





THE USE OF THOMSON REUTERS RESEARCH ANALYTIC RESOURCES IN ACADEMIC PERFORMANCE EVALUATION

DR. EVANGELIA A.E.C. LIPITAKIS OCTOBER 2014, PRAGUE

#### Thomson Reuters: Solutions Portfolio to Seamlessly Support Research

#### **Discover Scholarly Output**



# Organize References & Write Papers EndNote<sup>®</sup>



Benchmark & Analyze Performance

CONVERIS

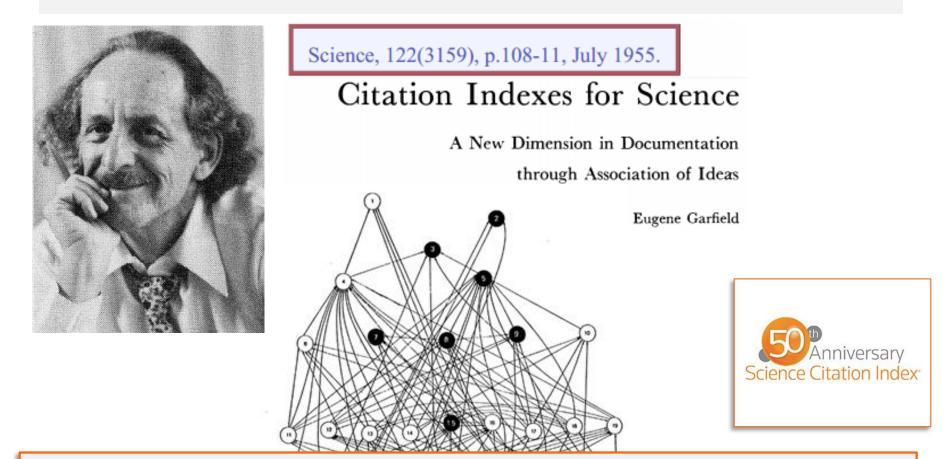
DESKTOP, IPAD, AND ONLINE

End-to-end research information management system

Manage & Report on Scholarly Activity



#### Eugene Garfield's "Association Of Ideas Index"-1955



Web of Science is the "web" presentation of journal citation indexes developed five decades ago by Dr. Eugene Garfield, founder of ISI (now Thomson Reuters SSR) and an icon in the realm of scholarly information

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## Web Of Science Online Citation Database

#### SELECTIVE.....YET COMPREHENS

- "Multidisciplinary" coverage
  - enable to analyze the whole context of scientific research
- "Multiyear" coverage
  - enable to analyze the history and development of sciences
- "Cover to Cover" policy
  - enable to follow the flow of a topic regardless of communication type
- "ALL Authors, ALL Addresses"
  - enable to analyze by author name, by institution
- "ALL Cited References"
  - enable to perform analyses on literature that is not indexed



Selection Process For The Web Of Science Core Collection

### Four Points of Evaluation







#### 1. Quantification:

- Data reduction (extracting essential information)
- Data cleaning and data disambiguation



- For more than four decades Thomson Reuters has provided a wide range of tools and services supporting research evaluation.
- Our specialist work with Web of Science data and ensure maximum standardization and unification before delivery to customers.
- Not just simple counts and averages, but real metrics founded on baselines for comparison and normalized statistics.



#### 2. Measuring:

- What can and what should be measured?
- What are appropriate measures for the purpose?





#### 3. Benchmarking

- Comparison (like with like)
- Putting data into context
- Consider limitations



#### **Field Baselines**

Baselines are annualized expected citation rates for papers in a research field.

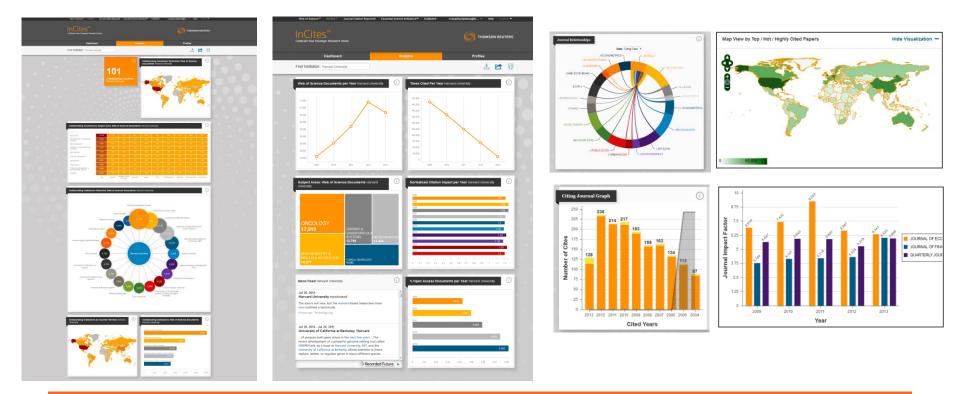
Citation Rates are yearly averages of citations per paper.

