



... a bridge to the Science future

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**Semantically
enrichable research
information system:**

**Socionet.ru /
SocioRePEc.org**

SocioRePEc is a research social media in Economics

← → ↻ <https://sociorepec.org> ☆ 📄 📧 ☰

socioRePEc

Papers Enrichment and Scholarly Communication over RePEc Data

Unknown user - please login

Logged-in user can: annotate abstracts*make relationships between own papers*enrich list of references for own papers*specify your roles in making collective papers*share opinions or make recommendations and comments* see your statistical portrait * express your "agree/disagree" with actions on your papers * find people who use your papers and cooperate with them

Beta-release. It is for testing only.

How to start:

(1) As unknown user you can search, navigate and read everything at SocioRePEc

(2) To use enrichment facilities you have to be registered author at [RePEc Author Service](#)

(3) Login into SocioRePEc with your RePEc Author Service credentials

(4) Find and open your personal profile at SocioRePEc and check your status

(5) Find and open your (or other authors) paper and use enrichment menus

Why should you do this?

Search (?)

Author Name: ☐ - personal profiles by the author

Keywords: ☐ - papers by the author

search papers by keywords without radio-buttons, use asterisk *, if needed

New documents for the last 28 days (min=32, max=3701)

today by CET ↗

Collections with new/updated documents on 2015-9-27 CET

new	mod.	collection title
1		Africa Spectrum
	24	Asian Agricultural Research
1	1	BEMPS - Bozen Economics & Management Paper Series
1		Biometrics
8		Comparative Economic Research
1	1	Computer Codes
1		CSEF Working Papers
	377	Development Economics Working Papers
1		Discussion Paper
	1	Discussion Papers
	26	Discussion Paper Series
1		Dissertations-Doctoral
	92	EABER Working Papers
1		Economic Development and Cultural Change
5		Economics Working Paper Series
	40	EDIRC - Economics Departments, Institutes and Research Centers in the World
	58	Energy Working Papers
	2	ERES
	1	European Journal of Economics and Economic Policies: Intervention
1		farmdoc daily
	262	Finance Working Papers
	186	Governance Working Papers
1		Historia Agraria. Revista de Agricultura e Historia Rural
	1	IZA Discussion Papers
1		Jahrbuch für Wirtschaftsgeschichte / Economic History Yearbook
4		Journal of Development Economics

Sections and Collections Updated on 2015-9-27 CET

No.	Name	docs	new	mod.
6962	Discipline: economics	1900477	66	2207
148	Chapters and Sections in Books	36738		
302	Collections of Books	21088	1	
	World Bank Publications		1	
2252	Collections of Journal Articles	1109817	26	25
	Africa Spectrum		1	
	Asian Agricultural Research		24	
	Biometrics		1	
	Comparative Economic Research		8	
	Economic Development and Cultural Change		1	
	European Journal of Economics and Economic Policies: Intervention		1	
	farmdoc daily		1	
	Historia Agraria. Revista de Agricultura e Historia Rural		1	
	Jahrbuch für Wirtschaftsgeschichte / Economic History Yearbook		1	
	Journal of Development Economics		1	
	Journal of Interdisciplinary Economics		1	
	Nordic Tax Journal		4	
	Philippine Review of Economics		1	
	Physica A: Statistical Mechanics and its Applications		1	
	Research Policy		1	
	Review of Social and Economic Issues		1	
	Revista Europea de Historia de las Ideas Políticas y de las Instituciones Públicas		1	
	Revue de l'OFCE		1	
1	Data about Organizations	13355		40
	EDIRC - Economics Departments. Institutes and Research Centers in the World			40

Preliminary evaluation

- ❖ by Bianca Kramer and Jeroen Bosman, authors of the “101 Innovations in Scholarly Communication” survey:
 - ❖ The reviewing and assigning relationships is “...**the most innovative** in our opinion. They set SocioRePEc apart from the rest and are **potentially very valuable**, especially if one is able to assign relationships at the sub-article level”

