

FAIR dati? FAIR dati. FAIR dati!

Gita Rozenberga

Nacionālais atvērtās piekļuves dienests

Latvijas Universitātes bibliotēka



Īss ieskats pētniecības datu savaldīšanā, 2020. gada 19. oktobrī



Prezentācijā...

Kas ir un nav FAIR?

FAIR principi un to realizēšana

Papildus materiāli

Vadmotīvs:
“tik atvērti, cik iespējams;
tik slēgti, cik nepieciešams”

(As open as possible, as closed as necessary)

Kas ir atvērtie dati?

Atvērtie dati

Brīva pieeja, iespējama
atkārtota izmantošana,
pārveidošana un
izplatīšana

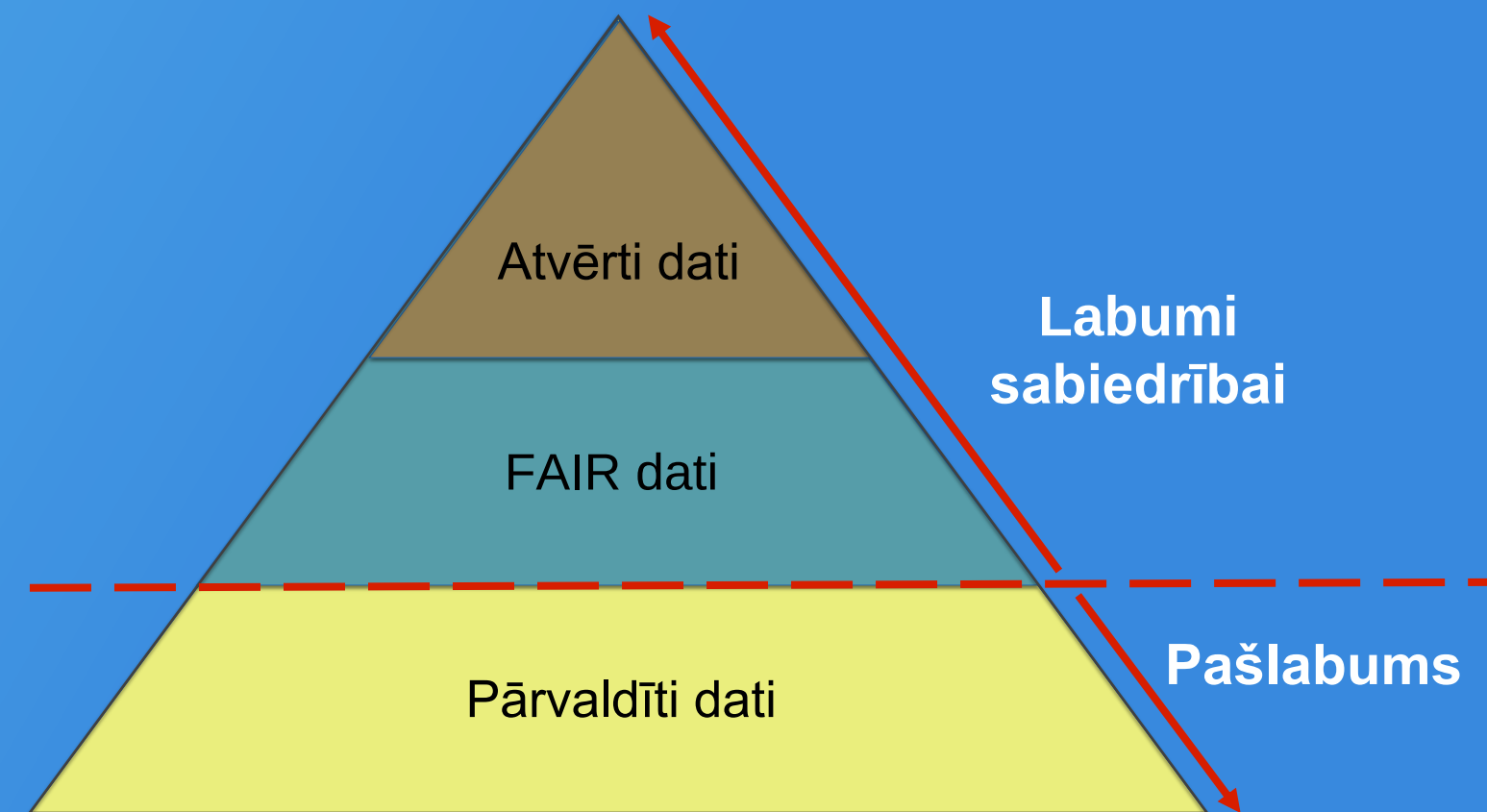
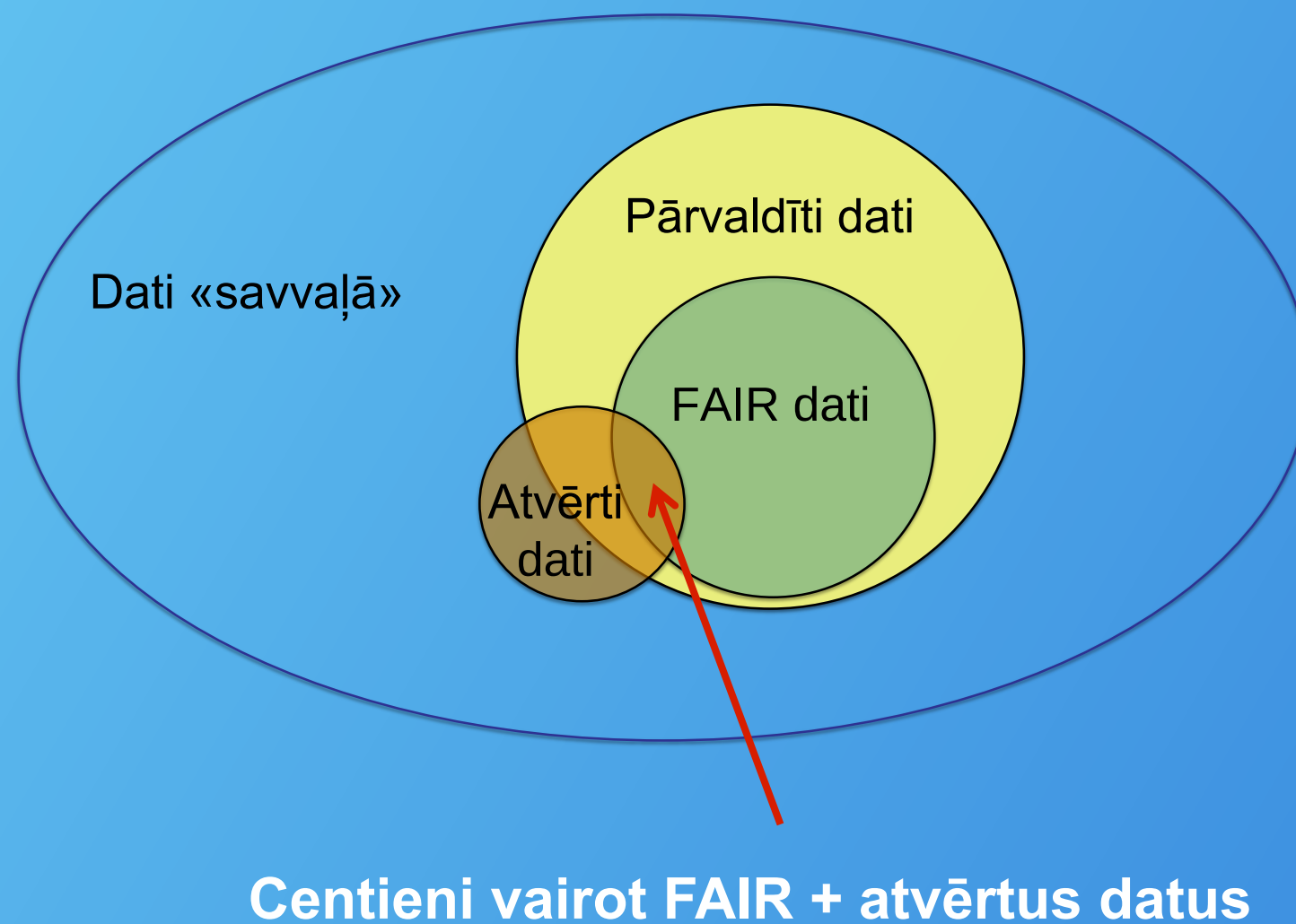
Datu kopīgošana

Ierobežota pieeja
ierobežotam personu
skaitam noteiktos
apstākļos

FAIR un atvērto datu salīdzinājums



Pētniecības dati



Kas ir FAIR?

