential area of overlap. In order to address the discussion of R&D and artistic creation, it can be useful to make a distinction between research for the arts, research on the arts and artistic expression.

**Research for the arts**

2.65 Research for the arts consists in developing goods and services to meet the expressive needs of artists and performers. There are enterprises in this line of business that devote a significant part of their resources to R&D in this area. For instance, they engage in experimental development to produce new electronic musical instruments to suit the needs of a group of performers. Other types of R&D organisations (mainly universities and technical institutes) also play a role in exploring new technologies for performance art (to improve audio/ video quality, for instance). The activity aimed at supporting the introduction of new organisational or marketing methods by art institutions (advertising, financial management, etc.) may qualify as R&D, but caution should be exercised in making this decision. This area of R&D performance is already covered by existing data collection.

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#### **Research on the arts (studies about the artistic expression)**

2.66 Basic or applied research contributes to most of the studies of the arts (musicology, art history, theatre studies, media studies, literature, etc.). Public research institutions could have a role in selected research domains (as some relevant research infrastructures – like libraries, archives, etc. – are often attached to arts institutions, such as museums, theatres, etc.). As far as preservation and restoration activities are concerned (if not to be included in the group above), it is recommended to identify the providers of such technical services as R&D performers (employing researchers, publishing scientific works, etc.). This area of R&D performance is largely covered by existing data collection.

#### **Artistic expression versus research**

2.67 Artistic performance is normally excluded from R&D. Artistic performances fail the novelty test of R&D as they are looking for a new expression, rather than for new knowledge. Also, the reproducibility criterion (how to transfer the additional knowledge potentially produced) is not met. As a consequence, arts colleges and university arts departments cannot be assumed to perform R&D without additional supporting evidence. The existence of artists attending courses in such institutions is not relevant to the R&D measurement. Higher education institutions have, nevertheless, to be evaluated on a case-by-case basis if they grant a doctoral degree to an artist as a result of artistic performances. The recommendation is to adopt an “institutional” approach and only to take account of artistic practice recognised as R&D by higher education institutions as potential R&D (to be further used by data collectors).

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#### **R&D in service activities**

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2.83 Identifying R&D is more difficult in service activities than in goods-producing industries because the R&D is not necessarily specialised in a field of research, although there may be specialisation reflecting the market served. R&D covers several areas: technology-related R&D, and R&D in the social sciences, humanities and arts, including R&D relating to the knowledge of behaviour and organisations. This last notion is already included in the criterion “knowledge of humankind, culture and society”, but it is particularly important in the case of service activities. Because these forms of R&D may be combined in a project, it is important to define clearly the various forms of R&D involved. If the analysis is confined to technology-related R&D, for example, R&D may be understated. In many cases, R&D findings in service industries may be part of service delivery activities.

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#### **R&D in the social sciences, humanities and the arts**

2.102 In the definition of R&D in this manual, the phrase “knowledge of humankind, culture and society” includes the social sciences, humanities and the arts. Also for the social sciences, humanities and arts, the use of clear criteria to identify R&D, such as having an appreciable element of novelty and dealing with uncertainty, is extremely helpful for defining the boundary between R&D and related (routine) scientific activities as well as non-scientific investigations. The

conceptual, methodological and empirical components of the project concerned have to be taken into consideration to identify an R&D activity.

2.103 In the social sciences – e.g. sociology, economics or political science – data collection activities, e.g. statistical surveys on specific populations, can only be included in R&D if they are undertaken as an integral part of a specific research project or for the benefit of a specific research project. Therefore, projects of a routine nature, in which social scientists bring established social science methodologies, principles and models to bear on a particular problem, cannot be classified as research. For example, a project using labour force survey data to identify long-term unemployment trends should exclude the data collection activity as an R&D component (as those data are regularly collected by using an existing methodology). On the other hand, a casestudy on unemployment in a specific region, if applying original techniques in interviewing survey respondents could include such data collection in its R&D effort. From a broader perspective, to the extent that the social sciences are using empirical data, the same guidelines have to be applied as for the natural sciences (although excluding the testing of their results on an experimental basis).

2.104 For the humanities, the same approach could be used as for the arts (studies on literature, music, visual arts, theatre, dance and other performing arts). Their historical or comparative nature can be pointed out as well as the relevant role played by universities or other specialised institutions in developing scientific guidelines to be followed by the scholars in the field.

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2.105 The broad range of sources used in history, archaeology, languages and legal studies and the different methods used by researchers are possible areas of R&D. The adoption of the five core criteria for R&D should be recommended, mainly with reference to novelty, creativity and transferability and/or reproducibility.

2.106 In the fields of philosophy and religious studies, for instance, historical and comparative studies undertaken in line with current academic standards are included in R&D. As a general rule cannot be given, beyond that of strictly applying the R&D criteria, the use of the institutional approach is also recommended (i.e. potentially excluding research-related activities on philosophy and religion conducted outside recognised research institutions).

