

## **Government of the Czech Republic**







# **DEFINITIONS OF TYPES OF RESULTS**

# Appendix No 4

Methodology for Evaluating Research Organisations and Research, Development and Innovation Purpose-Tied Aid Programmes

approved under Czech Government Resolution No 107 of 8 February 2017

Approved under Czech Government Resolution No 837 of 29 November 2017.

#### **DEFINITIONS OF TYPES OF RESULTS**

In point II/4 of Government Resolution No 107 of 8 February 2017 on the Methodology for Evaluating Research Organisations and Research, Development and Innovation Purpose-Tied Aid Programmes, the government instructed the Deputy Prime Minister for Science, Research and Innovation to revise, in collaboration with providers and by 31 October 2017, the definitions of the types of results listed in point I/2 of the resolution, and to submit them to the Government as an appendix to the Methodology with effect from 1 January 2018.

The following definitions come into effect on 1 January 2018.

The individual types are listed as defined for the Information System for Research, Experimental Development and Innovations<sup>1</sup> – the RIR database.

For all types of results<sup>2</sup> produced by research activities for which aid was provided under Act No 130/2002 on public funding of research, experimental development and innovations, amending certain acts (the Research, Experimental Development and Innovation Aid Act), as amended ("Act"), it holds that they can only be attributed to the research activity in question if they were demonstrably and unquestionably produced by such research activity. Nor can a result whose creator did not contribute to the work be attributed to the research activity in question. At provider level the types of results can be parameterised for the needs of a specific purpose-tied aid programme, or the purposes of the provider's own evaluation.

Only a result that exists, i.e. one which the provider has physically checked or checked in another verifiable way as actually existing, can be entered in the RIR and evaluated. There is also the principle that any proposer may only enter a result from a given research activity in the RIR once, and it must be designated by the type of result that best characterises it.

The peer review process is an appraisal procedure for scientific work (or work in general) before it is published, and comments by the reviewers (peers) are incorporated into the final published version. The requirement for peer review applies to results of type J, B, C and D. A peer-reviewed publication (book, proceedings, article, journal) means that when an article (book, chapter) is submitted to the editorial board (publisher), a report is produced, and on the basis of this report the author amends his or her work as necessary, and only then is it published.

<sup>&</sup>lt;sup>1</sup> Section 30 of Act No 130/2002 on public funding of research, experimental development and innovations, amending certain acts (the Research, Experimental Development and Innovation Aid Act), as amended, and Government Regulation No 397/2009 on the information system for research, experimental development and innovations.

<sup>&</sup>lt;sup>2</sup> An R&D&I result can generally be understood as any finding in the course of research work that has elements of novelty and originality. However, in this document "result" is used in accordance with Section 2(2)(i) of Act No 130/2002 on public funding of research, experimental development and innovations, amending certain acts (the Research, Experimental Development and Innovation Aid Act), as amended, for an R&D&I output that represents a particular entity and has a particular form, and can be described and entered into the database.

Decisions on whether results are the outcome of R&D&I work are based on the Frascati Manual,<sup>3</sup> which lists five core criteria:

- novel
- creative
- uncertain
- systematic
- reproducible

In some cases, the Frascati Manual highlights the difficulty of appraising work from an R&D&I perspective, and it provides additional criteria for e.g. identifying the presence of R&D&I in service activities (part 2.85):

- · links with public research laboratories,
- the involvement of staff with doctoral degrees or doctoral students,
- the publication of research findings in scientific journals, the organisation of scientific conferences or involvement in scientific reviews

<sup>&</sup>lt;sup>3</sup> Parts 2.4. and 2.85 of OECD (2015), *Frascati Manual 2015: Guidelines for Collecting and Reporting Data on Research and Experimental Development*, The Measurement of Scientific, Technological and Innovation Activities, OECD Publishing, Paris. DOI: <a href="http://dx.doi.org/10.1787/9789264239012-en">http://dx.doi.org/10.1787/9789264239012-en</a>

Result Code	Result Title	Description
Category I -	- Publication F	Results
		Definition:
J <sub>imp</sub> Jsc J <sub>oth</sub>	peer- reviewed scientific article	A "peer-reviewed scientific article" is an original article or review published in a scientific periodical (journal), regardless of the country in which it is published, that presents the results of original research and was written by an author, or a team of which the author was a member, with a stated affiliation to a Czech research organisation. This refers to coherent texts that are structured according to the requirements of the periodical's publishers for the structure of scientific articles (most often with a summary, introduction, materials and methods, results, discussion, conclusion and references) with sources cited in the standard way, e.g. with footnotes and endnotes. In the contents of a scientific periodical, articles of this kind are generally grouped with other original articles or reviews.
		A scientific periodical is a peer-reviewed scientific journal with a scientific editorial board that is published or was published periodically, has only been assigned an ISSN or e-ISSN, and is published in printed, printed and electronic or solely electronic form, including on-line publishing.
		Peer-reviewed scientific articles in scientific periodicals (journals) are divided into:
		<b>J</b> <sub>imp</sub> – an original article or review in a peer-reviewed scientific periodical that is included in the Web of Science <sup>4</sup> database ("WoS") as an "Article", "Review" or "Letter";
		<b>J</b> <sub>SC</sub> – an original article or review in a peer-reviewed scientific periodical that is included in the SCOPUS⁵ database as an "Article", "Review" or "Letter";
		J <sub>oth</sub> – an original article or review in a peer-reviewed scientific periodical that does not come under either of the above categories. The "List of Peer-Reviewed Periodicals Without an Impact Factor" is not used here. What is crucial is whether a peer-reviewed scientific article satisfies the general requirements for a result of this kind, and has undergone a proper peer-review process (see p. 2).
		The following are not scientific periodicals (journals):
		<ul> <li>periodicals that have neither an ISSN nor an e-ISSN;</li> <li>periodicals or extraordinary periodicals published with an ISSN and simultaneously with an ISBN in book form (such cases often arise with conference papers listed in the WoS and SCOPUS databases. Results published in a source of this kind come under type D);</li> </ul>