F_{indable}



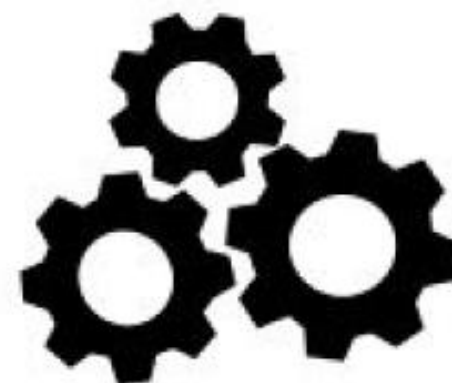
Atrodami

A_{ccessible}



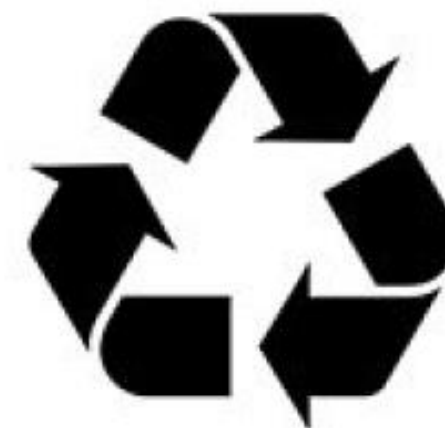
Pieejami

I_{nteroperable}



Savietojami

R_{eusable}



Atkārtoti izmantojami

FAIR 15 principi: Atrodamība

F1: (Meta) datiem ir piešķirts globāli unikāls un nemainīgs identifikators

F2: Dati ir bagātīgi aprakstīti ar metadatiem

F3: Metadati ietver saistīto datu identifikatorus

F4: (Meta) dati ir reģistrēti vai indeksēti pārmeklējamā resursā

FAIR 15 principi: Pieejamība

A1: (Meta) dati ir iegūstami pēc identifikatora caur standartizētiem komunikācijas protokoliem

A1.1: Izmantotai protokols ir atvērts, bezmaksas un globāli implementējams

A1.2: Protokols nodrošina autentifikāciju un autorizāciju nepieciešamības gadījumā

A2: Metadati ir pieejami arī tad, kad dati vairs nav pieejami

FAIR 15 principi: Savietojamība

I1: (Meta) dati izmanto formālu, pieejamu, koplietojamu un plaši pielietojamu valodu zināšanu attēlošanai

I2: (Meta) dati izmanto FAIR atbilstošu vārdnīcu

I3: (Meta) satur kvalitatīvas atsauces uz citiem (meta) datiem

FAIR 15 principi: Atkārtotā izmantošana

R1: (Meta) dati ietvar precīzus un noderīgus atribūtus

R1.1: (Meta) dati tiek izplatīti ar skaidru un pieejamu izmantošanas

R1.2: (Meta) datiem ir skaidri zināma izcelsme

R1.3: (Meta) dati atbilst konkrētā problēmapgabala kopienas
standartiem

FAIR Principles

Compliance



Findability

Resource and its metadata are easy to find by both, humans and computer systems. Basic machine readable descriptive metadata allows the discovery of interesting data sets and services.

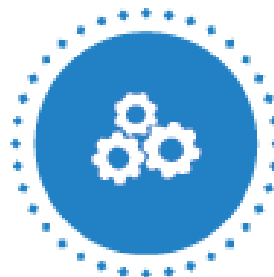
- ✓ F1. Resource is uploaded to a public repository.
- ✓ F2. Metadata are assigned a globally unique and persistent identifier.



Accessibility

Resource and metadata are stored for the long term such that they can be easily accessed and downloaded or locally used by humans and ideally also machines using standard communication protocols.

- ✓ A1. Resource is accessible for download or manipulation by humans and is ideally also machine readable.
- ✓ A2. Publications and data repositories have contingency plans to assure that metadata remain accessible, even when the resource or the repository are no longer available.



Interoperability

Metadata should be ready to be exchanged, interpreted and combined in a (semi)automated way with other data sets by humans as well as computer systems.

- ✓ I1. Resource is uploaded to a repository that is interoperable with other platforms.
- ✓ I2. Repository meta- data schema maps to or implements the CG Core metadata schema.
- ✓ I3. Metadata use standard vocabularies and/or ontologies.