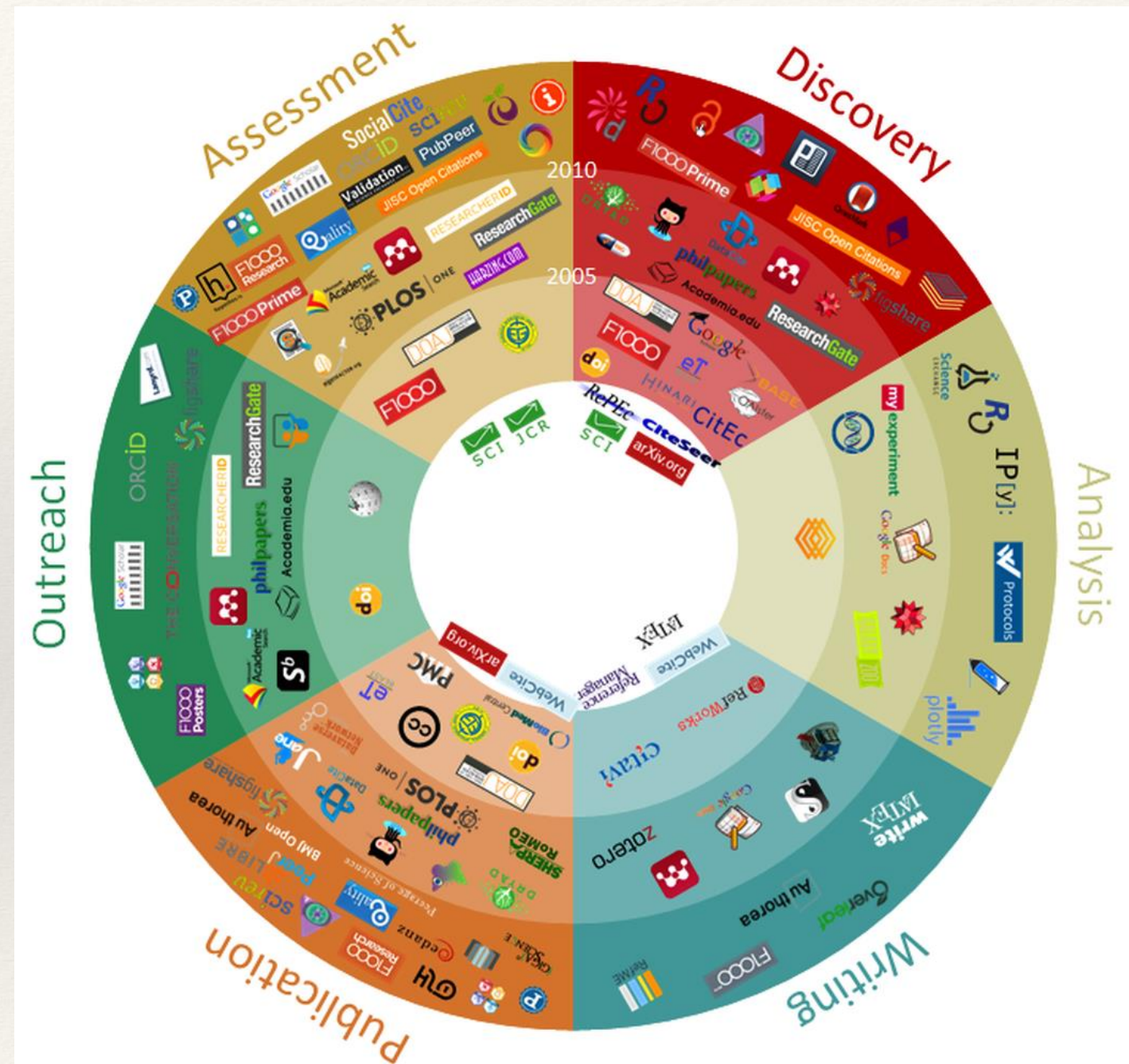
