



Ural Federal
University

Limitations of CRIS in assessing the progress of increasing research output in UrFU

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Challenge: To support the process of the University's evolution we need an instrument which would allow us to notice the emerging scientific practices on the earliest stages of the development (before the first publications), and also give us the ability to track the overall development of scientific groups in the University.

- Why Ural Federal University needs to change
- The problem of grossindicators
- CRIS – managing the individual research productivity
- Monitoring of the Skills Training for Researchers development in UrFU and the general architecture of the research process in the University
- The instrument for monitoring of changes on the university scale



Ural University was founded in 1920.
Later it was divided into several separate
institutions including
Ural State University (USU) and
Ural State Technical University (USTU-UPI)



In 2011, these two institutions
were merged again and become
The Ural Federal University (UrFU)

UrFU bears the name of **Boris Yeltsin**
the first President of Russia who graduated
from the university
in 1955

- UrFU is recognized as one of the leading Russian Federal University (among 9 other Federal Universities)
- 95-year history, more than 300 000 graduates
- About 2600 faculties
- More than 40 000 students in 18 UrFU Institutes, including 25 000 full-time students
- About 800 PhD students

- UrFU takes part in two federal programs:
- 5 – year program of development of Federal Universities (2010-2014, 9 Federal Universities), 20 mln Euro per year
- The Program of Enhancement of Competitiveness of Russian Universities – Project 5-100 (2013 – 2020, 14 Universities), 10 - 15 mln Euro per year

- There are 20 research institutes of Ural Branch of RAS located in Ekaterinburg which are collaborating with Ural Federal University both in the field of higher education and joint research and development activities.
- The Ural Division was established in 1932, with Aleksandr Fersman as its founding chairman. Currently research centers are open in Ekaterinburg, Perm, Chelyabinsk, Izhevsk, Orenburg, Ufa and Syktyvkar. As of 2007, the Division employed 3,600 scientists, 590 full professors, 31 full members, and 58 corresponding members of the Academy.

Re-industrialization

31%

of Russian
industrial
production

290 bn \$

gross regional product

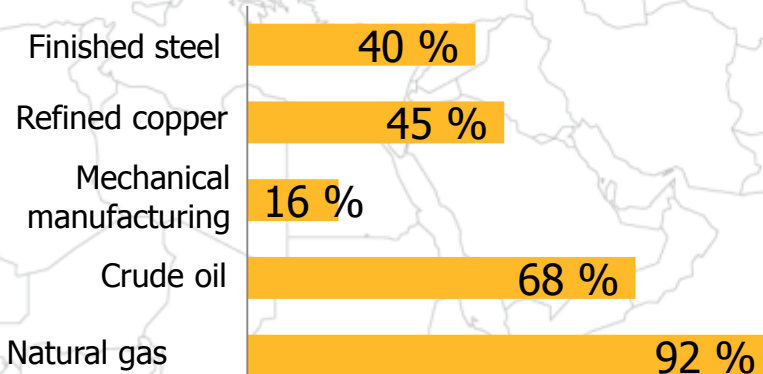
40 bn \$

industrial
value-added
product

22,5

mln people

Share of the region in the production of Russia



The Mission of Ural Federal University

is to ensure re-industrialization and to enhance competitiveness, to build human, scientific and technical capacity, to upgrade traditional sectors of Russian economy and to develop post-industrial ones in a balanced manner, in particular within the Urals

Our Dream is to establish a **World-Class University** in the heart of Eurasia

Ural Federal University



Today:

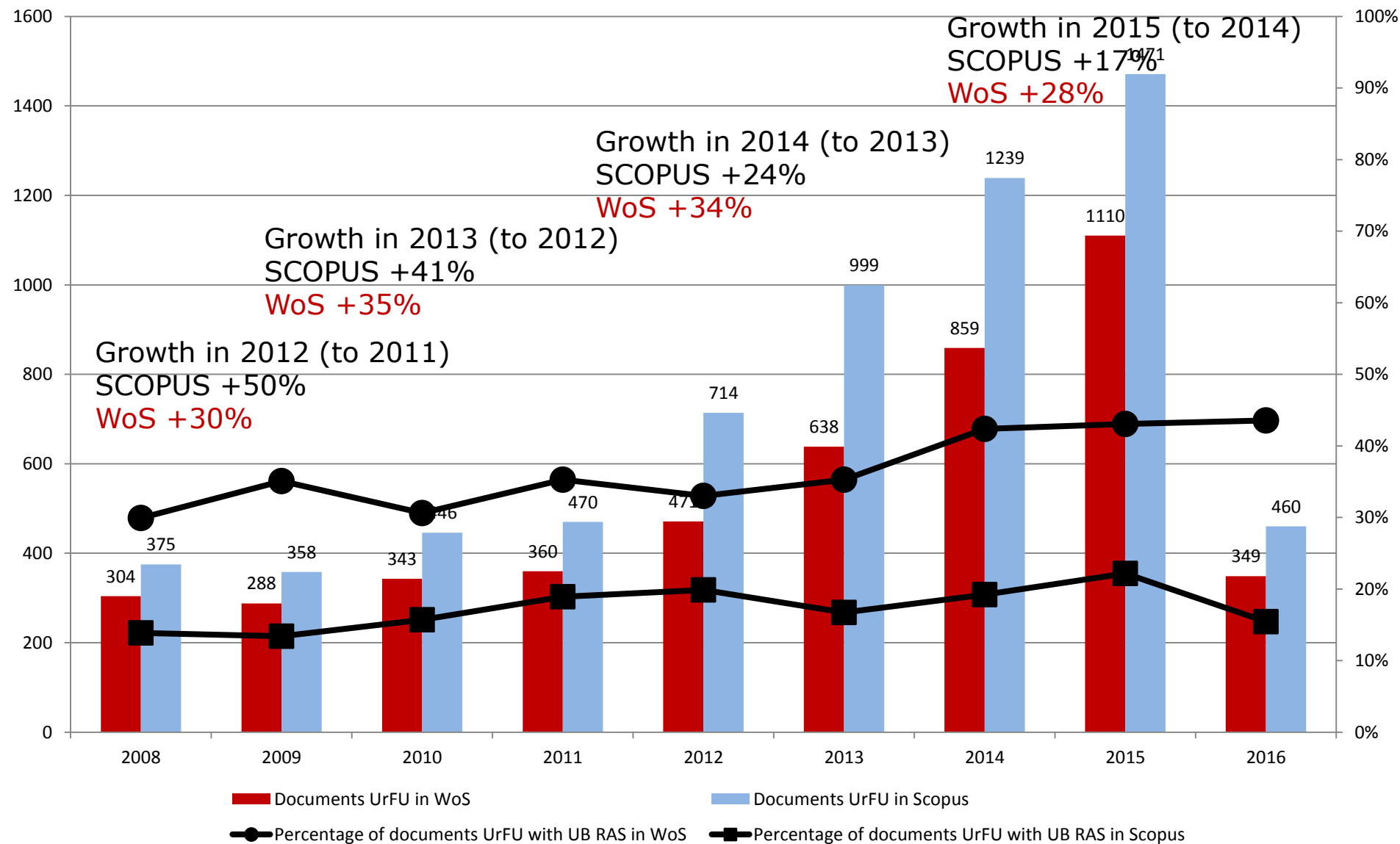
- Top 601-650 in QS World University Ranking
- Top 601-800 in THE World University Ranking