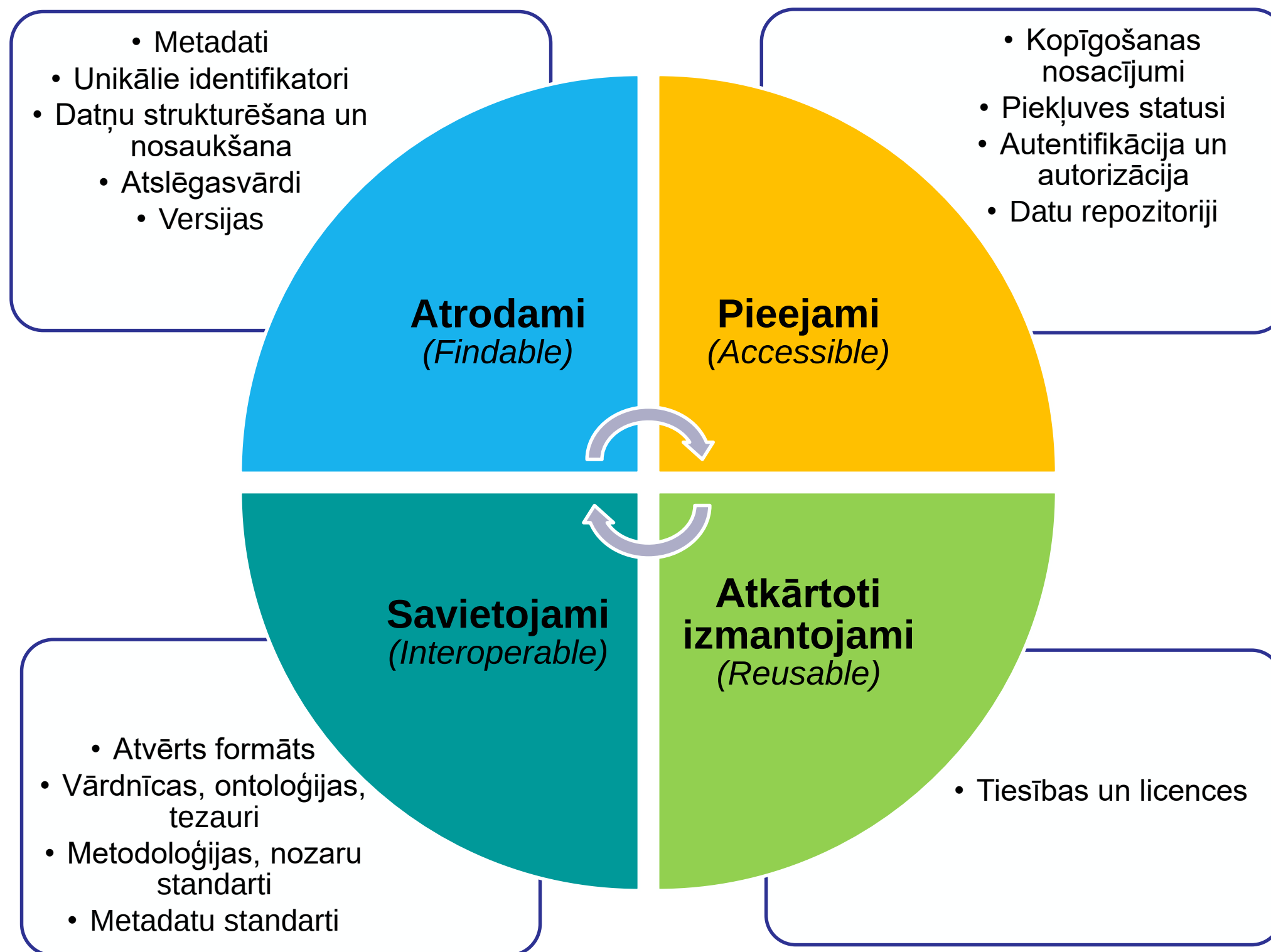


Reusability

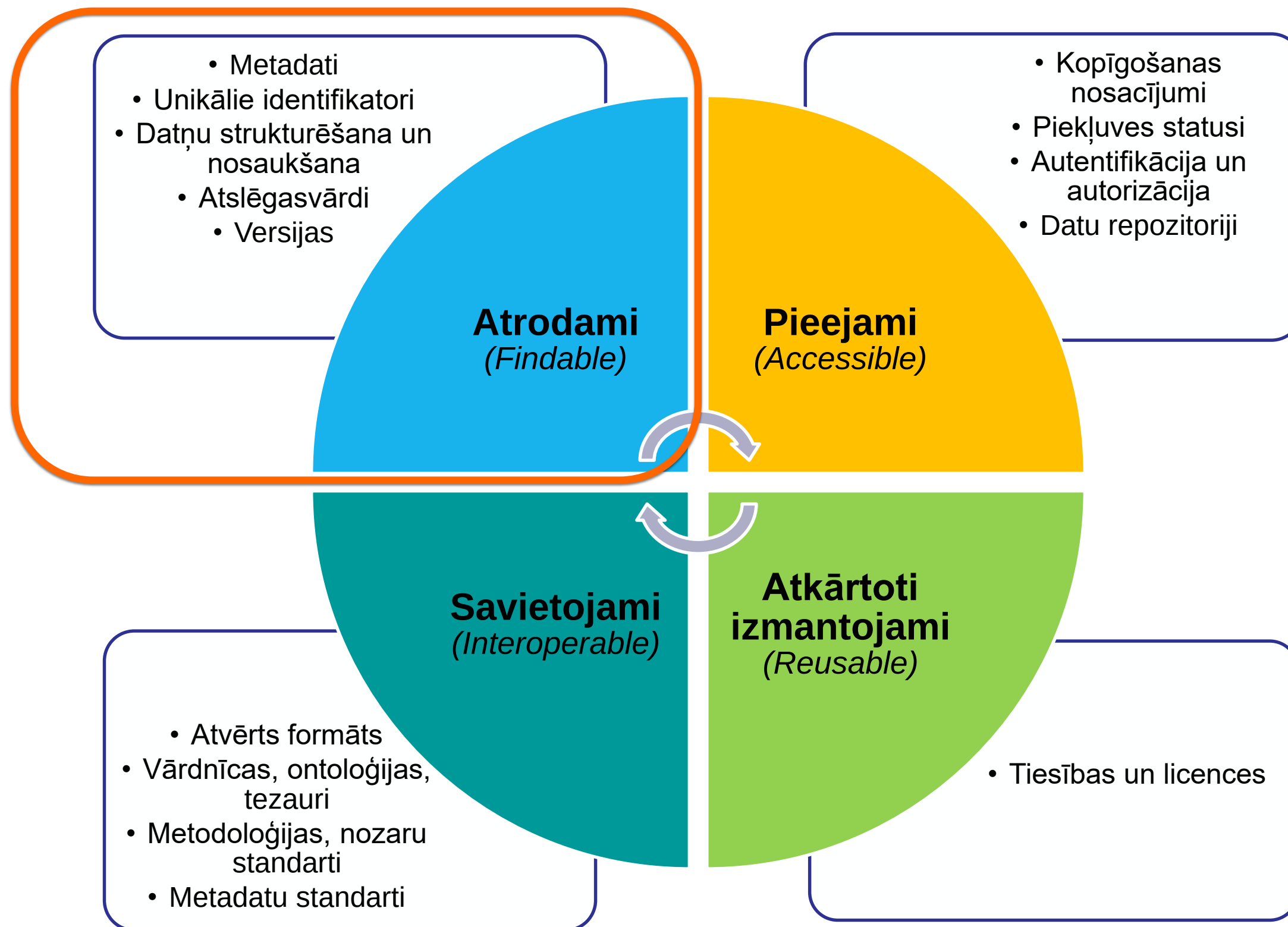
Data and metadata are sufficiently well-described to allow data to be reused in future research, allowing for integration with other compatible data sources. Proper citation must be facilitated, and the conditions under which the data can be used should be clear to machines and humans.

- ✓ R1. Metadata are released with a clear and accessible usage license.
- ✓ R2. Metadata about data and datasets are richly described with a plurality of accurate and relevant attributes.