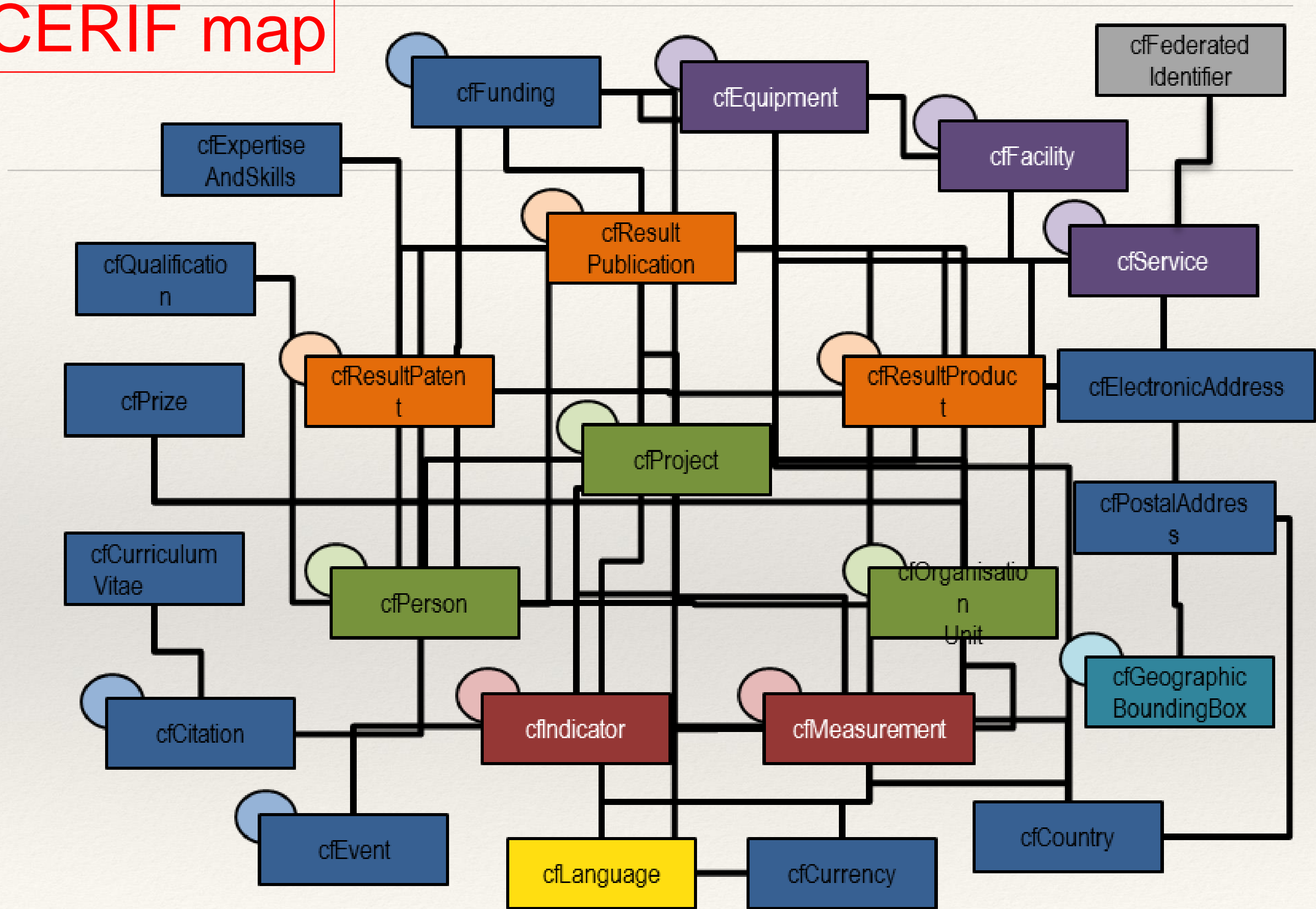


