

Frascati Manual - 2015 Edition

Guidelines for Collecting and Reporting Data on Research and Experimental Development

<http://oe.cd/frascati>

As the internationally recognised methodology for collecting and using R&D statistics, the OECD's Frascati Manual is an essential tool for statisticians and science and innovation policy makers worldwide. Now in its 7th edition, it includes definitions of basic concepts, data collection guidelines, and classifications for compiling R&D statistics. This updated edition contains improved guidelines reflecting recent changes in the way R&D takes place and is funded and the wider use of R&D statistics and definitions. It includes new chapters dedicated to the practical aspects of collecting R&D data in different sectors, and provides new guidance on capturing various types of public support for R&D such as tax incentives.

Why an OECD manual on R&D statistics?

The outcomes from R&D transform people's lives, societies and natural environment. Policy analysts and decision makers require data documenting the level and nature of human and financial resources that different countries, regions, firms and institutions devote to such endeavour, as a first step towards learning how best to direct them towards desired objectives. Supporting these evidence needs through internationally comparable statistics, using a shared approach and a common language, is the main objective of the OECD's *Frascati Manual*.

Although the manual is a technical document, it is a cornerstone of OECD efforts to increase our understanding of the role played by science, technology and innovation and to analyse national systems of research and innovation. Furthermore, by providing internationally-accepted definitions of R&D and classifications, the manual contributes to intergovernmental discussions on good practices for science and technology policies.

The Measurement of Scientific, Technological and Innovation Activities

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How is R&D defined?

Research and experimental development (R&D) comprise creative and systematic work undertaken in order to increase the stock of knowledge – including knowledge of humankind, culture and society – and to devise new applications of available knowledge.

The manual provides a set of five core criteria to help survey practitioners and respondents identify whether their activities are consistent with this general definition.

Main novelties in the 7th edition

This new revision contains a number of major novelties compared to the previous 2002 edition. It:

- Integrates *ad hoc* guidance on measuring R&D in developing countries into the core manual.
- Extends guidance on the use of surveys to other sources, such as administrative records.
- Goes beyond the use of R&D data for macro indicators and is conceived to facilitate the production and use of R&D microdata for the analysis of R&D dynamics and impacts.
- Addresses the role of external contributors (e.g. self-employed, volunteers and students).
- Contains four new sector-specific chapters on practical issues arising in data collection.
- Provides brand new guidance on measuring R&D globalisation in business and elsewhere.
- Describes different types of public support for R&D and includes guidance on how to measure the cost of R&D tax incentives for the first time.
- Aligns definitions and classification schemes with general statistical guidance and incorporates specific classifications.
- Facilitates the new (SNA2008) treatment of R&D as productive capital in National Accounts.
- Includes specific guidance on improving the timeliness of key indicators.

Finding R&D data and related guidance

The Frascati Manual provides the basis upon which the OECD collects and publishes statistics on R&D expenditures and personnel for all OECD countries and major economies. Key R&D indicators are published at www.oecd.org/sti/msti.htm and detailed R&D data can be accessed from www.oecd.org/sti/rds. Links to annexes, databases and other information can be found in the manual's main page <http://oe.cd/frascati>. A community space for statistical practitioners is available at <http://oe.cd/frascati-community> for discussing manual implementation experiences.

Next steps

Following the launch of the manual, its implementation requires the redesign of OECD data collection methods and databases as agreed within NESTI. Countries will progressively implement changes to their surveys and methods. To support this process, a number of Frascati Manual seminars will be scheduled in different countries.

NESTI is also currently embarking on the revision of its guidelines on measuring innovation, the *Oslo Manual* – see <http://oe.cd/oslo-manual> for details.

Did you know?

This manual owes its name to the Italian town where, in 1962, the OECD Working Party of National Experts on Science and Technology Indicators (NESTI) first agreed on a common approach to measure and report statistics on R&D. The manual has been revised on six occasions to address new challenges and take into account emerging user interests. The 6th edition of 2002 has been formally translated into 15 languages.

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How was the manual revised?

The *Frascati Manual* is based on the experience gained from collecting R&D statistics in both OECD and non-member countries. It is a result of the collective work of NESTI, involving more than 120 experts from nearly 40 countries and international organisations. The revision took place over two years and was supported by an open online consultation and discussions with various other OECD committees. The manual has been endorsed by the OECD Committee for Scientific and Technological Policy (CSTP) and the OECD Committee for Statistics and Statistical Policy (CSSP).