FAIR principi efektīvai datu pārvaldībai



FAIR principi efektīvai datu pārvaldībai



Unikālie identifikatori

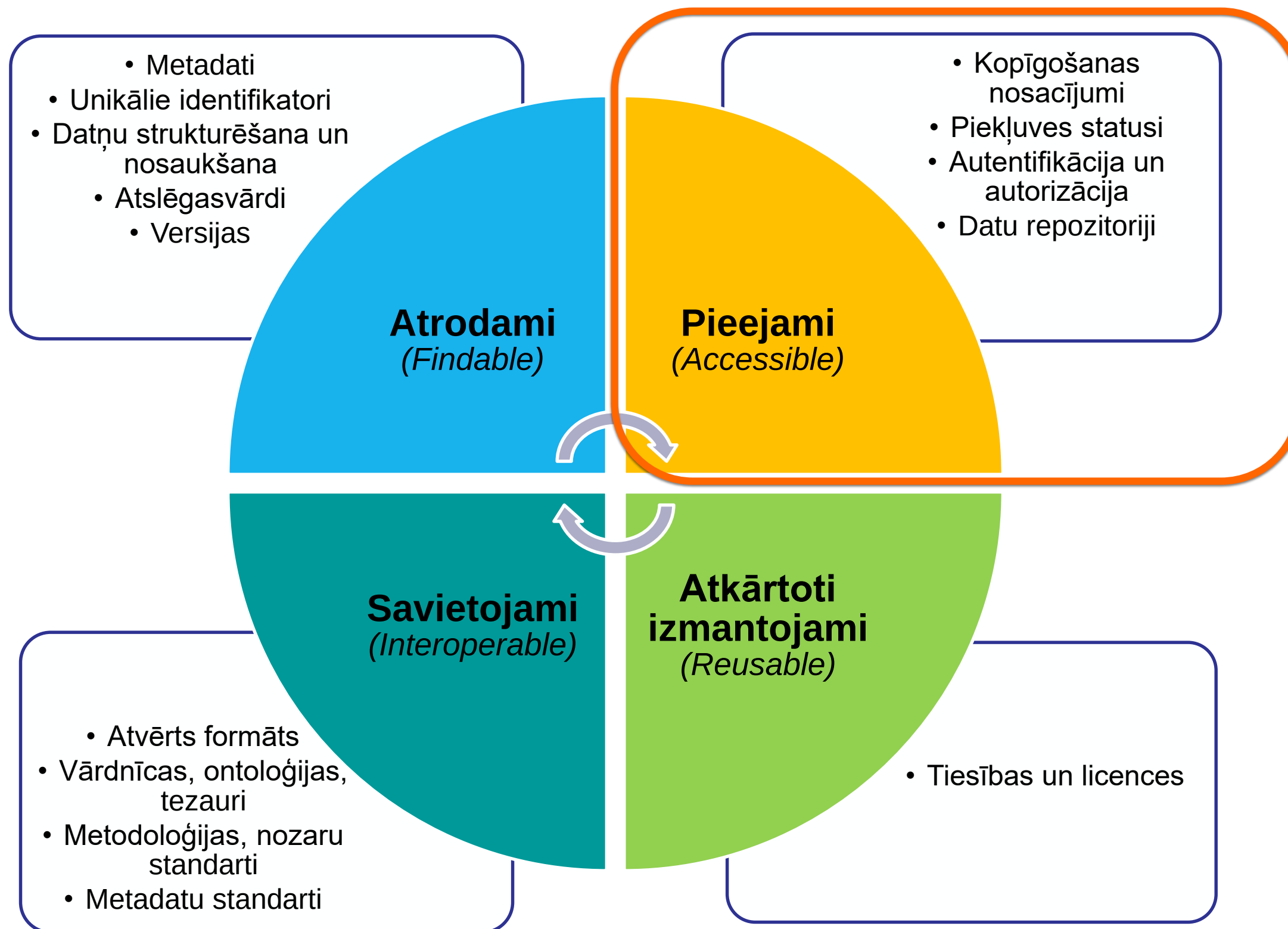
- Unikāls identifikators (*persistent identifier* – *PID*) ir rakstzīmju virkne, kas tiek izmantota, lai unikāli identificētu dokumentu, datni, autora profilu un citus objektus tīmeklī, kā arī, lai atpazītu sasaisti starp šiem objektiem.
- Unikālie identifikatori nodrošina ilgtermiņa un nemainīgu atsauci uz objektu
- Zinātnes informācijas un datu apmaiņai un verificēšanai ir pieejami ir dažādi unikālie identifikatori (piem., ORCID, DOI, ISBN, ISSN)
- Liela daļa repozitoriju piedāvā unikālo identifikatoru pievienošanas pakalpojumu, izveidojot metadatu ierakstus un deponējot zinātniskos rezultātus tajos.

Papildus informācija: **the PID Forum**

Informācijas un diskusiju platforma par unikāliem identifikatoriem

<https://www.pidforum.org/c/knowledge-hub/11>

FAIR principi efektīvai datu pārvaldībai



Datu repozitorija izvēle

Kritēriji:

- Labāk izmantot nozarē specializētu repozitoriju
- Jāpārbauda vai atbilst konkrēto datu vajadzībām (piem., vai uzņem faila formātus, atvērtas un slēgtas pieejas nodrošinājums)
- Noskaidrot, vai piešķir unikālos identifikatorus?
- Noskaidrot, vai repozitorijs ir sertificēts?

Datu repozitoriju izvēle (2)

Autors noskaidro,
vai viņa
pētniecības
nozarē
ir jau izveidots
repozitorijs vai
datu krātuve.
Ja ir, tad ievieto
datus tur

Ja institūcijai,
kuru pārstāv
autors
ir izveidots
institucionālais
repozitorijs,
tad ievieto tur

Ja nozarei un
institūcijai nav
repozitorija, tad
izmanto
bezmaksas
starptautisko
repozitoriju

The Zenodo logo consists of the word "zenodo" in white lowercase letters on a blue rectangular background.

Pārbauda,
ko piedāvā
pētniecisko datu
repozitoriju
reģistrs

The re3data.org logo features the text "re3data.org" in blue and green, with "re" in blue, "3" in green, and "data.org" in blue. Below it, in smaller blue capital letters, is the text "REGISTRY OF RESEARCH DATA REPOSITORIES".

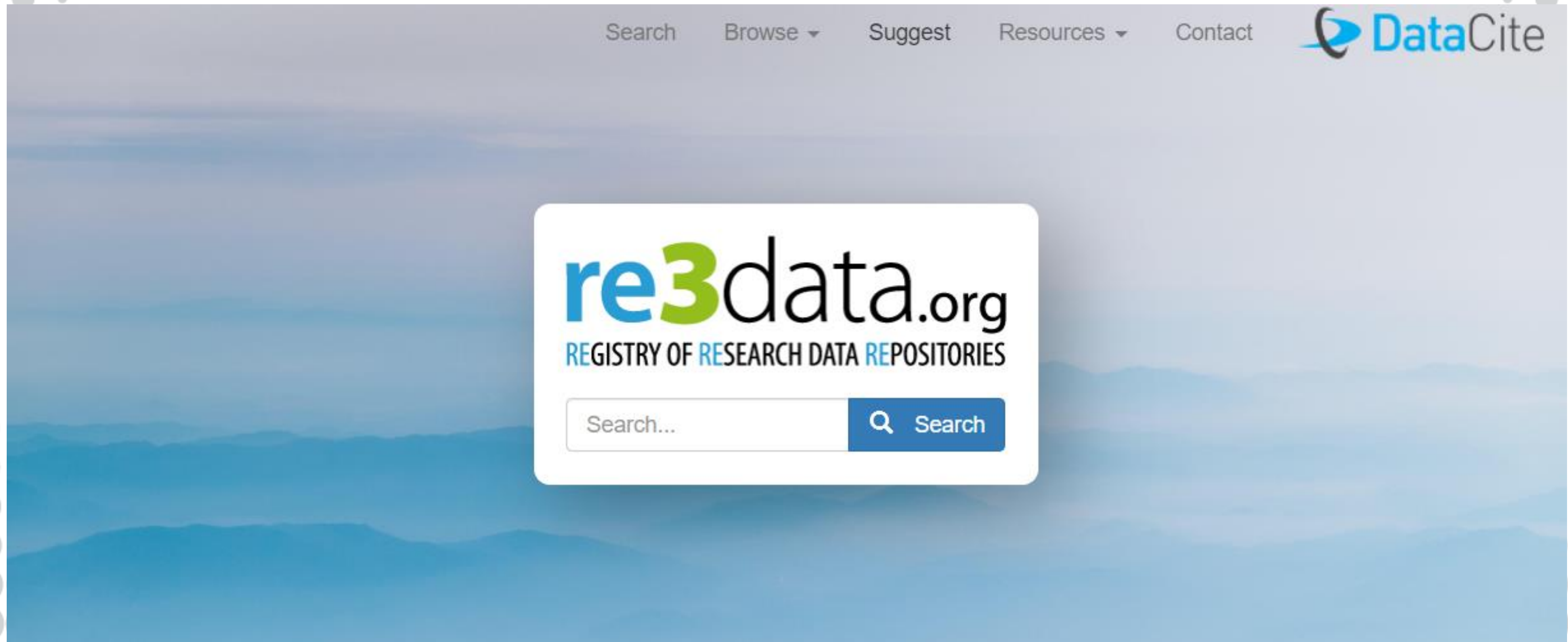
Vairāk informācijas par repozitorija izvēli: <https://www.openaire.eu/opendatapilot-repository-guide>

Zenodo: <http://www.zenodo.org>

Re3data.org: <http://www.re3data.org>

Regístrs – re3data.org (1)

<http://www.re3data.org>



Regístrs – re3data.org (2)



SearchBrowse ▾SuggestResources ▾Contact



Filter

Reset all

Subjects ⊞

Humanities and Social Sciences (1)

Social and Behavioural Sciences (1)

Jurisprudence (1)

Private Law (1)

Public Law (1)

Criminal Law and Law of Criminal Procedure (1)

Content Types ⊞

Countries ⊞

Data access ⊞

Database access ⊞

Data licenses ⊞

Data upload ⊞

Enhanced publication ⊞

Institution responsibility type ⊞

Institution type ⊞

Keywords ⊞

Search...