Diagram from <https://innoscholcomm.silk.co/>

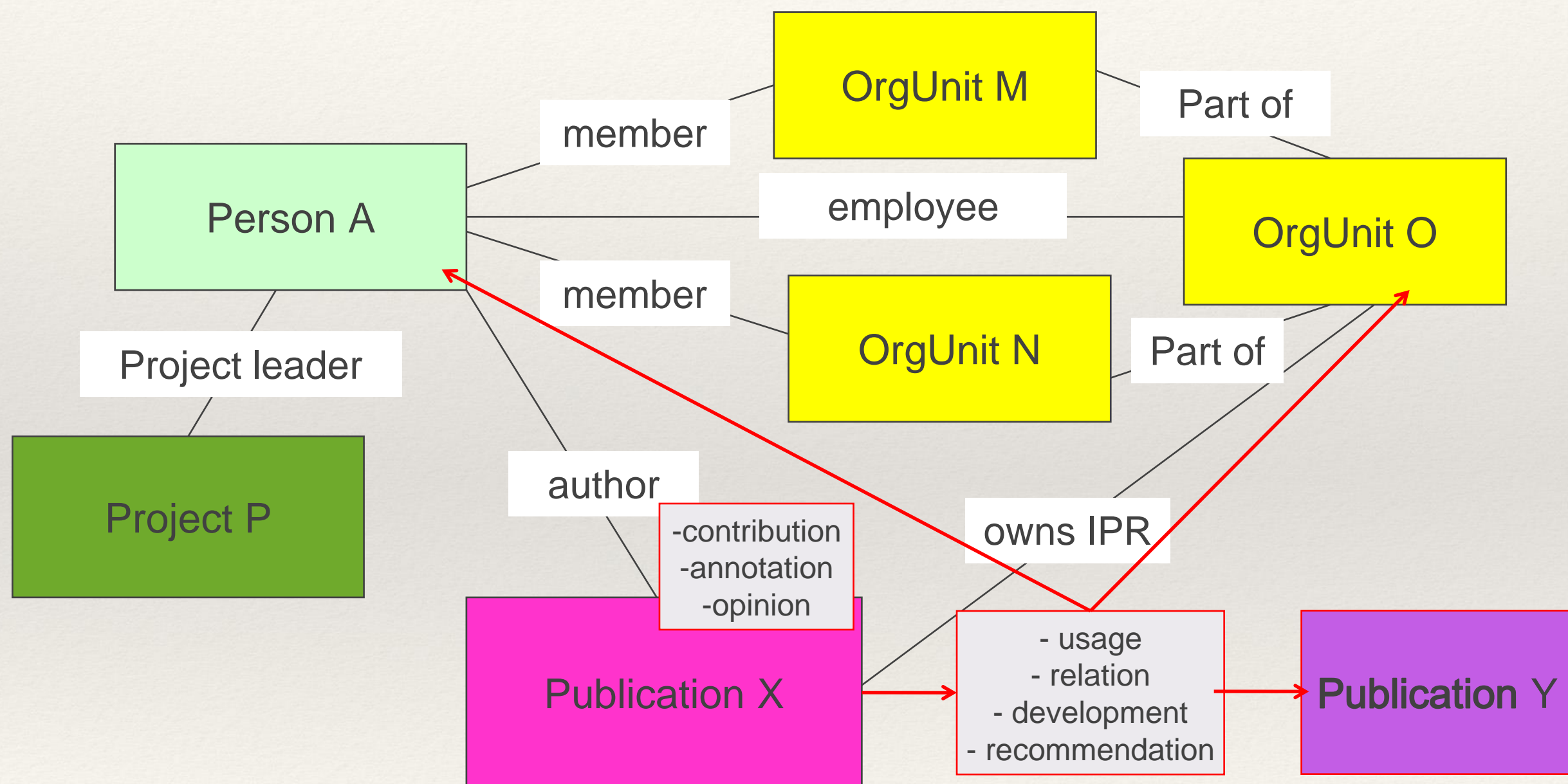
Research Information System

- ❖ Research Information System (RIS) operates with entities «person», «organization», «project», «research result», etc. and with its cross-relations.
- ❖ Designing our RIS we use the CRIS concept and the Common European Research Information Format (CERIF)
- ❖ CRIS-CERIF concept and a data model are supported and developed by euroCRIS (www.eurocris.org)
- ❖ sociorepec.org and socionet.ru are examples of RIS

CERIF map



CERIF objects and semantic linkages (the initial slide from Keith Jeffery)



New class of RIS: seRIS

	Traditional RIS	Semantically Enrichable RIS
Semantic linkage model	CERIF model: IDs of linked objects, semantic meaning and dates of the linkage validity	Added attributes to have the linkage as a <u>separate interoperable entity</u> : own ID, linkage direction, anchoring (e.g. for annotation), and a comment
Semantic linkage technique	Enter the ID of one linked object into metadata of another linked object with some semantic meaning	RIS users can make linkages between <u>any</u> two objects, assign available taxonomy value and submit it to the RIS administrator or use it privately
Semantic block (layer)	When RIS displays an object metadata, it replaces ID of another objects on its names with hyperlinks	Displaying an object the RIS shows all <u>outgoing</u> and <u>ingoing</u> linkages of the object with its specific <u>anchoring</u> to some metadata elements
Semantic ecosystem	none	Notifications, scientometrics, taxonomy management, etc.

seRIS use cases (1)