● The redpoints represent institutions of the top 200 of THE ranking

● The purple points represent institutions of the top 200-400 of THE ranking

Source: Times Higher Education World University Rankings 2015-16

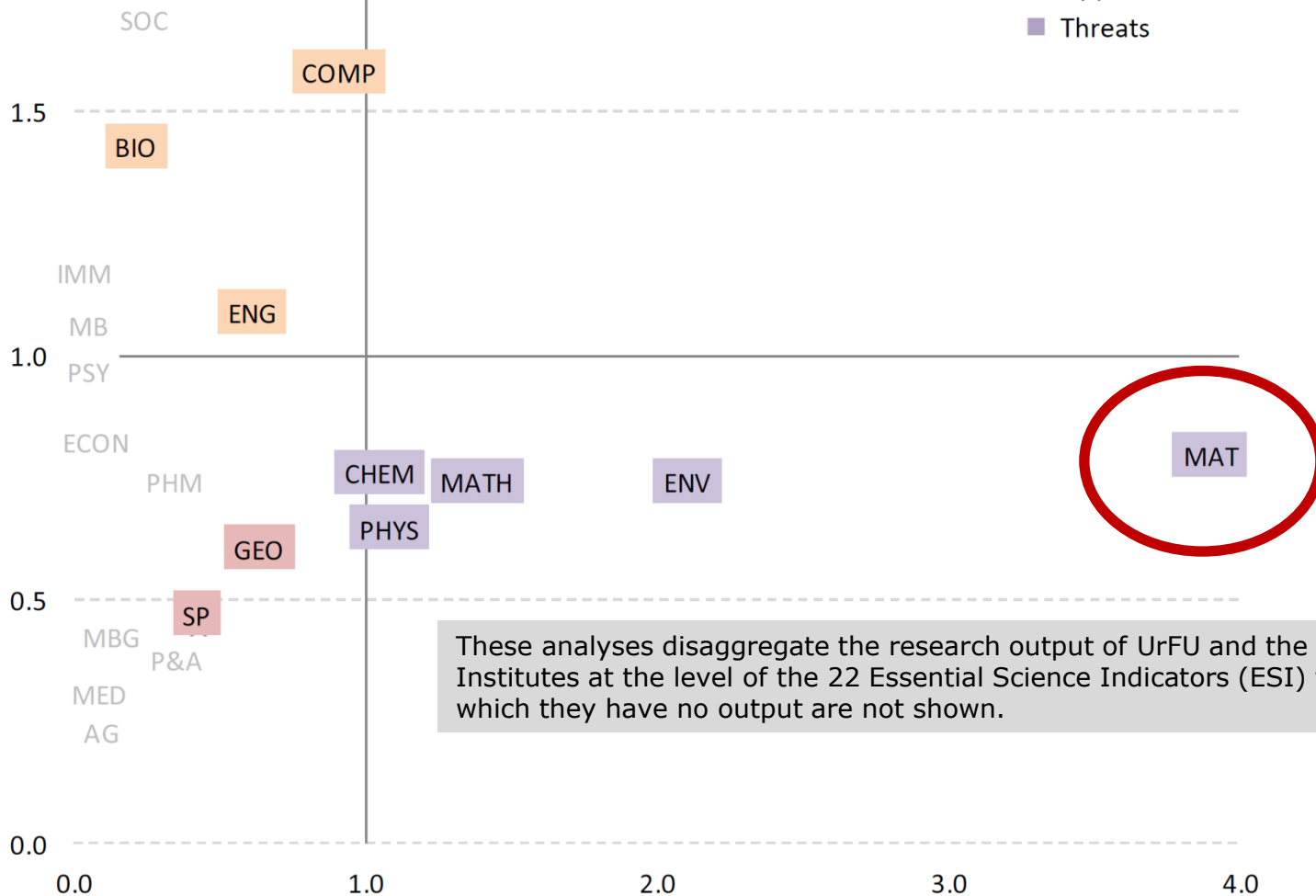
Research output UrFU



SWOT analysis of UrFU and the selected UB RAS institutes, 2003-2012

Citation impact
relative to Russia

- Strengths
- Weaknesses
- Opportunities
- Threats



These analyses disaggregate the research output of UrFU and the selected UB RAS Institutes at the level of the 22 Essential Science Indicators (ESI) fields. Those fields in which they have no output are not shown.

Share of output relative to Russia

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Elsevier and Russia's Ural Federal University Sign License Agreement for Pure

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First Russian university to have access to Elsevier's research information management system

Moscow, April 22, 2014

Elsevier, a world-leading provider of scientific, technical and medical information products and services, today announced it has reached an agreement with Russia's Ural Federal University (UrFU) to provide its researchers, faculty members and management with access to [Pure](#), a research information management system to enable evidence-based decisions, promote collaboration, simplify administration and optimize impact. Pure is part of the [Elsevier Research Intelligence](#) portfolio of tools and services.

Over the years, UrFU, one of the leading Russian universities, has focused on increasing the quality and quantity of its research output with the aim of increasing its position in the world research rankings. With access to Pure, UrFU researchers, faculty members and management can improve transparency in their research processes, monitor and facilitate collaboration and track the university's research outcomes, including awarded grants, publications and research output and impact. Furthermore, the customized dashboards and flexible reporting capabilities will help managers make more strategic, evidence-based decisions to improve the university's performance.

Viktor Koksharov, UrFU's Rector, said, "Pure will allow us to share our accomplishments with the global scientific community. Centrally collecting research information will give us more insights to enable us to increase the efficiency of research management in the university."

Igor Osipov, PhD, Regional Director at Elsevier Russia and Belarus, added, "We welcome the innovative approach UrFU is taking for their future development. We are pleased to extend our collaboration with the university and bringing Pure to the Russian market for the first time. We are confident that with access to Pure the university can further optimize their efforts to expand their global reputation."

About Ural Federal University

[Ural Federal University \(UrFU\)](#) is the oldest higher educational institution in the Ural region. It was founded in Ekaterinburg in 1920. Since 2008 the Ural University has carried the name of Boris Yeltsin, its graduate of 1955, elected by the people in 1991 to be the first President of Russia. UrFU is one of the top ranked scientific centres in Russia, carrying out research in natural, technical, and social sciences, the



Франсин Доминик
Лиектенан

Liektenan, Fransin Dominik

› Rektorat

Overview

Research output

Activities

CV

Research interests

Francine-Dominique Liechtenhan is among the leading European specialists in the field of Russian history, and an experienced administrator of the research and education academic projects. F.-D. Liechtenan is the author of more than 100 research papers, including 15 monographs in the history of Russia.