Search

Toogle short help

← Previous1Next →

Sort by ▾

Found 1 result(s)

Supreme Court Database

U.S. Supreme Court Database

Subject(s)

Humanities and Social SciencesPrivate LawPublic LawCriminal Law and Law of Criminal Procedure

JurisprudenceSocial and Behavioural Sciences

Content type(s)

DatabasesStandard office documentsScientific and statistical data formatsStructured graphics

other

Country

United States

The Supreme Court Database is the definitive source for researchers, students, journalists, and citizens interested in the U.S. Supreme Court. The Database contains over two hundred pieces of information about each case decided by the Court between the 1791 and 2015 terms. Examples include the identity of the court whose decision the Supreme Court reviewed, the

Regístrs – re3data.org (2)

re3data.org

Search Browse Suggest Resources Contact DataCite

Filter
Reset all

Subjects

- Humanities and Social Sciences (1)
- Social and Behavioural Sciences (1)
- Jurisprudence (1)
- Private Law (1)
- Public Law (1)
- Criminal Law and Law of Criminal Procedure (1)

Content Types

Countries

Data access

Database access

Data licenses

Data upload

Enhanced publication

Institution responsibility type

Institution type

Keywords

Search... Search

Toogle short help

Sort by

Found 1 result

Supreme Court Database

U.S. Supreme Court

Subject: Jurisprudence Social and Behavioural Sciences

Content type(s): Databases Standard office documents Scientific and statistical data formats Structured graphics other

Country: United States

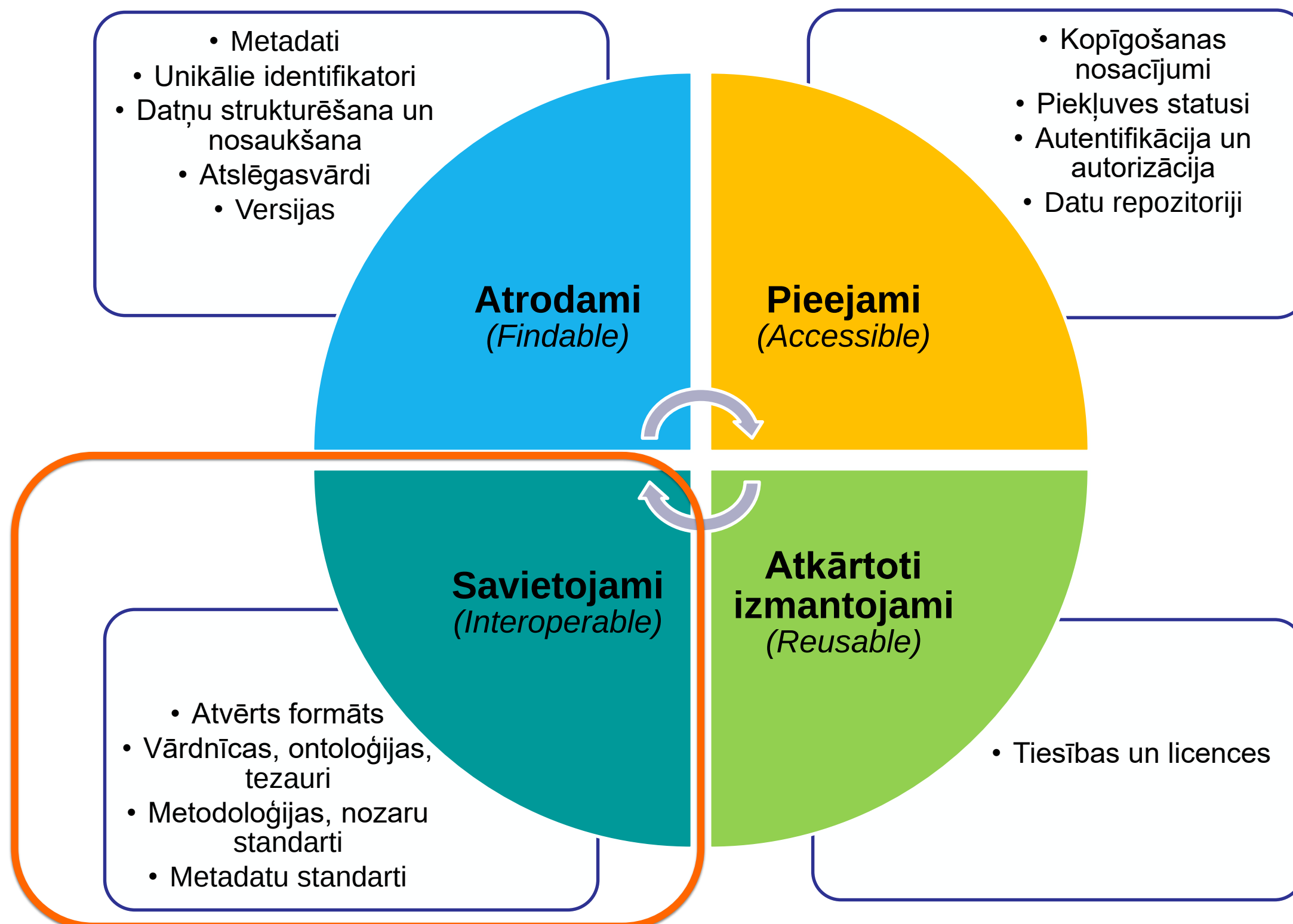
The Supreme Court Database is the definitive source for researchers, students, journalists, and citizens interested in the U.S. Supreme Court. The Database contains over two hundred pieces of information about each case decided by the Court between the 1791 and 2015 terms. Examples include the identity of the court whose decision the Supreme Court reviewed, the

Information Access Licenses Persistent Identifier Certificates and Standards Policy Reviewed