Citation Rates	RESEARCH FIELDS A	- 20	004	2005	2006	2007
	ALL FIELDS		22.11	20.36	18.25	16.24
MATHEMATICS	7.96	7.13		6.43	5	.72
MOLECULAR BIOLOGY & GENETICS	51.52	46.19		41.70	37.	.52
	COMPUTER SCIENCE		7.08	6.60	5.98	8.25
	ECONOMICS RUSINESS	8	17.14	15.58	13.38	10.79

alibrate Your Strategic Research Visio						THOMSON	REUTERS
Dashboard		Analyt	ics		P	rofiles	
Analytics Explore Organiza	tions						
Results: 75 ()	Bar Graph 🗸 🛛 N	ormalized Citati	an Impact		- 5 +	Hide	Create Tile
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Organization Name -	Jotte Physical Technical Institut				<u>8</u>		
Organization Type =					0.65		
Location -	Hovestrak State University					-	0.89
× RUSSIA	Russian Academy of Sciences						
Rank	Global	Base	line				
Association	Cicibal	Dusc					
By Research Ne	_						
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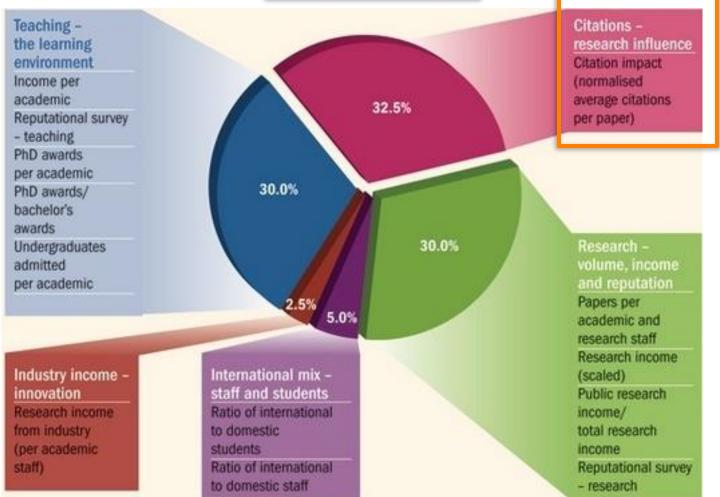
#### 4. Presentation and interpretation

- Visualizations + interpretation of observations
- Linking bibliometric indicators to results of other methods











#### The "SHANGHAI RANKING"



#### Indicators and Weights for ARWU

Criteria	Indicator	Code	Weight
Quality of Education	Alumni of an institution winning Nobel Prizes and Fields Medals	Alumni	10%
Quality of Faculty	Staff of an institution winning Nobel Prizes and Fields Medals	Award	20%
Quality of Faculty	Highly cited researchers in 21 broad subject categories	HiCi	20%
	Papers published in Nature and Science*	N&S	20%
Research Output	Papers indexed in Science Citation Index-expanded and Social Science Citation Index	PUB	20%
Per Capita Performance	Per capita academic performance of an institution		10%
Total			100%