Research output

› Une leçon de géostratégie, les observations sur la Russie en 1761

Book/Report › Book

› Pierre le Grand : le premier empereur de toutes les Russies

Book/Report › Book

› Une vie avec l'histoire : mémoires

Book/Report › Book

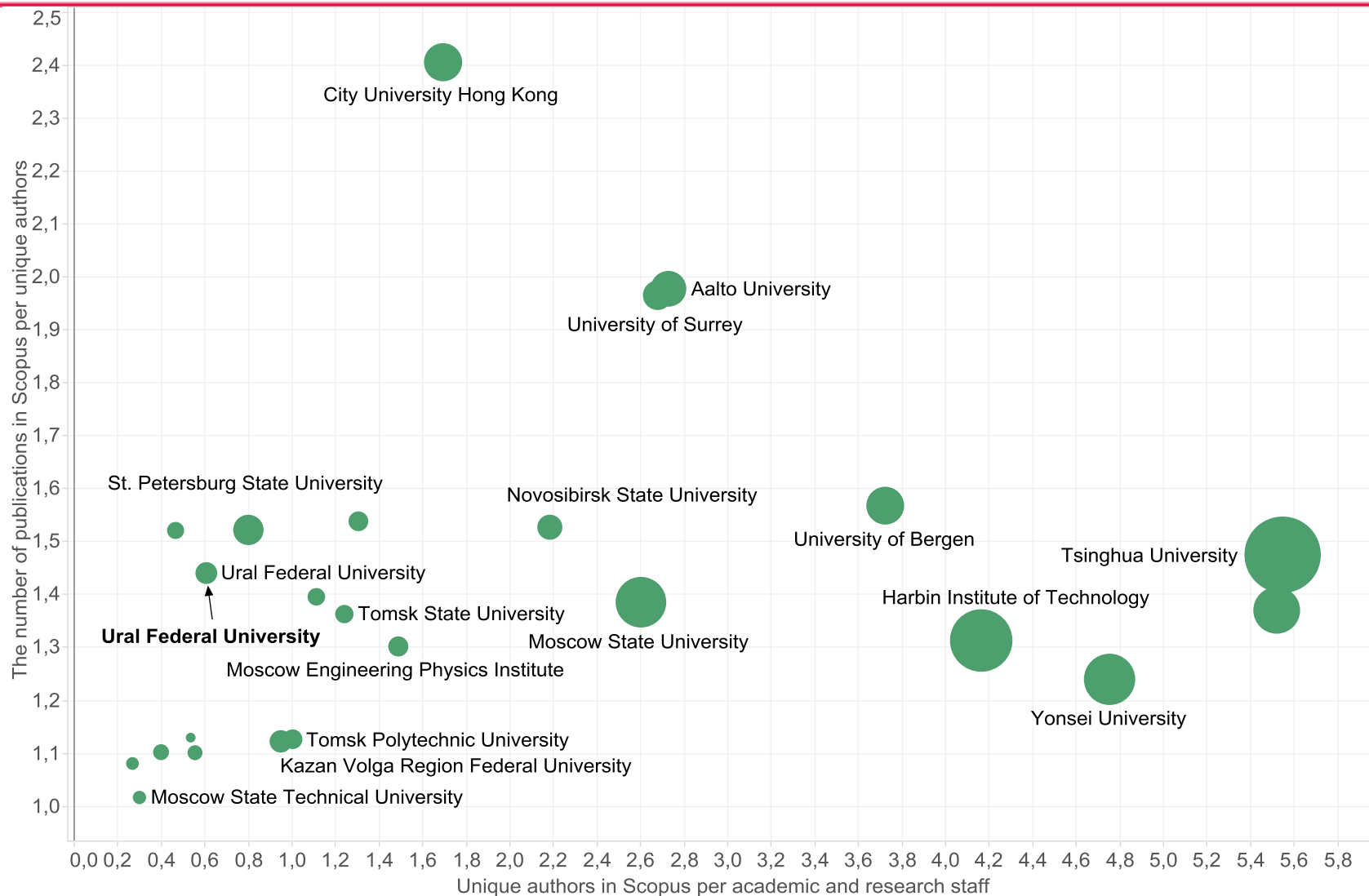
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Activities