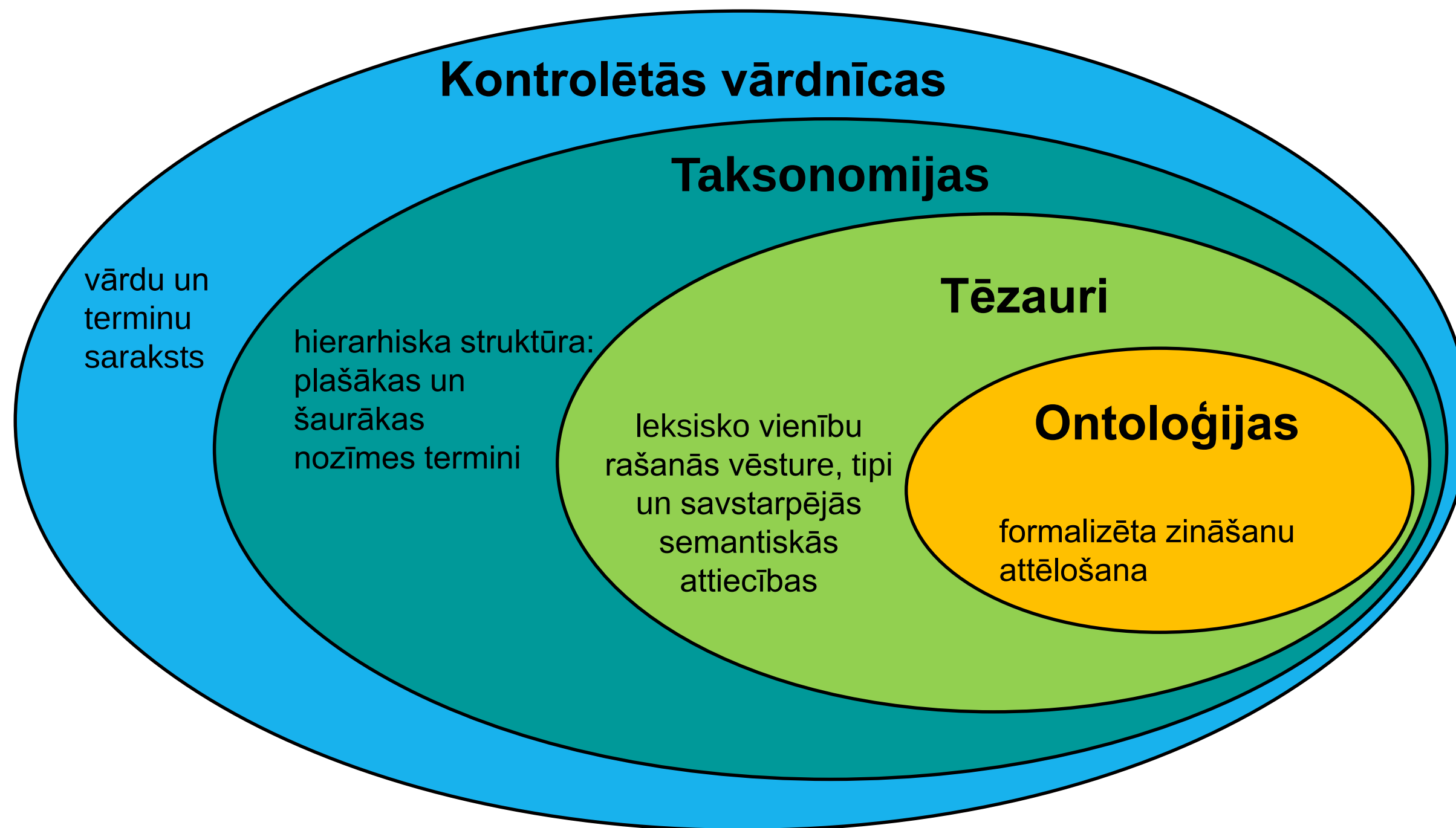
Public Law Criminal Law and Law of Criminal Procedure

Activate Windows

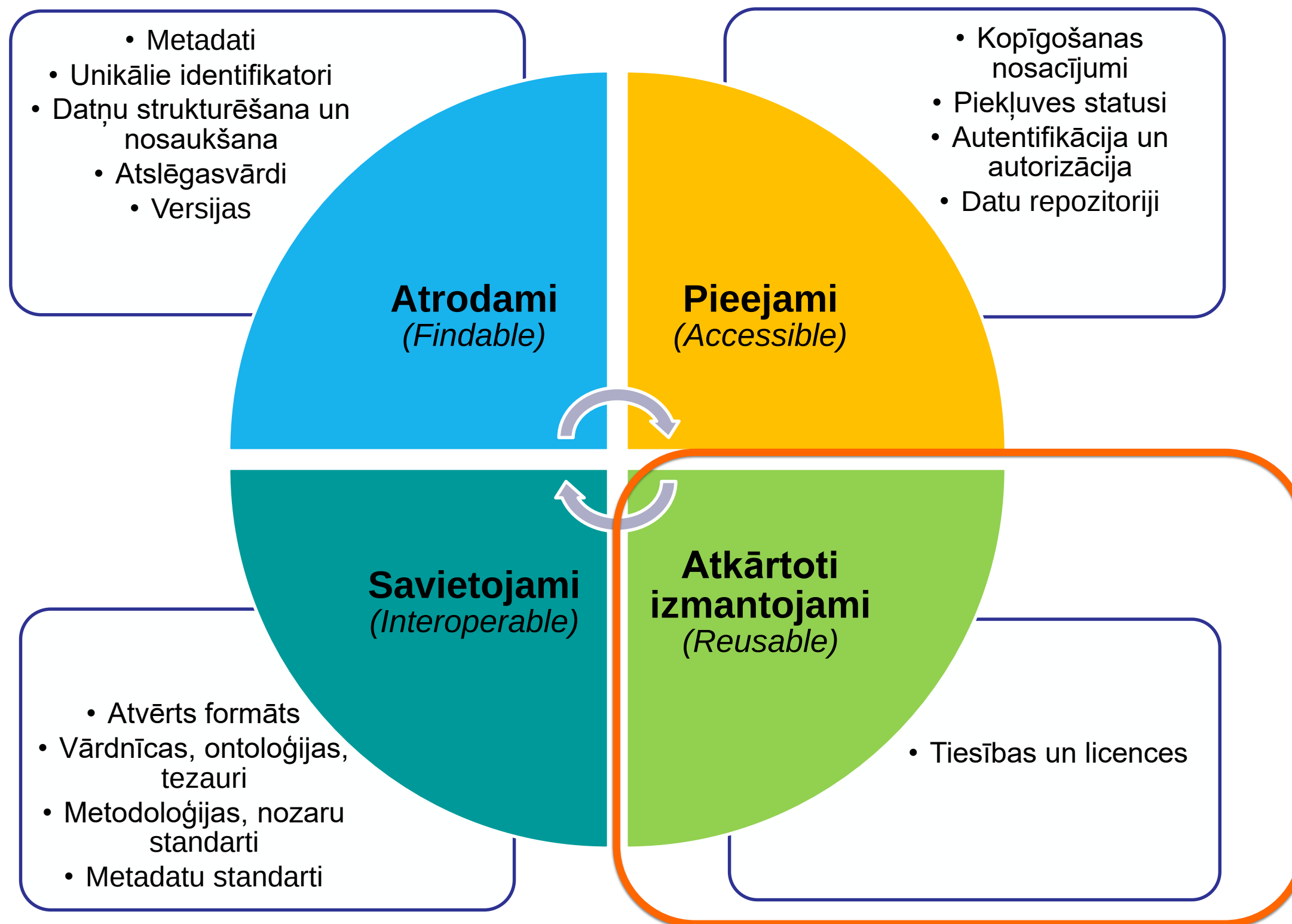
FAIR principi efektīvai datu pārvaldībai



Ontoloģijas



FAIR principi efektīvai datu pārvaldībai



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 You can redistribute (copy, publish, display, communicate, etc.)		 You have to attribute the original work		 You can use the work commercially	 You can modify and adapt the original work	 You can choose license type for your adaptations of the work.

AVOTS: How To Attribute Creative Commons Photos by Foter, CC BY 3.0
<https://unevoc.unesco.org/home/Open%20Licensing%20of%20Educational%20Resources>

Iesaistītās puses FAIR datu radīšanai

Researchers in academia, industry, government

Use FAIRsharing to identify and cite the standards, databases or repositories that exist for your discipline when creating a data management plan, releasing data or submitting a manuscript to a journal.



Developers and curators of resources

Make your standard, database or repository discoverable, by adding or claiming it in FAIRsharing; increase exposure and credit outside of your immediate community and promote adoption.

Journal publishers or organizations with data policy

Create in FAIRsharing your interrelated list of citable databases, repositories and relevant standards to recommend to your authors, users or their community; maintain and revise your recommendation over time.



Research data facilitators, librarians, trainers

Use FAIRsharing to provide a foundation on which to create or enrich educational lectures, training and teaching material; and to plug into data management planning tools and other FAIR-supporting resources.

Learned societies, unions and associations

Collaborate with FAIRsharing to raise awareness of standards, databases, repositories and data policies; mobilize your community to take action to promote registration, use and citation of key resources.



Funders and data policy makers

Recommend FAIRsharing to your awardees or community, to inform the development of their data management plan; and select the appropriate resources to recommend in your data policy.

*Papildus materiāls:
savienotu infrastruktūru iespējas*



www.openaire.eu

Pakalpojumi

1

Pētniekiem:

- iespēja dalīties un arhivēt pētījumu;
 - palielināt pētījuma rezultātu izmantošanu;
- izpildīt finansētāju prasības – dot atvērtu piekļuvi pētījuma rezultātiem;
- savienot publikācijas ar pētījuma datu kopām;
- deponēt repozitoriju tīklā vai *zenodo.org*.