<sup>&</sup>lt;sup>4</sup> http://webofknowledge.com, 30. 10. 2017 <sup>5</sup> https://www.scopus.com, 30. 10. 2017

- periodicals that have no peer-review process for articles, or have not made this process public;
- a periodical in the nature of daily newspapers, i.e. the press, special "popular science" supplements in newspapers, weekly magazines, specialist newspapers (e.g. *Zdravotnické noviny* [for the healthcare sector], *Hospodářské noviny*, [the economy], *Učitelské noviny* [for the teaching profession], etc.);
- popular educational periodicals aimed at laypeople and published by commercial publishing houses, public and other institutions;
- popular science journals aimed at the broader scientific community, e.g. published by scientific societies or institutions, etc., for the purpose of promoting and popularising science;
- periodicals published by trade unions, political parties, interest groups, etc.;
- corporate and insurance periodicals;
- forms and newsletters;
- special editions of journals in which conference papers are published.

#### The following are not scientific articles:

- reprints, abstracts, etc., even if published in scientific periodicals, and articles of an informative or popularising type on research results;
- editorial matter, corrections, reviews, research and summaries;
- "pre-print" articles, i.e. versions of articles published prior to peer review;
- for J<sub>oth</sub>, articles that have fewer than two pages of text excluding photographs, graphs, maps, illustrations, tables and advertisements.

## book

В

#### **Definition:**

A "book" presents the original results of research conducted by the book's author or a team of which the author was a member. A book is a non-periodical scientific publication with at least 50 pages of text excluding photographs, illustrations, maps, etc., published in print or electronic form and appraised (reviewed) in the form of a reader's report by at least one generally recognised expert in the field, who must not come from the same workplace as the book's author(s). The book addresses a precisely defined problem in a particular field of knowledge and contains a formulation of an identifiable and recognised methodology (even monographs focusing more on applications practical must have explicitly formulated methodological bases) and/or the formulation of a new methodology backed by theoretical research in the field in question to date. The formal attributes of a book are references to the literature in the text, a list of literature used (e.g. with footnotes, endnotes and bibliography) and a summary in at least one world language. The book has been assigned an ISBN or ISMN code. The entire book has been created by a single team of authors (regardless of what proportion individual team members have contributed to the contents), even if each chapter in the book is the work of a different author. A book can be e.g. a monograph; an encyclopaedia and

lexicon; a critical edition of sources; a critical edition of artistic material (music, fine art, etc.) accompanied by a study; published master's, doctoral, habilitation and dissertation theses that satisfy the parameters for a book and are not based on  $J_{imp},\,J_{SC}$  or  $J_{oth}$  articles; a critical translation of a demanding philosophical, historical, philological or similar text; a bilingual scientific dictionary or scientific explanatory dictionary; a critical exhibition catalogue, etc., provided the aforementioned formal criteria are satisfied. For a multivolume scientific monograph, each volume can be entered in the RIR provided each individual volume satisfies the requisite criteria and has been issued as a separate publication with its own ISBN. If a book is entered in the RIR as a type B result, its chapters cannot be entered as type C results by the same proposer.

## The following are not books:

- books that do not have an ISBN or ISMN code;
- schoolbooks (i.e. textbooks, study guides) that are not the result of original pedagogical research;
- expert evaluations and opinions, studies, translations, manuals, information and promotional publications, yearbooks (other than those that satisfy the requirements for a book), annual reports or similar periodical reports;
- published master's, doctoral, habilitation and dissertation theses based on  $J_{imp}$ ,  $J_{SC}$  or  $J_{oth}$  articles and furnished with a commentary and an ISBN code;
- standard bilingual dictionaries;
- special-purpose summaries of scientific works (e.g. from a single workplace);
- printed or electronically published summaries of abstracts or addresses from conferences;
- methodological manuals, catalogues and norms;
- proceedings (individual papers from proceedings are type D results);
- fiction, popular non-fiction, e.g. travel books, plays;
- select bibliographies, annual reports, speeches, reports, collections of students' work for competitions, tourist guidebooks;
- commercial translations from foreign languages;
- memoirs, information materials; popular monographs, biographies and autobiographies; final reports from projects published as monographs.

If a book is published in the Czech Republic, a legal deposit must be registered in the National Library of the Czech Republic. For "book" results published abroad, verification takes the form of a Digital Object Identifier (DOI) or Open Access (OA), traceability in an internationally recognised catalogue, or verification by means of a loan from a reporting institution confirmed by the provider.