- ❖ 1. If you have co-authors you can specify your roles in making collective research outputs. The idea of such facility and initial taxonomy of author roles came from the Nature commentary (<http://www.nature.com/news/publishing-credit-where-credit-is-due-1.15033>) and from the CRediT project (credit.casrai.org) led by The Wellcome Trust, Digital Science, CASRAI, NISO and Science Europe
- ❖ 2. You can make some actualization of your publications. It can be done by two ways:
 - ❖ 1) by annotating text fragments of a publication abstract to provide for readers additional and/or newer information on the topic; and
 - ❖ 2) by linking to the publication its newest versions, related papers appeared after its publishing, etc.
- ❖ 3. You can visualize for readers an evolution or a development through a set of your publications of some ideas, approaches, etc.

seRIS use cases (2)

- ❖ 4. You can visualize for readers how certain materials from a reference list of your publication were used by you in producing this research output.
- ❖ 5. You can make recommendations for and/or to share useful information with registered authors whose publication you currently reading in your browser. In this case your proposal will look as a linkage with some taxonomy class between some of your publication and the currently reading one.
- ❖ 6. You can visualize research relationships and associations between your publications and publications of other authors.
- ❖ 7. You can express publicly your professional opinion about a publication of other authors by using some specific taxonomy classes.

Our test bed for experiments

- ❖ Research information systems:
 - ❖ Socionet.ru and socioRePEc
 - ❖ +RePEc data (repec.org)
 - ❖ +RePEc Author Service users (authors.repec.org)
- ❖ Total current number of available research information objects – about 3.5M and 9.5M of semantic linkages
- ❖ Total number of users with personal profiles and linked publications is about 50K

Further development

Sub-article level: fragmentation and relationships

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and is used for the applications such as laboration Suite. In experience and enable chins must provide

Compilers for static type information to generate efficient programming language such as JavaScript, the types of expressions may vary at runtime. This means that the compiler can no longer easily transform operations into machine instructions that operate on one specific type. Without exact type information, the compiler must emit slower generalized machine code that can deal with all potential type combinations. While compile-time static type inference might be able to gather type information to generate opti-

Commentary

Здесь можно задать комментарий к выделенному фрагменту текста

Вид связи

отношение не задано

Комментарий: Для использования при создании традиционных аннотаций к тексту на экране, когда создается связь без указания научного отношения между связываемыми объектами

Сохранить в коллекцию

Коллекция публичных аннотаций/с

Помощь Cancel Save

Fragmentation as annotations, nanopubs, citations and artifacts

```
<?xml version="1.0" encoding="utf-8"?>
<root>
  <Linkage>
    <Object>
      <Annotation>
        <End>/div[1]/div[2]/div[117]</End>
        <EndOffset>20</EndOffset>
        <StartOffset>21</StartOffset>
        <Start>/div[1]/div[2]/div[115]</Start>
        <Quote>This means that the compiler c
operations into machine instructions that operat
type</Quote>
      </Annotation>
      <To>
        <DataType>paper</DataType>
      </To>
      <Data>
        <Metrics>
          <RelativeComm>Здесь можно задат
выделенному фрагменту текста</RelativeCo
```

Used open source software:

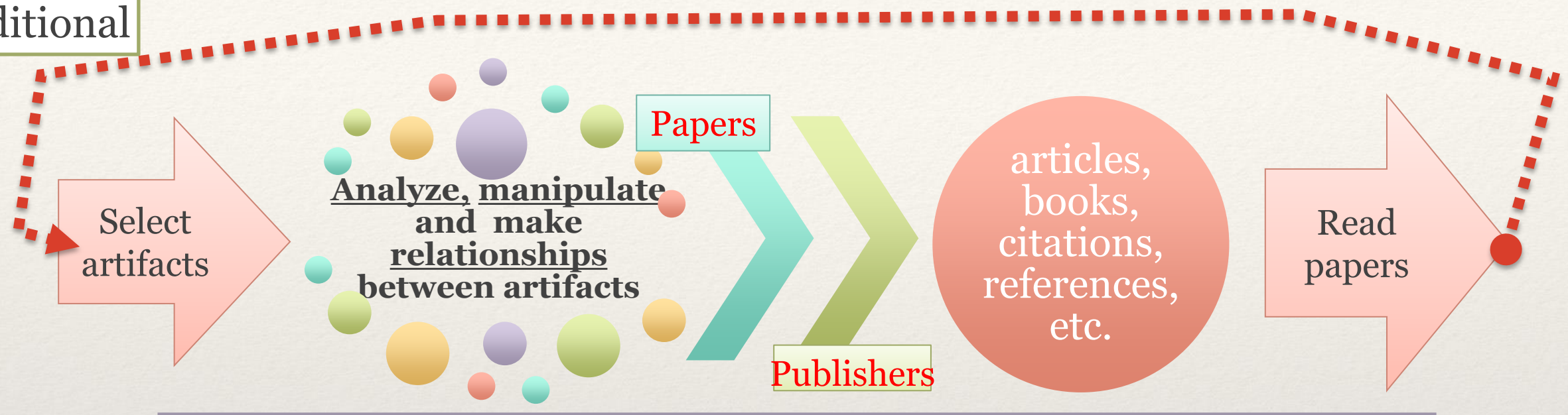
- 1) <http://annotatorjs.org/>
- 2) <https://github.com/hypothesis/pdf.js-hypothes.is>