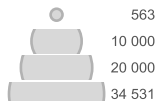
› Quaestio rossica

Editorial work or peer review of publications ›
Editorial activity

Comparison chart of author publication activity

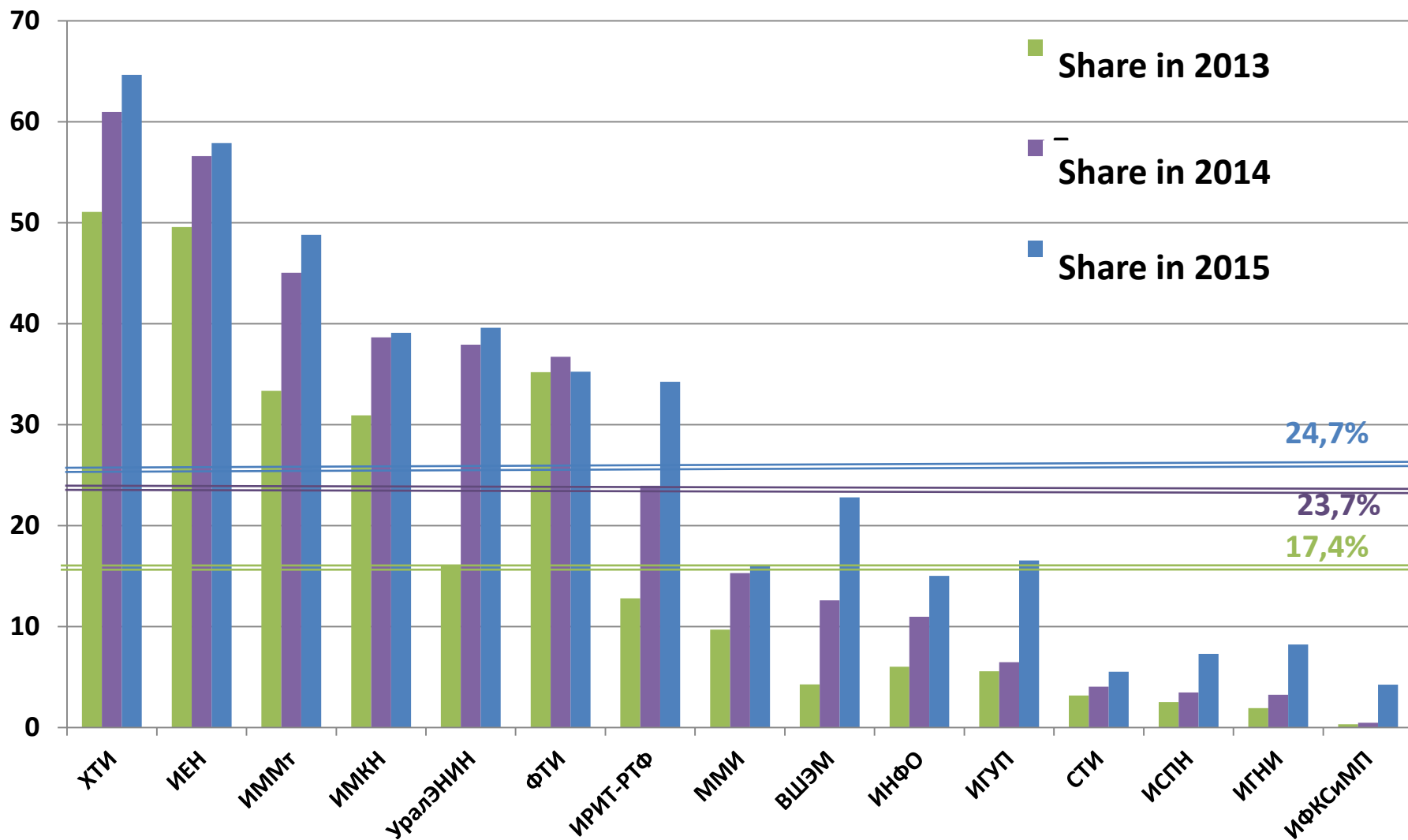


The number of publications in Scopus (2012-2014)



Source: SciVal 2012-2014. Information about academic and research staff from The Report Russian Ministry of Education and Science 2013 and InCites 2012

Dynamics of changes in the share of active authors in academic and research staff per department of the university, who wrote papers indexed in WoS Core Collection and Scopus



No.

According to Russian Science Citation Index (RSCI)

<http://elibrary.ru>

Interface and papers are mostly in Russian. The access to the system is free.

In 2015 in RSCI were 5873 UrFU publications while only 1471 (25%) were in Scopus



ПОИСК

ВХОД

НАВИГАТОР

СЕССИЯ

КОНТАКТЫ

СРАВНЕНИЕ ПОКАЗАТЕЛЕЙ ОРГАНИЗАЦИЙ

ПАРАМЕТРЫ

Референтная группа организаций:

Все организации РФ (2128)

Регион Российской Федерации:

Все регионы РФ

Выберите показатель для сравнения организаций:

Общее число публикаций за 5 лет

ИНСТРУМЕНТЫ

- ▶ Следующая страница
- ▶ Список организаций

- i** Показатели рассчитываются по публикациям организации за 5 лет (2011-2015), за исключением h-, g- и i-индексов, которые учитывают все публикации организации
- i** Учитываются все типы публикаций, в том числе монографии, материалы конференций, сборники статей, патенты, диссертации и т.д.
- i** Показываются только организации, имеющие не менее 50 публикаций за 5 лет (2011-2015)
- i** Дата последнего обновления показателей: 31.03.2016

№	Название организации	Показатель
1.	Московский государственный университет им. М.В. Ломоносова (Москва)	67321
2.	Санкт-Петербургский государственный университет (Санкт-Петербург)	50241
3.	Финансовый университет при Правительстве РФ (Москва)	44751
4.	Российская академия народного хозяйства и государственной службы при Президенте РФ (Москва)	37289
5.	Российский экономический университет им. Г.В. Плеханова (Москва)	29768
6.	Российский университет дружбы народов (Москва)	29560
7.	Южный федеральный университет (Ростов-на-Дону)	29262
8.	Первый Московский государственный медицинский университет им. И.М. Сеченова (Москва)	28995
9.	Казанский (Приволжский) федеральный университет (Казань)	27889
10.	Российский государственный педагогический университет им. А.И. Герцена (Санкт-Петербург)	27074
11.	Уральский федеральный университет им. первого Президента России Б.Н. Ельцина (Екатеринбург)	25757
12.	Национальный исследовательский Томский политехнический университет (Томск)	25144