# c chapter in a book

## **Definition:**

A "chapter or chapters in a book" (provided the book satisfies the definition of a type B result) is used if the whole book only has an editor, or if the author is listed in the book (on the title page or the

		verso of the title page) as a co-author (albeit with a minority of the contents) and is a member of a team of authors with the principal authors clearly designated. However, the chapter must list the individual author or authors.
		If a book is entered in the RIR as a type B result, its chapters cannot be entered as type C results by the same proposer.
		Definition:
D	paper in proceedings	A "paper in proceedings" presents the original results of research conducted by the book's author or a team of which the author was a member. A paper has the usual structure for a scholarly work, with sources cited in the usual way (not an abstract), and is published in proceedings.
		Proceedings are a peer-reviewed non-periodical publication published for a conference, seminar or symposium. Proceedings contain individual papers by various authors that generally concern common or related themes; proceedings have been assigned an ISBN or ISSN code, or both.
		A "paper in proceedings" has at least two pages excluding photographs, graphs, maps, illustrations, tables and advertisements.
		A result of this type is registered:
		<ul> <li>a) in the SCOPUS database under Sources as Book Series or Conference Proceedings, and it has been assigned an ISBN or ISSN code or both.</li> </ul>
		<ul> <li>b) in the WoS database under the Conference Proceedings Citation Index, and it has been assigned an ISBN or ISSN code or both.</li> </ul>
		<ul> <li>c) an article in a special edition of a journal that is registered in one of the aforementioned databases and is devoted to publishing conference papers.</li> </ul>
		The following are not papers in proceedings:
		<ul> <li>occasional collections of scholarly work (e.g. from a single workplace, for an anniversary, celebrations of its founding and anniversary conferences);</li> <li>collected and published abstracts;</li> <li>articles and papers, etc. already published elsewhere.</li> </ul>
Category II	– Non-Publicat	ion Results
		Definition:
Р	patent	A "patent" is an invention where one of the following institutions has granted an exclusive right for its use:
		<ul> <li>for a Czech patent, the Industrial Property Office, under the terms set out in Act No 527/1990 on inventions and rationalisation proposals, as amended;</li> <li>for a European patent, the European Patent Office, under the terms set out in the Convention on the Grant of European Patents;</li> </ul>

 for other patents, the competent patent office, under the terms set out under the relevant legal system.

The result is a patent granted to protect the original results of research and development conducted by the creator or a team of which the creator was a member. A result of this kind can be considered to have been realised at the moment notification of the granting of the patent is published in the relevant patent register, or when a deed certifying the granting of the patent becomes final.

## The following are not patents:

- patent applications at any phase in proceedings to grant a patent;
- a national validation of a European patent;
- protection granted by the competent national patent office for a non-technical solution, e.g. a plant variety, a design or software.

## Note on type P results:

Each year the proposer enters data into the RIR on the use of the patent (whether the patent was enforced or not, licences sold, etc.), which are subject to international checks. After five years a patent will automatically be listed as not enforced, unless the proposer can demonstrate otherwise.

<u> </u>		, , ,
		<u>Definition:</u>
Z <sub>pilot</sub>	pilot plant	A "pilot plant" result verifies the original results of research and development conducted by the creator or a team of which the creator was a member. This refers to a facility that has verified the functionality of laboratory procedures on a larger scale, i.e. in trial or pilot operation, and it is used to verify properties, activities, failure rate and other parameters before the new system is brought into operation in manufacturing or services. Trial or pilot operation also serves to reveal and remedy any errors and satisfy additional requirements for the technical or organisational aspects of a design. A pilot plant must include a design or structure for a facility that allows planned production to proceed on a larger scale (mass or serial production). A condition is the novelty and uniqueness of the entire process, including the facility (e.g. plant and machinery, etc.), demonstrated by the technical documentation for the result.
		A pilot plant is not:
		<ul> <li>an existing or already functioning installation where only minor technological or system components, including control or management components, have been modified, extended or improved (innovated).</li> </ul>
		Definition:
Z <sub>tech</sub>	verified technology	A "verified technology" result implements the original results of research and development conducted by the creator or a team of which the creator was a member. This is similar to a pilot plant, but here novelty applies to the process (technology) used in manufacturing or services. A condition is the testing (verification) of the technology, supported by a report on verification and its direct application, demonstrated by the concluding of a contractual relationship or, if the result's owner is also its implementer, by demonstrating the anticipated economic benefits. Verified

		technology can refer e.g. to a result which is the subject of an agreement on the application of the result concluded between the result's creator (beneficiary or another party) and the result's user. A condition is technical documentation for the result.
		Definition:
Z <sub>var</sub>	variety	A "variety" result implements the original results of research and development conducted by the creator or a team of which the creator was a member. This refers to a result in which a new plant variety has been cultivated where protection for the rights has been granted under Act No 408/2000 on the protection of plant variety rights, amending Act No 92/1996 on plant varieties, seed and planting material of cultivated plants, as amended.
		The following are not varieties:
		<ul> <li>registrations for putting varieties into circulation;</li> <li>applications at any phase in proceedings to grant the protection of rights.</li> </ul>
		Definition:
Z <sub>bre</sub>	breed	A "breed" result implements the original results of research and development conducted by the creator or a team of which the creator was a member. The result is a new breed for which a new herdbook has been introduced under Section 9 of Act No 154/2000 on the breeding and registration of livestock, amending certain acts (the Breeding Act), as amended.
		A breed is not:
		<ul> <li>an application at any phase in proceedings to grant the protection of rights.</li> </ul>

## Note on type Z results:

A condition for the including type Z – pilot plant and type Z – verified technology results in the R&D&I Information System is the concluding of an agreement on the use or application of the result between its owner (i.e. the beneficiary or another party) and the user (implementer), other than in cases where the result is used by the owner; the application of variety and breed results is established by their registration in the appropriate register or herdbook. The price or economic parameters under which the result will be implemented will be stated (i.e. the price that will be stated as the selling price in an agreement on the use or application of the result).