2

Projektu koordinatoriem:

- izpildīt finansētāju prasības – dot atvērtu piekļuvi pētījuma rezultātiem;
- izgūt pārskatu par pētījuma rezultātu publiskošanas progresu;
- meklēt un apkopot projekta darbības rādītājus;
- savienot publikācijas ar pētījuma datu kopām.

3

Datu sniedzējiem:

- datu saturu padarīt vizuālu;
- atvērtu piekļuvi padarīt par ikdienas praksi zināšanu menedžmentā;
- deponēt repozitoriju tīklā vai *zenodo.org*.;
 - nodrošināt sadarbību repozitorijiem, *CRIS* sistēmām un projektu datu bāzēm.

Pakalpojumu katalogs

<https://www.openaire.eu/>

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Piemērs – informācija par projektu (1)



[↓ \(CSV\)](#)

Results per page: 10

Filters

1 project, page 1 of 1

Keywords: × syskid

Funder (1)

☐ European Commission (1)

[SYSKID-Systems biology towards novel chronic kidney disease diagnosis and treatment \(241544\)](#)

EC

OPEN ACCESS MANDATE FOR PUBLICATIONS

SPECIAL CLAUSE 39

Start Year (1)

Start year: 2010 - End year: 2014

Piemērs – informācija par projektu (2)



SYSKID

Systems biology towards novel chronic kidney disease diagnosis and treatment (241544)

PROJECT

EC

OPEN ACCESS MANDATE FOR PUBLICATIONS

SPECIAL CLAUSE 39

Funding: FP7 | SP1 | HEALTH

Start Date: 2010-01-01

End Date: 2014-12-31

Open Access mandate for Research Data: no

Organization: ICS | Universitätsklinikum Erlangen | Universitätsklinikum Erlangen | MUI | UKA
AMC | Weizmann Institute of Science | NUID UCD | UNIVERSITAIR MEDISCH CENTRUM
GRONINGEN | IDIBELL | University of Glasgow | Mosaiques diagnostics and therapeutics AG
(Germany) | Semmelweis University | IRFMN | MUW | MUW | SUM | SUM | Biogazelle
Biogazelle | Biogazelle | Biogazelle | CNR | UCO | Saarland University | UBx | Biocrates Life
Sciences (Austria) | Biocrates Life Sciences (Austria)

[Detailed project information \(CORDIS\) →](#)

Publications (196)

+

Research Data (0)

+

Software (0)

+

Other Research Products (0)

+

SEARCH

DEPOSIT

LINK

⌵

[LINK THIS PROJECT TO...](#)

Share - Bookmark



Share project's research results

PUBLICATIONS

RESEARCH DATA

SOFTWARE

OTHER

[↑](#) DEPOSIT

Piemērs – informācija par projektu – savienojums ar CORDIS



Systems biology towards novel chronic kidney disease diagnosis and treatment

Fact Sheet

Result in Brief

Reporting

Results

Deliverables

Deliverables not available

Publications

Publications via OpenAire



Quality of Reporting and Study Design of CKD Cohort Studies Assessing Mortality in the Elderly Before and After STROBE: A Systematic Review

Author(s): Rao, Anirudh,Brück, Katharina,Methven, Shona,Evans, Rebecca,Stel, Vianda S.,Jager, Kitty J.,Hooft, Lotty,Ben-Shlomo, Yoav,Caskey, Fergus

Published in: Public Library of Science PLoS ONE, Vol 11, Iss 5, p e0155078 (2016) 2016

Permanent ID: pmid:27168187 pmc:PMC4862070 doi:10.1371/journal.pone.0155078

Project information

SYSKID

Grant agreement ID: 241544

 [Project website](#)

Status

Closed project

Start date

1 January 2010

End date

31 December 2014

Funded under:

FP7-HEALTH

Tālākai tēmas izzināšanai...

Papildus materiāli tēmas izzināšanai (1)

<https://www.openaire.eu/>



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how research is performed
and how knowledge is shared.

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Papildus materiāli tēmas izzināšanai (2)

Eiropas Komisijas ekspertu darba grupas FAIR datu jautājumos gala ziņojums «Padarot FAIR datus par realitāti» (*Turning FAIR into Reality*)

https://ec.europa.eu/info/sites/info/files/turning_fair_into_reality_1.pdf



Papildus materiāli tēmas izzināšanai (3)

<https://www.go-fair.org/>



The screenshot shows the GO FAIR website banner. At the top left is the GO FAIR logo. To its right is a navigation menu with links: FAIR Principles, Implementation Networks, News, Events, Resources, About GO FAIR, and a search icon. The main banner has a yellow and blue background with a world map. The title 'Call for Proposals & Open Registration' is in large white text. Below it, a paragraph states: 'The call for posters & lightning talks as well as the registration for the International FAIR Convergence Symposium is open!'. To the left of this text is a left arrow icon. Below the paragraph are two bullet points: '♦ Submit your proposals for posters & lightning talks by 31/10/2020' and '♦ Register for the conference by 16/11/2020'. Below the bullet points is the text 'on our dedicated conference website!'. To the right of the text is a right arrow icon. In the center of the banner is a white box containing the text: 'International FAIR Convergence Symposium', 'convened by CODATA and GO FAIR', and 'Virtual, 27 November - 04 December 2020'. Below this text is a network diagram with yellow, green, and blue nodes. At the bottom of the white box are the CODATA logo (with the text 'COMMITTEE ON DATA INTERNATIONAL SCIENCE COUNCIL') and the GO FAIR logo. At the bottom left of the banner, the text 'What is in it for you?' is partially visible.

GO FAIR

FAIR Principles Implementation Networks News Events Resources About GO FAIR 🔍

Call for Proposals & Open Registration

The call for posters & lightning talks as well as the registration for the International FAIR Convergence Symposium is open!

- ♦ Submit your proposals for posters & lightning talks by 31/10/2020
- ♦ Register for the conference by 16/11/2020

on our **dedicated conference website!**

International FAIR Convergence Symposium
convened by CODATA and GO FAIR
Virtual, 27 November - 04 December 2020

CODATA COMMITTEE ON DATA
INTERNATIONAL SCIENCE COUNCIL

GO FAIR

What is in it for you?

Papildus materiāli tēmas izzināšanai (4)

<https://www.rd-alliance.org/recommendations-and-outputs/catalogue>

Building the social and technical bridges to enable open sharing and re-use of data

RDA EU RDA US CONTACT US LOGIN REGISTRATION

RESEARCH DATA ALLIANCE

O&A Members 63
Active Organisational & Affiliate members

MEMBERSHIP Members: 11222
Becoming a member of RDA is simple and open to both individuals and organizations
[Register now](#)

RDA Groups WG & IGs: 99
Discover what RDA Working and Interest Groups and all other Groups are up to and find out how to join them. [Explore Groups](#)

ABOUT RDA ▾ GET INVOLVED ▾ GROUPS ▾ **RECOMMENDATIONS & OUTPUTS ▾** RDA FOR DISCIPLINES ▾ PLENARIES & EVENTS ▾ NEWS & MEDIA ▾

Q

Outputs & Recommendations

[Home](#) » [Recommendations & Outputs](#) » [Outputs & Recommendations](#)

RDA Outputs are the technical and social infrastructure solutions developed by RDA Working Groups or Interest Groups that enable data sharing, exchange, and interoperability.

These Outputs have an important impact in two areas: solving problems, and incorporation and/or adoption in infrastructure environments by individuals, projects and organisations. As an organisation, RDA's goal is to expand awareness and adoption of these Outputs, and hence their impact, within all regions of the world. RDA Outputs are products of the respective Working or Interest Group and should be demonstrably developed and endorsed by the group. Each Output should have the respective Working or Interest Group listed as an author where appropriate.