2.107 In conclusion, research in the humanities and the arts can be included in R&D in so far as their own internal requirements for identifying the “scientific” nature of such research are met.

Additional practical guidelines follow.

- Context of performance (institutional criterion). Research carried out within the framework of a university or an officially recognised research institution (including museums, libraries, etc.) can be included in R&D.
- Adoption of recognised procedures. Research requires formalisation, and this applies to the humanities. Research activities could be identified and their results made available to the scientific community through their publication in scientific journals. In so far as these features can be identified and a scientific community is actively developing some rules to identify its own members, the same rules can be applied for identifying R&D performance.
- Research in the humanities may deal with the systematic development of theories or interpretations of texts, events, material remains or any other available evidence. By convention, research activities carried out outside the fields of R&D listed in Chapter 3 have to be excluded from R&D.

### **R&D and traditional knowledge**

2.108 A cross-cutting research domain with some overlap with the humanities and medicine is that dealing with “traditional knowledge”. Traditional knowledge has been defined to be a largely tacit “cumulative body of knowledge, know-how, practices and representations maintained and developed by peoples with extended histories of interaction with the natural environment [...] a cultural complex that encompasses language, naming and classification systems, resource use practices, ritual, spirituality and worldview” (ICSU and UNESCO, 2002: 9). The issue of the relationship between traditional knowledge and R&D is particularly relevant in developing

countries where the existence of a valuable stock of traditional knowledge can be a powerful incentive for domestic and foreign organisations to set up R&D activities.

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### **The institutional approach to R&D statistics**

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3.8 The **institutional approach** to R&D statistics is aimed at the collection and presentation of statistics based on the generic attributes of the institutional units. In the institutional sector approach, a given unit's resources dedicated to R&D are attributed to the sector into which it is classified, while flows relate to transactions between the statistical unit and third parties. In the functional distribution approach, a given unit's resources are distributed using information provided by the relevant reporting unit(s). Examples of functional distributions are the type of R&D (basic research, applied research and experimental development), the product field (or industry served), the field of R&D (e.g. natural sciences, engineering and technology, social sciences and humanities and arts) and the socio-economic objective (e.g. economic development, health, environment, education). Institutional and functional approaches can often be combined, for example, when only large organisations are requested to break down their activities on a functional basis that may or may not match their own internal structure, while for burden reasons no such breakdown may be requested from smaller and simpler units, thus relying in such cases on the institutional classification. Functional distribution approaches can be used to address the potential mismatch between reporting units and intended statistical units when the reporting units encompass the statistical units of interest.

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3.45 Because of the great diversity of R&D domains covered within institutional units, the relevance of using this classification for grouping institutional units is limited to Frascati institutional sectors in which R&D-performing units are fundamentally focused on the production of knowledge-based outputs, especially the Higher education sector, and to statistical units that are defined at a relatively disaggregated level. In those cases, the first level of the classification comprising six fields of R&D should be used:

- natural sciences
- engineering and technology
- medical sciences
- agricultural sciences
- social sciences
- humanities and the arts.

3.46 Specific guidance on the use of this classification is provided separately for each sector, and principally from a functional distribution perspective. The more detailed classification is found online in annex guidance to this manual available at <http://oe.cd/frascati>.

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### **R&D in the social sciences, humanities and the arts**

9.50 A large share of R&D in the social sciences and humanities is being conducted in the Higher education sector. Guidelines on the boundaries and exclusions related to R&D in the social sciences and the humanities are given in Chapter 2.

9.51 Much of the research on, for and in the arts is also conducted in the Higher education sector. Chapter 2 provides guidelines on what should be considered as R&D in the field of the arts.

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### **Definition and identification of R&D in GBARD**

12.10 The definition of R&D is given in Chapter 2. As already noted, the SNA 2008 and GFS 2014 – the core statistical frameworks for government and public sectors statistics – use the definitions in the previous edition of this manual, which are essentially the same as those in Chapter 2 of this edition.

12.11 Basic research, applied research and experimental development are all included but are not identified separately for the purposes of GBARD compilation. Likewise, the analysis for budgetary data on R&D covers natural sciences and engineering and social sciences, humanities and the arts.

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**Table 12.1. Classification of socioeconomic objectives for GBARD Based on NABS 2007**

Chapter number	NABS categories for socioeconomic objectives of R&D	Recommended subcategories
13	General advancement of knowledge: R&D financed from other sources than GUF	13.1 R&D related to Natural Sciences 13.2 R&D related to Engineering Sciences 13.3 R&D related to Medical Sciences 13.4 R&D related to Agricultural Sciences 13.5 R&D related to Social Sciences 13.6 R&D related to Humanities <sup>1</sup>

Note: Recommended classification subject to potential revision and update.

<sup>1</sup> The Arts are to be included. Source: Eurostat. Accessed from <http://oe.cd/seo>.