		Definition:
Futil	utility model	A "utility model" result implements the original results of research and development conducted by the creator or a team of which the creator was a member. A utility model is a technical solution that is new, goes beyond mere professional skills, and has industrial application.
		Only technical solutions that the Industrial Property Office has recorded in its utility models register can be considered utility models. The details of the application and registration process, and the period for which a utility model is valid, are set out in Act No 478/1992 on utility models, as amended. As the Industrial Property Office does not examine whether a utility model's novelty, uniqueness and creativity make it eligible for protection, the condition is that the utility model's technical solution means it has

		industrial application, i.e. whether it can be repeatedly used in economic activity (see Section 5 of Act No 478/1992).
		<u>Definition:</u>
F <sub>ind</sub>	industrial design	An "industrial design" result implements the original results of research and development conducted by the creator or a team of which the creator was a member. Industrial design refers to a product's appearance, in particular the lines, contours, colours, shape, structure and materials of the product itself or its ornamentation. This refers to a product's design, i.e. its visual qualities rather than its technology or construction. A product is an industrially-made or handcrafted three or two-dimensional object, i.e. an industrially-made or handcrafted object, including the components for assembling it into a single product, its packaging and finish, and any graphic symbol or typographic character.
		This refers to a result that is protected under Act No 207/2000 on the protection of industrial designs, amending Act No 527/1990 on inventions and rationalisation proposals, as amended.
		The following are not industrial designs:
		<ul> <li>computer programs;</li> <li>graphic designs that are unrelated to specific products.</li> <li>results that do not satisfy the additional criteria in Part II of the Frascati Manual.</li> </ul>

## Note on type F results:

Data on the registration of designs (designating the competent authority, the date of certification and the certificate number) must be entered into the RIR.

	<u> </u>	
		Definition:
G <sub>prot</sub>	prototype	A "prototype" result implements the original results of research and development conducted by the creator or a team of which the creator was a member. This refers to a functional industrial product produced as a single item to verify the design features of the product or a part thereof in practice or in a testing facility immediately prior to introducing pilot, serial or mass production. A condition is the novelty and uniqueness of the prototype's design, demonstrated by the technical documentation for the result.
		Definition:
G <sub>func</sub>	functioning sample	A "functioning sample" result implements the original results of research and development conducted by the creator or a team of which the creator was a member. This is similar to a prototype; the only difference is that the development or production of a functioning sample is not immediately followed by pilot, serial or mass production. It refers e.g. to the design, development and subsequent production of a single unique instrument or piece of equipment, or the creation of a biological sample with a demonstrably novel, unique and economically significant quality. A condition is the novelty and uniqueness of the functioning sample's design, demonstrated by the technical documentation for the result.

		Definition:
H <sub>leg</sub>	results projected into legislation and standards	Results projected into legislation and standards implement the original results of research and development conducted by the originator or a team of which the originator was a member. This refers to a result whose content will be (without amendments to the essence of the design, excluding e.g. mandatory technical adaptations) subject to the consultation or approval process for the legislation (or a part thereof) or standard, and every effort will be made to satisfy the definition, with the simultaneous existence of a result that can projected into a piece of legislation or a standard. For applying a result as a piece of legislation, this must be Czech or international legislation. For applying a result as a standard, a condition is that the standard is issued by a standards institute that is authorised to issue standards (mandatory or advisory), regardless whether this is a national standard (a Czech standard or a standard of another state, with national jurisdiction) or a supranational (European) standard.  Results projected into legislation and standards are not:
		translations or edited translations of standards.  Posterities as
H <sub>nonleg</sub>	results projected into guidelines and other non- legislative regulations that are mandatory under the relevant provider	Definition:  Results projected into guidelines and other non-legislative regulations that are mandatory under the relevant provider implement the original results of research and development conducted by the originator or a team of which the originator was a member. This refers to a result which is used (adopted without amendments to the essence of the design, excluding e.g. technical adaptations) to draft the final wording of the guideline or non-legislative regulation, and every effort will be made to satisfy the definition, with the simultaneous existence of a result that can projected into the guideline or regulation in question, which the relevant provider or another competent body can declare generally binding within its jurisdiction (this does not concern a methodology), and it is published in the relevant ministry's official bulletin, or in the published collection of regulations and methodological guidelines issued by the relevant central authority, including in electronic form.
H <sub>strat</sub>	results projected into approved strategic and policy documents by state or public adminis- tration bodies	Definition:  Results projected into approved strategic and policy documents by state or public administration bodies implement the original results of research and development conducted by the originator or a team of which the originator was a member. This refers to a result demonstrably used when drafting approved strategies and polices, including policies and programmes for research, development and innovation, regardless whether they are at national, regional or supranational level.

## Note on type H results:

Data on the number and full title of the legal regulation, standard, guideline or non-legislative regulation (or the numbers of government resolutions) must be entered into the RIR.