seRIS ecosystem

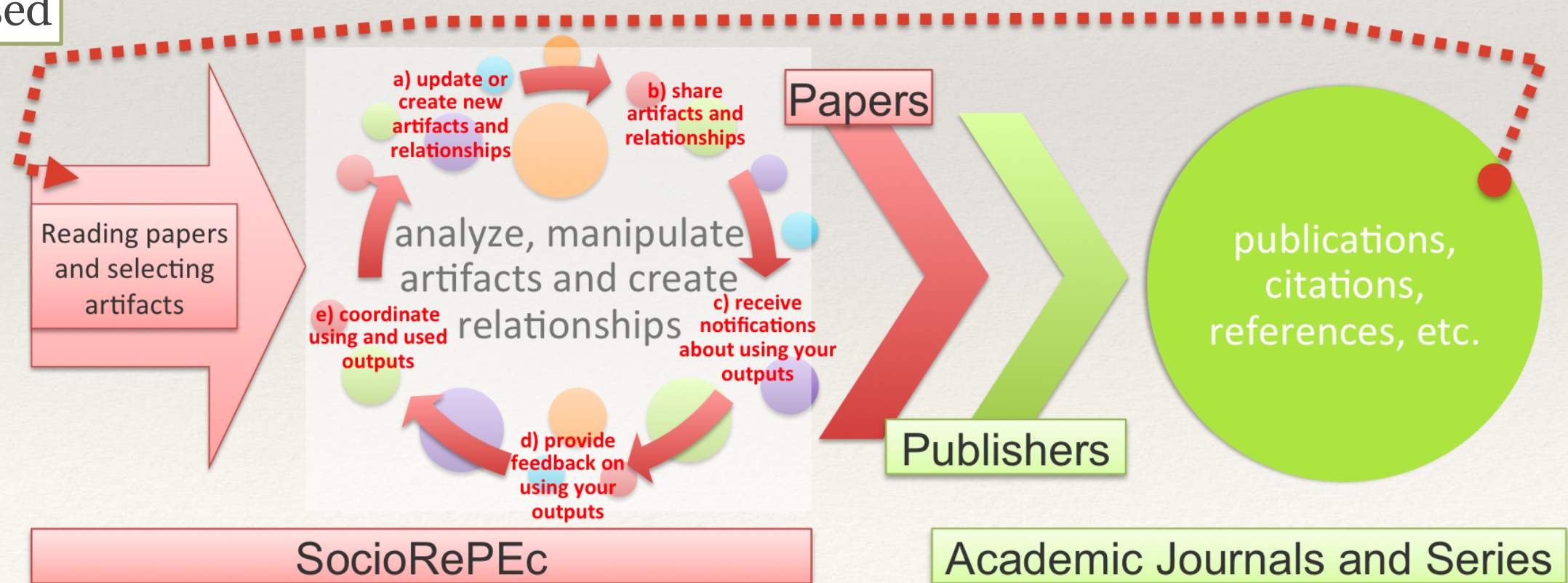
- ❖ Open repository with input/output by OAI-PMH and REST API based on the CERIF format:
 - ❖ All public semantic linkages
 - ❖ All semantic vocabularies of currently used scientific relationships taxonomy
- ❖ Different scenarios of communications among the authors and the users of research results
- ❖ Everyday updated scientometrics based on the semantic linkages data, including aggregated indicators for each authors and research organizations