Transferable Skills Training for Researchers

Transferable skill category	Skills included:
Interpersonal skills	* Working with others/teamwork * Mentoring and supervisory skills * Negotiating skills * Networking skills
Organisational skills	* Project and time-management skills * Career planning skills
Research competencies	* Grant application writing skills * Research management and leadership * Knowledge of research methods and technologies beyond the PhD project * Research ethics and integrity
Cognitive abilities	* Creativity and the ability for abstract thought * Problem solving
Communication skills	* Communication/presentation skills, written and oral * Communication/dialogue with non-technical audiences (public engagement) * Teaching skills * Use of science in policy making
Enterprise skills	* Entrepreneurship * Innovation * Commercialisation, patenting and knowledge transfer

Source: ESF (2009), grouped into categories by author.
Transferable Skills Training for Researchers / OECD. Paris:
Organisation for Economic Co-operation and Development,
2012. 151 p.

Which skills should be trained and what should be done on the organizational level to be able to train them?

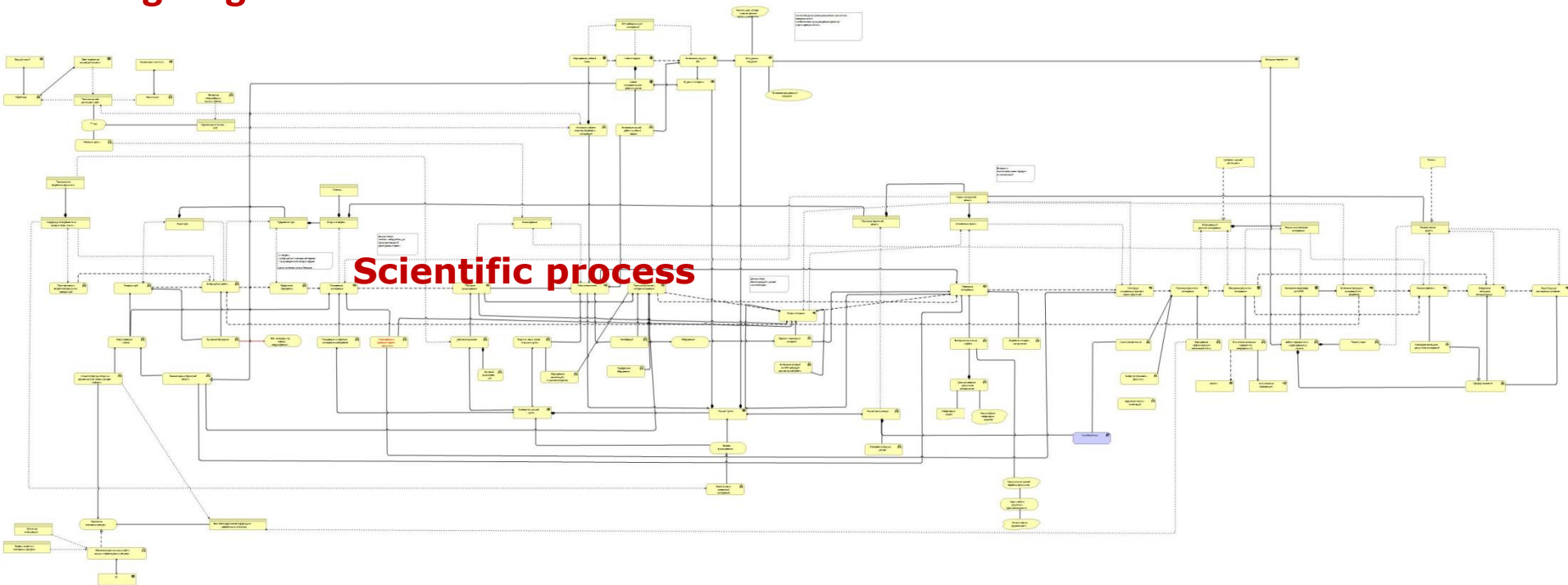
- To model the skills and their connections with organisational changes we used the Archimate language
The Open Group Standard
<http://www.opengroup.org/subjectareas/enterprise/archimate>
- Results were discussed during a regular meeting of INCOSE RUS
February 17 2016 (available in Russian)
<http://incose-ru.livejournal.com/54648.html>

Architecture of the Academic and Engineering Work at the University

Strategizing

Education

Innovations



About Archimate: <http://www.opengroup.org/subjectareas/enterprise/archimate>

About the model: <http://incose-ru.livejournal.com/54648.html> (only in Russian, sorry)