		Definition:
N <sub>metS</sub> N <sub>metC</sub> N <sub>metA</sub>	methodology	A "methodology" result is a set of recommended practices and procedures approved, certified or accredited by the competent public administration body or, if there is no such body, by an authorised certification (accreditation) body that conducts certification (accreditation) on the basis of international agreements, standards or similar documents, with clearly defined and published powers for specific areas, fields or sectors and with clearly defined users, such that these users can be assured that adhering to the methodology means that their outputs will be demonstrable, reproducible and reliable. A "methodology" result implements the original results of research and development conducted by the creator or a team of which the creator was a member.
		A result of this type includes:
		a) $N_{\text{mets}}$ methodologies approved by the competent state administration body for the matter in question;
		b) N <sub>metC</sub> methodologies certified by the authorised body;
		c) $\textbf{N}_{\text{metA}}$ methodologies and procedures accredited by the authorised body.
		A methodology is not:
		A methodology generated on the basis of aid provided by a body other than the competent body authorised to conduct approval, certification or accreditation under the general regulations, if the competent body or authorised certification (accreditation) body conducting certification (accreditation) on the basis of international agreements, standards or similar documents did not set out in writing the obligation to appraise the resulting methodology before aid was provided.
		Definition:
N <sub>med</sub>	medical procedure	A "medical procedure" result implements the original results of research and development conducted by the creator or a team of which the creator was a member. This refers to a result that is a verified complex of activities in human or veterinary medicine, encompassing a description of a condition and its causes, and on the basis of this knowledge a treatment method is prescribed to restore the organism's homeostasis. A medical procedure must be verified in clinical trials.
		<u>Definition:</u>
N <sub>con</sub>	conservation procedure	A "conservation procedure" result implements the original results of research and development conducted by the creator or a team of which the creator was a member. A conservation procedure is a verified set of activities or materials and technologies leading to the salvaging, preservation or restoration of a part of the cultural heritage. A conservation procedure includes a description of the problem, an account of the causes for the worsening of the condition or the threat to the existence of this part of the cultural heritage, and on the basis of this knowledge a restoration method is prescribed.

		A conservation procedure must be verified in practice, recommended by the National Heritage Institute on the basis of two independent evaluations, and approved by the Ministry of Culture.
		If the creator of the conservation procedure is the National Heritage Institute, the procedure must be verified in practice and approved by the Ministry of Culture.
		<u>Definition:</u>
N <sub>map</sub>	specialised map	A "specialised map" result implements the original results of research and development conducted by the creator or a team of which the creator was a member. A specialised map is a synthesis of point, two-dimensional, three-dimensional and if applicable temporal information (4D), obtained cartographically or from a geographic information system (GIS), and their contexts, revealed by researching a specific locality or three-dimensional site. A specialised map is an analytical or synthesised map with special relevance, and it is the result of an analysis or synthesis of spatial data that is visualised cartographically. A map may be the result of advanced processing of data layers in geographic information systems, but it must generate new data with new knowledge.
		A specialised map may be e.g. a map of climate zones, a traffic intensity map, a map showing the distribution of harmful organisms, a geological map, maps of heritage sites, archaeological sites, nature conservation areas or industrial sites, large-scale maps or plans of relatively small locations (e.g. heritage sites, industrial or archaeological sites and parks), including comprehensive documentation of architectural, historical, town-planning or landscape surveys, but also of e.g. biological and other natural phenomena, historical or social contexts, etc.
		This category also includes special 3D static models and 4D dynamic models with specialist content that add a third dimension to the data depicted (e.g. a 3D model of the geological structure of a locality and a 4D model of geological changes over time). 3D and 4D models are the outcome of advanced processing of data layers using specialised 3D and 4D modelling software.
		If a set of individual specialised maps is published in a single volume, the individual maps are not each considered a separate result.
		For a specialised map to be recognised as a result, it must be approved by the provider.
		The following are not specialised maps:
		<ul> <li>state maps;</li> <li>conventional topographical, cadastral or geographical maps;</li> <li>thematic maps for schools or the general public (e.g. road maps, hiking maps, fishing maps, etc.).</li> </ul>

## Note on type N results – methodology:

A methodology must have internationally recognised certification (accreditation) from the competent certification (accreditation) body, or certification from the competent public administration body for the field in which the methodology or procedure is applied. If approval or certification (accreditation) is granted by the competent public administration body, i.e. the provider, such approval/certification/accreditation must be granted on the basis of two independent evaluations. The approval/certification/accreditation process may be governed by a specific regulation of the competent approval/certification/accreditation body.

## Note on type N results - medical procedure:

A medical procedure result must be published in the Ministry of Health Bulletin (for medical procedures in human medicine) or approved by the competent authority, e.g. the State Veterinary Administration (for medical procedures in veterinary medicine).

## Note on type N results – conservation procedure:

A conservation procedure result must be recommended by the National Heritage Institute and the Ministry of Culture on the basis of two independent evaluations, other than in cases where the National Heritage Institute is the conservation procedure's creator.

P	coftware

## **Definition:**

"Software" is a program or set of instructions serving to ensure the functioning of a computer or other hardware, including machinery and equipment and their interactions with their surroundings. A "software" result implements the original results of research and development conducted by the author or a team of which the author was a member. A condition is the novelty and uniqueness of the software's design, demonstrated by the result's technical documentation. Software must embody scientific and/or technological advances that result in an increase in the stock of knowledge. However, the use of software for a new application or purpose does not in itself constitute an advance.

## Software can be e.g.:

- the development of new operating systems or languages;
- the design and implementation of new search engines based on original technologies;
- the effort to resolve conflicts within hardware or software based on the process of re-engineering a system or a network;
- the creation of new or more efficient algorithms based on new techniques;
- the creation of new and original encryption or security techniques.