Application to improving the scholarly communication process

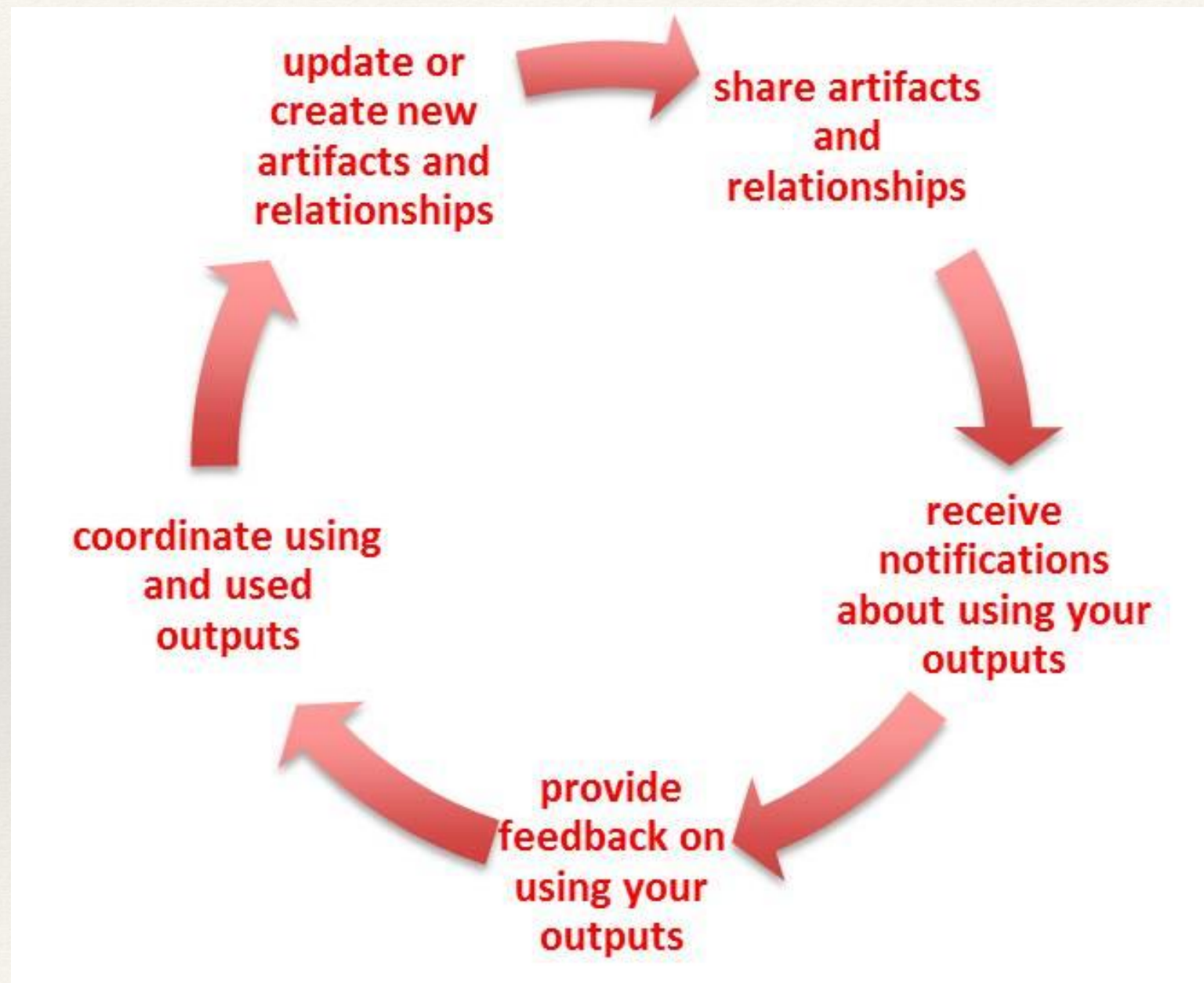
Traditional



Proposed



Proposed additional scholarly communication circle



... a bridge to the Science future

Conclusion

We are developing the seRIS approach and the public socioRePEc.org system for the research process modernization, including:

- o More efficient research communication, interactions and coordination for the large-scale scientific communities**
- o New scientometrics and better professional signaling system**
- o Better research assessment and evaluation**



More details about seRIS

- ❖ Our poster at KESW poster session
- ❖ Our KESW conference paper
- ❖ SocioRePEc blog - <http://sparinov.wordpress.com/>