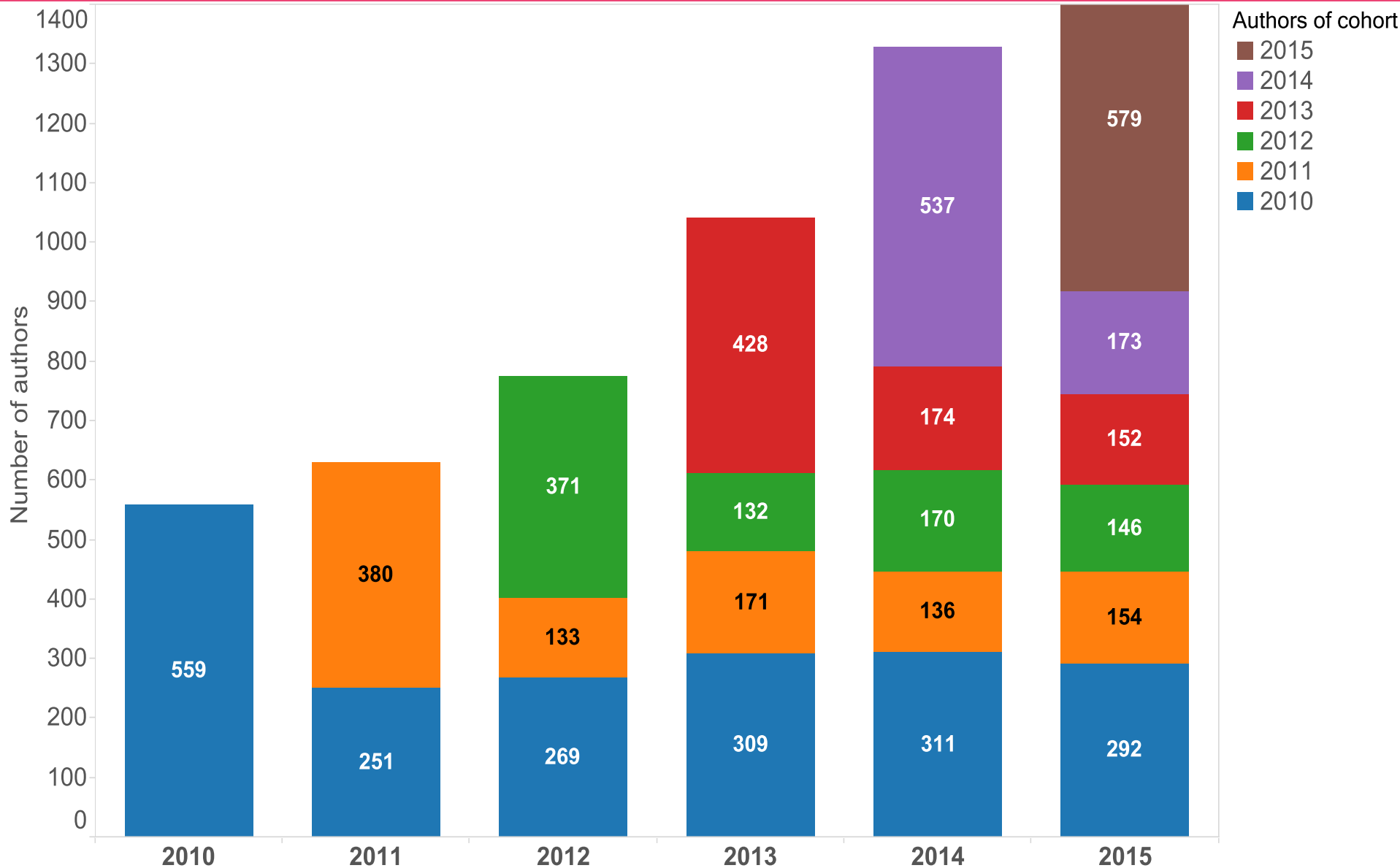
- The ability to confirm the presence of the skills required to conduct the whole research cycle for university employees
- Model of maturity of a scientific group
- Ability to determine which information about a business function implementation cannot be found in CRIS.
- Ability to design the process of information collection about business functions acknowledging the limitations of CRIS.

- Allows us to build indicators for measuring the progress of whole organization, and not only some processes within it
- Is used to detect the differences in behavior of employees by grouping them by the cohort. For example, grouping them by the year of the first publication.
- Allows us to track the results for both the information which can and cannot be displayed in CRIS.
- Allows to compare the results with other benchmark universities.