#### Software is not:

- the development of business application software and information systems using known methods and existing software tools;
- adding user functionality to existing application programs (including basic data entry functionalities);
- the creation of websites or software using existing tools;

<sup>&</sup>lt;sup>6</sup> Part 2.70., p. 66 of OECD (2015), Frascati Manual 2015: Guidelines for Collecting and Reporting Data on Research and Experimental Development, The Measurement of Scientific, Technological and Innovation Activities, OECD Publishing, Paris. DOI: <a href="http://dx.doi.org/10.1787/9789264239012-en">http://dx.doi.org/10.1787/9789264239012-en</a>

		<ul> <li>the use of standard methods of encryption, security verification and data integrity testing;</li> <li>the customisation of a product for a particular use, unless during this process knowledge is added that significantly improves the base program;</li> <li>routine debugging of existing systems and programs, unless this is done prior to the end of the experimental development process.</li> </ul>
		Definition:
S	specialised public database	A "specialised public database" result incudes structured and publicly accessible data on original results from research and development, structured on the basis of research and development conducted by the creator or a team of which the creator was a member. It allows structured information on a particular phenomenon to be made available as a source for further research, or for the end user.
		A specialised public database is not:
		<ul> <li>a result that does not satisfy the condition of public availability (internal records and databases that only serve the result's owner);</li> <li>a database containing data that is already known or publicly</li> </ul>
		accessible.
V	research report	Definition:  A "research report" result implements the original result of research, development and innovation conducted by the author or a team of which the author was a member. This is a result that has been realised in accordance with Section 4(g) of Government Regulation No 397/2009, containing classified information in accordance with specific legislation (e.g. Act No 148/1998 on the protection of classified information, amending certain acts, as amended; Act No 412/2005 on the protection of classified information and security eligibility, as amended; Section 27 of Act No 240/2000 on crisis management).
		Definition:
V <sub>summ</sub>	summary research report	A summary research report $V_{\text{summ}}$ may be one of the results required from an applied research project with purpose-tied or contractual funding. A summary research report summarises the project's results and comments on how far the project achieved its objectives; it must have been requested by the provider, or the client must have confirmed the receipt of the result.
		<u>Definition:</u>
A	audiovisual work	An "audiovisual work" result implements the original result of research, development and innovation conducted by the creator or a team of which the creator was a member. This refers to electronic documents (i.e. documents that are only published in a form readable by the relevant technical equipment, e.g. documents only issued on CD or DVD, documents only available on the internet or as a web presentation), other than results published in electronic

		form that satisfy the condition for inclusion under categories J, B or D.
		The following are not audiovisual works:
		<ul> <li>research reports published in electronic form;</li> <li>an annual, periodical or final report (or the same under a different name) on a project (including a grant project) or other research activity, which is submitted to the provider and published in electronic form.</li> </ul>
		•
E	holding an exhibition	Definition: The organising (holding) of an exhibition can only be considered an R&D&I result if the presence of R&D&I can be identified in the activities on whose basis the information or facts presented originated. The result implements the original results of research and development conducted by the author or a team of which the author was a member.
		A type E result is not:
		<ul> <li>an exhibition generally dedicated to the given topic that does not include the results produced by the creator or a team of which the creator was a member, but instead summarises broad knowledge in the field in question, or e.g. is solely for educational purposes.</li> </ul>
		Definition:
E <sub>crit</sub>	holding an exhibition with a critical catalogue	An "exhibition with a critical catalogue" result refers to the public presentation of the original results of research, development and innovation conducted by the author or a team of which the author was a member. The aid provider for the research activity in question may set one or more criteria for recognising the exhibition, and providers may further parametrise the integral parts of the result in line with their needs.
		A condition for the recognition of an "exhibition with a critical catalogue" result is the publication of a critical exhibition catalogue that satisfies all the particulars for a "book" result and is realised and approved as such; this result cannot therefore be recognised without a critical catalogue (book) prior to the publication of such catalogue.
		Definition:
M	holding a conference	The organising (holding) of a conference, seminar or symposium can only be considered an R&D&I result if in addition to the five core criteria for identifying the R&D&I activities on whose basis the information presented originated, any of the additional criteria in Part II of the Frascati Manual are satisfied.
		The conference must include a public presentation of the original results of research and development conducted by the originator or a team of which the originator was a member.
		For the purpose of classifying R&D&I result types, the following are not conferences:
		<ul> <li>a conference without the scientists' participation;</li> </ul>

		<ul> <li>a conference where neither the originator nor a team of which the originator was a member has an active contribution;</li> <li>a conference where original R&amp;D&amp;I results are not presented;</li> <li>a seminar or lecture / set of seminars and lectures presenting knowledge in the field in question for a lay public, or for education.</li> </ul>
		<u>Definition:</u>
W	holding a workshop	The organising (holding) of a workshop can only be considered an R&D&I result if in addition to the five core criteria for identifying the R&D&I activities on whose basis the information presented originated, any of the additional criteria in Part II of the Frascati Manual are satisfied.
		The workshop must include a public presentation of the original results of research and development conducted by the originator or a team of which the originator was a member.
		Definition:
O	other results	"Other results" are results that do not satisfy the criteria for the types of results defined above. Such a result implements the original results produced by activities satisfying the Frascati Manual's requirements for activities in R&D&I that were conducted by the originator or a team of which the originator was a member.
		Research and development results that are formally (parametrically) defined by the aid provider for the research activity in question can also be recorded as "other results", e.g. results that are the output from artistic research.

## Note on all types of results:

A provider may refine the conditions for the definitions of the types of results and set out the parameters that a result must satisfy in order for the provider to recognise it. If a condition for the recognition of a result is its certification (accreditation) or approval by the provider, the provider may set out additional requirements in a separate regulation.