RDA Outputs are classified as **RDA Recommendations** (official, endorsed results of RDA Groups), **Supporting Outputs** (useful solutions from our RDA Working and Interest Groups) or **other Outputs** - more information can be found at <https://www.rd-alliance.org/recommendations-outputs>. **They are all listed below and can be searched according to their focus, scientific domain, or by status using the filters on the right.** Filters can be combined, too (if more than one filter is selected, results sum up).

Search for Recommendations & Outputs



Search by Status

- ☐ RDA Endorsed Recommendations
- ☐ Recommendations with RDA Endorsement in Process
- ☐ RDA Supporting Outputs

Search for Topics

Select All

- ☐ Data Management
- ☐ Data Collection
- ☐ Data Description
- ☐ Identity, Store, and Preserve
- ☐ Disseminate, Link, and Find
- ☐ Policy, Legal Compliance, and Capacity

Primary Domain

Select All

Papildus materiāli tēmas izzināšanai (5)

<https://www.CESSDA.eu/Training/Training-Resources/Library/Data-Management-Expert-Guide>

Consortium of European Social Science Data Archives



[Home](#) [EVENT CALENDAR](#) [TRAINING RESOURCES](#) [ABOUT](#)



Training / Training Resources / Data Management Expert Guide



Data Management Expert Guide

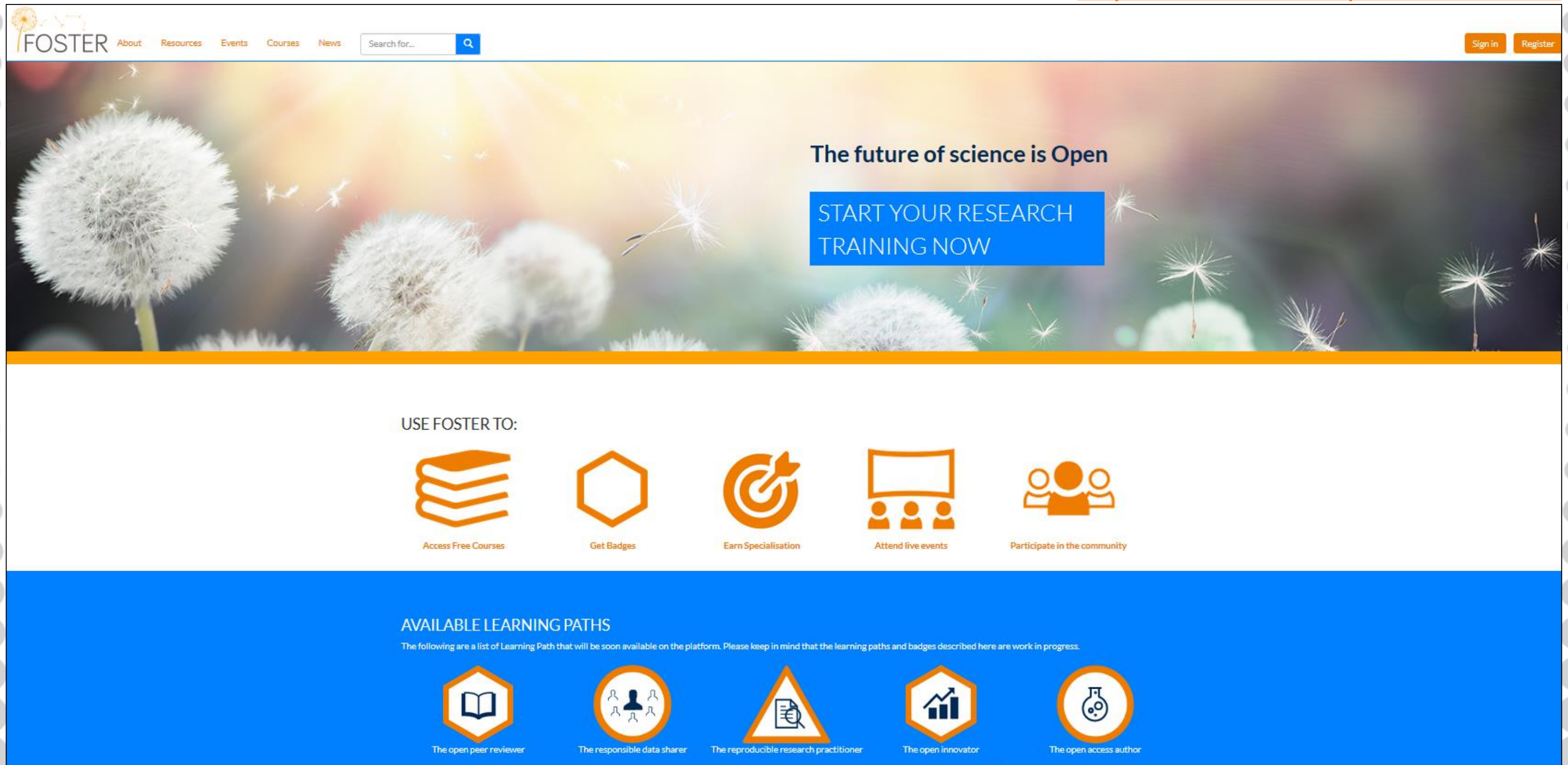
This guide is designed by European experts to help social science researchers make their research data Findable, Accessible, Interoperable and Reusable (FAIR).

You will be guided by different European experts who are - on a daily basis - busy ensuring long-term access to valuable social science datasets, available for discovery and reuse at one of the [CESSDA social science data archives](#).

You can [download](#) the full DMEG for your personal study offline. PDFs for every [single chapter](#) are also available for being printed as handouts for

Papildus materiāli tēmas izzināšanai (6)

<https://www.fosteropenscience.eu/>



The screenshot shows the FOSTER website homepage. At the top, there is a navigation bar with the FOSTER logo, links for About, Resources, Events, Courses, and News, a search bar, and Sign in and Register buttons. The main banner features a background image of dandelions with the text "The future of science is Open" and a blue button that says "START YOUR RESEARCH TRAINING NOW". Below the banner, a section titled "USE FOSTER TO:" lists five benefits with corresponding icons: Access Free Courses (stack of books), Get Badges (hexagon), Earn Specialisation (target with arrow), Attend live events (screen with people), and Participate in the community (group of people). The bottom section, titled "AVAILABLE LEARNING PATHS", includes a disclaimer and five learning paths with icons: The open peer reviewer (book), The responsible data sharer (people with data), The reproducible research practitioner (microscope), The open innovator (bar chart), and The open access author (flask).

FOSTER About Resources Events Courses News Search for... Sign in Register

The future of science is Open

START YOUR RESEARCH TRAINING NOW

USE FOSTER TO:

- Access Free Courses
- Get Badges
- Earn Specialisation
- Attend live events
- Participate in the community

AVAILABLE LEARNING PATHS

The following are a list of Learning Path that will be soon available on the platform. Please keep in mind that the learning paths and badges described here are work in progress.

- The open peer reviewer
- The responsible data sharer
- The reproducible research practitioner
- The open innovator
- The open access author

Papildus materiāli tēmas izzināšanai (7)

<http://www.dcc.ac.uk/training>

Contact us

 because good research needs good data

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RDMF20: RDM and Data Sharing/Openness in The Arts - CANCELLED
London, 22 April 2020

Agenda | Registration | Unconference

Latest news

Next events



RDMF20: RDM and Data Sharing/Openness...

22 April 2020

Friends House London



Making the most of DMPonline

23 April 2020, 09:30 - 15:00

Zoom online meeting



RDA's 17th Plenary Meeting

20 April 2021 - 22 April 2021

Edinburgh International...

Kontaktinformācija

Gita Rozenberga

Nacionālais atvērtās piekļuves dienests

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Paldies!