Cohort structure and dynamics

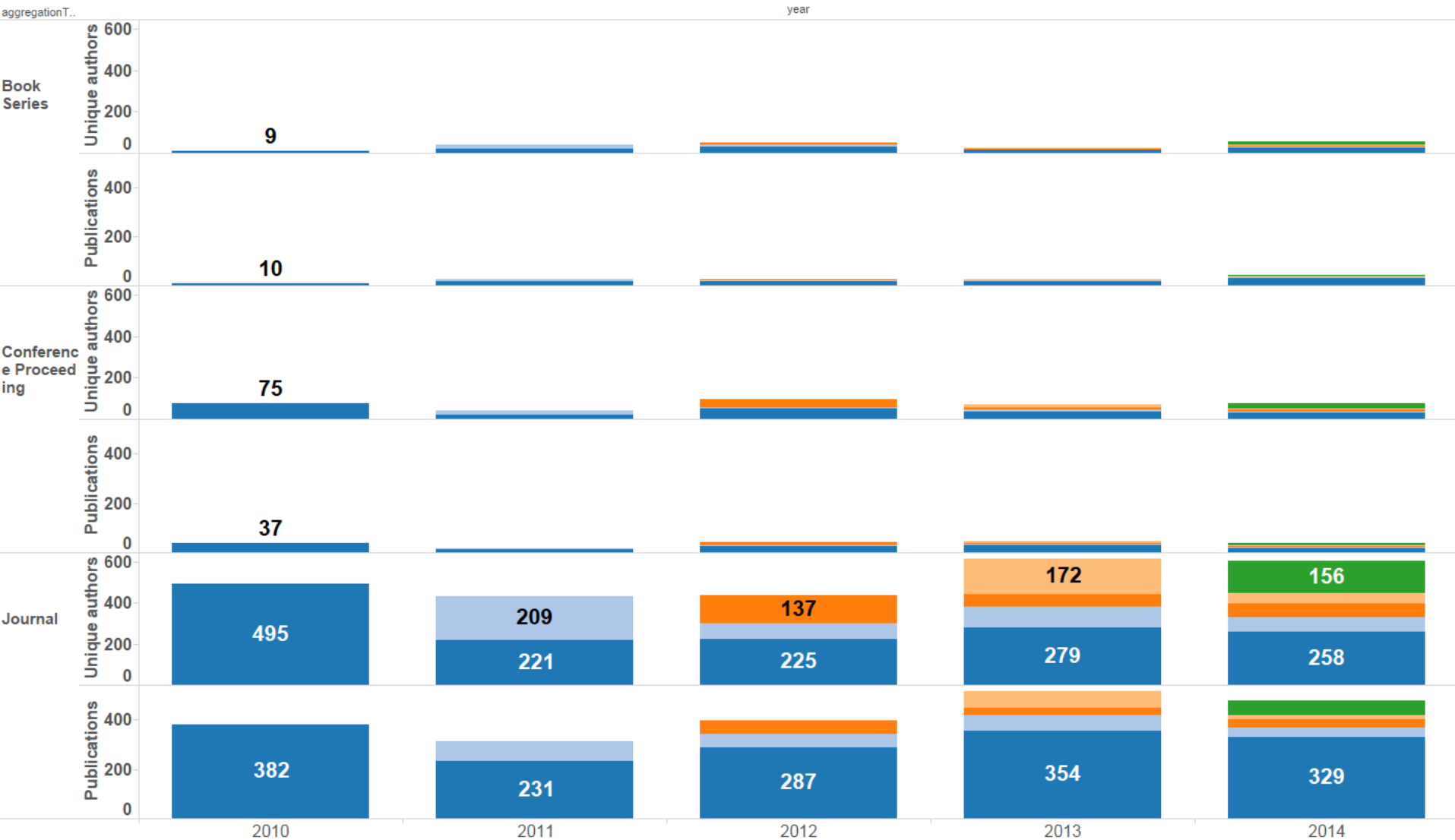
Year	2010	2011	2012
Authors of cohort 2012			New authors who published in 2012: • 15 (PhD students 2012) • 20 (New Researchers, may be with history)
Authors of cohort 2011		New authors who published in 2011: • 10 (PhD students 2011) • 8 (New Researchers, may be with history)	Authors who published in 2011: • 4 (PhD students 2011) • 7 (New Researchers, may be with history)
Authors of cohort 2010	• 10 (PhD students 2010) • 10 (Researchers)	Authors who published in 2010: • 5 (Researchers, ex PhD students) • 7 (Researchers)	Authors who published in 2010: • 4 (Researchers, ex PhD students) • 9 (Researchers)

Cohort analysis of UrFU authors for years 2010-2015



Publications of authors from cohort	2010	2011	2012
2012-2012			20
2011-2012			5
2011-2011		8	14
2010-2012			10
2010-2011		6	4
2010-2010	10	9	12

Cohort analysis by publication types. Authors of 2010, co-authors of 2010-2014. UrFU



Cohort analysis by publication types. Authors of 2012, co-authors of 2012-2014. UrFU



- CRIS allows for assessment of research performance of those of the academic staff who are already working at a level of publishing papers in indexed journals.
- A model of research group maturity was proposed to aid facilitation and monitoring of the development of new research groups. Extending the CRIS capabilities to those of RIMS is needed in order to study the validity of the model and to employ it for action planning.
- A cohort analysis method based on CRIS Pure data is proposed to validate the long-lasting effect of actions taken to increase the university's research output.

Thank you for attention

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