# RESULTS VERIFIABILITY CRITERIA

Result Type	Criterion	Exclusion Criterion (Description)	Verification Method
	Truthfulness under Section 12(1) of the Act for each decisive criterion for the individual result types	the information is untrue	listed below for the individual result types
	<b>Description</b> under Section 32(3) of the Act	the information is not given, or the description has fewer than 64 characters (including spaces)	description in the requisite scope
	Existence of the result (e.g. a J <sub>oth</sub> article has been published in the specified periodical – a photocopy of the published article; an agreement has been concluded for the use of the result, etc.)	the result does not exist	verification by the provider
Applicable to all result types <sup>7</sup>	Year of the application of a result  if the result relates to a specific research activity (Central Register of R&D Projects, Central Register of R&D Activities), whether the stated year does not precede the year in which R&D work began	the application year precedes the year in which R&D work began	searching the relevant database (R&D&I Information System), verification by the provider  SW algorithm for comparing RIR, CEP and CEA data fields
	The result is submitted by an author employed by the proposer i.e. a "domestic author" (if the proposer's name is listed in a language	another or an incorrect affiliation is listed for the	verification by the provider
	other than Czech, this must be a relevant translation of the official name)	result's author	searching the relevant database
J – article in a in a scientific	Existence and correctness of an ISSN	wrong check digit <sup>8</sup>	SW algorithm, numerical check

Including data on contract research.
 Exceptions are recorded and checked separately.

Result Type	Criterion	Exclusion Criterion (Description)	Verification Method
periodical (journal)	Inclusion in WoS or SCOPUS databases	the periodical is not listed or the result has not been assigned a WoSID <sup>9</sup> or SCOPUS EID	SW algorithm, searching the relevant database
	Number of pages (minimum = 2)  (for J <sub>oth</sub> results)	fewer than 2 pages	SW algorithm, verification by the provider
	The requisite attribute is stated for J <sub>imp</sub> and J <sub>SC</sub> results	the attribute is not an Article, Review or Letter	SW algorithm, searching the relevant database
	Existence and correctness of an ISBN	wrong check digit <sup>10</sup>	SW algorithm, numerical check
	Number of pages (minimum = 50)	fewer than 50 pages	SW algorithm
B – book	Delivery of legal deposits in accordance with Section 3(1) of Act No 37/1995 on non-periodical publications, as amended by Act No 320/2002, to the National Library of the Czech Republic (only applies to books published in the Czech Republic)	non-existence of the ISBN in the National Library's catalogue or, for books published outside the Czech Republic, in an internationally recognised catalogue or a Digital Object Identifier (DOI) or Open Access	National Library database books published outside the Czech Republic: filling in the mandatory fields, records in an internationally recognised catalogue, or verification by the provider in a loan from the reporting institution
	Expertise – if results are challenged, whether the book satisfies the definition of a result, or possibly an expert check by the RDI Council's relevant scientific and advisory body of whether the book satisfies the definition	the book does not satisfy the definition of a result	potential appraisal by the RDI Council's scientific and advisory bodies
D – paper in proceedings	Existence and correctness of an ISBN or ISSN	wrong check digit <sup>11</sup>	SW algorithm, numerical check

<sup>&</sup>lt;sup>9</sup> Accession Number,

http://apps.webofknowledge.com/full\_record.do?product=WOS&search\_mode=GeneralSearch&qid=
1&SID=P2cNFIWMYIf36VdfbYB&page=1&doc=1, 30. 10. 2017

Exceptions are recorded and checked separately.

Exceptions are recorded and checked separately.

Result Type	Criterion	Exclusion Criterion (Description)	Verification Method
	Record of the result in a database SCOPUS or WoS	the publication is not listed in SCOPUS or WoS	SW algorithm, searching the relevant database
	Number of pages (minimum = 2)	fewer than 2 pages	SW algorithm, verification by the provider
	Decision number (not application number)	no decision number stated or recorded	searching the relevant database,
P – patent	Internet address for the patent office that granted the patent	incorrect or no internet address for the patent office	verification by the provider
	The result is a pilot plant / verified technology	the description of the result's technical parameters in the RIR does not describe the result as a process intended for use in manufacturing and services	SW algorithm, verification by the provider
	An agreement on the licensed or other use of the result has been concluded with a specific party, or the result is used by the owner	NO is entered in the data field	
Z – pilot plant,	Expertise – if results are challenged, whether the pilot plant / verified technology satisfies the definition of a result	the result does not satisfy the definition	potential appraisal by the RDI Council's scientific and advisory bodies, result checked by the provider
verified technology	Can an agreement on the use of the result be concluded between the beneficiary and the party implementing the pilot plant or verified technology in manufacturing?	no economic parameters have been entered in the description of the result's economic parameters in the RIR	completed data fields
	Have a description and the technical parameters been stated?	RIR description and technical parameters for the result – mandatory data fields	completed data fields

Result Type	Criterion	Exclusion Criterion (Description)	Verification Method
Z – variety	Granting of protection for the rights (Act No 408/2000 on the protection of plant variety rights, amending Act No 92/1996 on plant varieties, seed and planting material of cultivated plants, as amended; not the application date or number	data not recorded in the Central Institute for Supervising and Testing in Agriculture or the Central Institute for Supervising and Testing in Agriculture has only recorded the registration of the variety for circulation	verification in the Central Institute for Supervising and Testing in Agriculture database, verification by the provider
	The <b>result title</b> is identical to the variety's name in the Central Institute for Supervising and Testing in Agriculture database	data does not correspond to the variety's name in the Central Institute for Supervising and Testing in Agriculture database	
Z – breed	Decision number not application number	not recorded in the relevant database	verification in the relevant database, verification by the provider
F – utility model	Does the result have industrial application?	verification by the provider	verification in the relevant database,
F – industrial design	Decision number, not application number	not recorded in the database of the competent patent office	verification by the provider
	Has the result been applied after verifying the design features in practice or in a testing facility prior to introducing serial or mass production?	the description of the result's technical parameters in the RIR does not state that the result has been verified for production	verification by the
G – prototype	Has an agreement been concluded with a specific party for the licensed or other use of the result? Can the prototype be brought into serial production?	NO is entered in the data field	provider
	Can an agreement be concluded on the use of the result between the beneficiary and the party implementing serial or mass production?	no economic parameters have been entered in the description of the result's economic parameters in the RIR	verification by the provider

Result Type	Criterion	Exclusion Criterion (Description)	Verification Method
G – functioning sample	Has the result been applied after verifying the design features in practice or in a testing facility, and on the basis of this verification has a unique instrument or piece of laboratory equipment, etc., been produced?	the description of the result's technical parameters in the RIR does not state that the result has been produced on the basis of verifying (testing) its design features	completed data field, verification by the provider
	Has an agreement been concluded with a specific party for the licensed or other use of the result? Is there a physical result or just a design?	NO is entered in the data field verification by the provider	
H – results projected into legislation and standards	Application = publishing in the Collection of Laws, or for ČSN Application = publishing the standard	the RIR numerical identification does not give the legislation number, or the legislation number is not listed in the Collection of Laws,  or  the RIR numerical identification does not give the ČSN, or the stated ČSN is not included in the standards institute's database	searching the Ministry of the Interior's Collection of Laws database, or searching the relevant ČSN database
H – results projected into guidelines and other non- legislative regulations that are mandatory under the relevant provider	Application = publishing in the official bulletin of the provider or another competent authority	the RIR numerical identification does not include any identification of the publishing of the non-legislative regulation in the relevant ministry's official bulletin or its electronic version	searching the relevant ministry database, verification by the provider
H – results projected into approved strategic and policy documents by state or public administration bodies	Application = publishing (e.g. on the web) following approval by the government or another competent authority	the RIR numerical identification does not include any identification of the approval and publishing of a strategic or policy document	searching the link given, verification by the provider

Result Type	Criterion	Exclusion Criterion (Description)	Verification Method
N – methodology, conservation procedure	Pata field for identification  ref. no of the approval/certification/ accreditation body	the RIR does not list the reference number	verification by the provider
N – medical	Human medicine: the medical procedure has been published in the Ministry of Health Bulletin	the RIR does not identify the Ministry of Health Bulletin	searching the relevant database, verification by the provider
procedure	Veterinary medicine:	the RIR does not list the number of the decision on certification of the medical procedure by the State Veterinary Administration	searching the relevant database, verification by the provider
N – specialised map	Data field for identification ref. no of the approval body and any other requirements the provider may have	the RIR does not list the approval body's reference number	verification by the provider
R – software	Public availability of the result – availability of a description of the result's functionality and the licence terms for its use	RIR states the condition of the need to acquire a licence	completed data field, verification by the provider
	Approval by the competent authority	the RIR does not list the approval body's reference number	verification by the provider
S – specialised public database	Public availability of the result	the RIR does not have a functioning link to the result	verification by the provider
	Any other requirements the provider may have		verification by the provider

Result Type	Criterion	Exclusion Criterion (Description)	Verification Method
V – research report	Delivery using the prescribed method for classified information (see Act No 148/1998 on the protection of classified information, amending certain acts, as amended; Act No 412/2005 on the protection of classified information and security eligibility, as amended; Section 27 of Act No 240/2000 on crisis management)	the result was not delivered via the provider's confidential registry	verification by a qualified member of staff
V – summary research report	The provider has requested the report, or the client has confirmed the receipt of the result  or  Application = publishing (e.g. on the web) by the provider or another competent authority	NO is entered in the relevant field in the RIR, or no link to the publication	completed data field, following the link given, verification by the provider
E – holding an exhibition E <sub>crit</sub> – holding an exhibition with a critical catalogue	The exhibition presents original scientific / research information and additional criteria in Part II of the Frascati Manual are satisfied and for E <sub>crit</sub> there is a critical exhibition catalogue and any other requirements the provider may have (e.g. duration, visitor figures, target group, etc.)	no R&D&I element identified  or  no presentation of the results of research by the author or a team of which the author was a member (i.e. the exhibition is too general)  and  for Ecrit no critical catalogue has been published, or it does not satisfy the parameters for a type B "book" result or  the provider's requirements have not been satisfied	verification by the provider

Result Type	Criterion	Exclusion Criterion (Description)	Verification Method
M – holding a conference	The conference presents original scientific / research information and additional criteria in Part II of the Frascati Manual are satisfied and any other requirements the provider may have (e.g. target group of participants, number of participants, international character of the conference)	no R&D&I element identified or no presentation of the results of research by the originator or a team of which the originator was a member (i.e. the conference is too general) or the provider's requirements have not been satisfied	verification by the provider
W – holding a workshop	The workshop presents original scientific / research information and additional criteria in Part II of the Frascati Manual are satisfied and any other requirements the provider may have (e.g. duration, visitor figures, target group, etc.)	no R&D&I element identified or no presentation of the results of research by the originator or a team of which the originator was a member (i.e. the workshop is too general) or the provider's requirements have not been satisfied	verification by the provider
O – other results	The aid provider can define the criterion / criteria for the research activity in question e.g. the output from artistic research		verification by the provider

## Note:

**SW algorithm** – refers to the use of a computer program to check data against a specific database;

physical verification by the provider – refers to requesting the provider's cooperation with verifying data on the result, i.e. providing the requisite materials on the result within ten working days to facilitate a qualified decision on its inclusion or not in the R&D&I Information System, with reference to Sections 12 and 31(10) of the Act. If the provider does not cooperate, the result will be excluded from the database;

**verification by the provider** – refers to direct physical verification, verification via remote access, and indirect verification, e.g. verifying the existence of results published outside the Czech Republic;

**searching the relevant database** – a cross-check conducted as part of international checks.