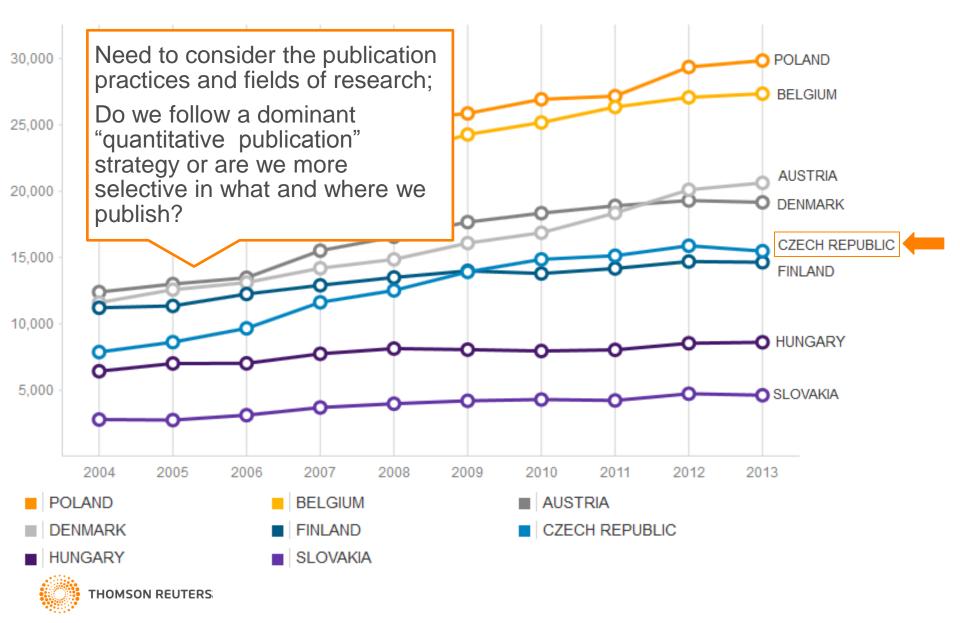
#### Data collection

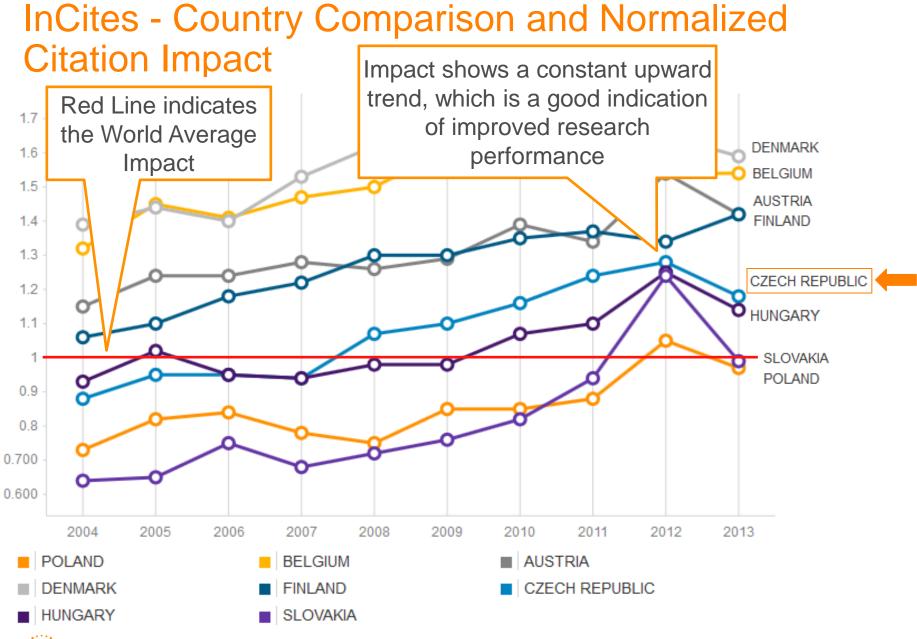
The CWTS Leiden Ranking 2013 is based on data from the Web of Science bibliographic database produced by Thomson Reuters. The ranking includes the 500 universities worldwide with the largest publication output in the Web of Science database. Although the ranking is limited to universities, it does include organizations directly related to universities, in particular hospitals associated with universities. Changes in the organizational structures of universities up to 2012 have been taken into account.

#### **CWTS Leiden Ranking 2013**

Select field and region/country			Select indicators						
Field:		All sciences	•	Type of indicators:		Impact			
Region:		Asia	Y	Indicator us ranking:		PP(top 10%)			
Country:		China	•	Minimum nu publications		500 1000	5000	10000	
Rank University		Country	PI	PP(top 10%)	Stability	interval			
1	Nankai Univ		<u> 17</u>	3673	14.4%				
2	Hunan Univ		<b>1</b>	1969	14.3%	-			
3	Hong Kong Univ S	ci & Technol	12 - C	2797	13.5%				
4	Univ Sci & Techno	l China	*	4914	13.3%	•			
5	City Univ Hong Ko	209	2	3242	12.4%				

## National Comparisons – Monitor your Productivity





THOMSON REUTERS

### InCites – Monitor your International Collaboration

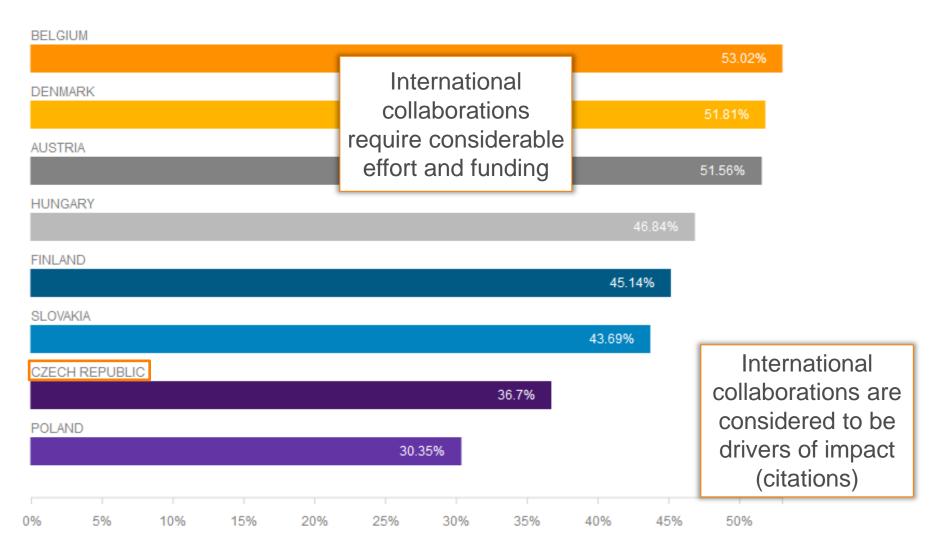
 International research collaboration has intensified and is often regarded as an indicator of quality and a way to develop and disseminate scientific knowledge

 Funding agencies such as the EC stimulate collaboration within the European Union by applying it as a funding criterion

What is the return on international collaboration?

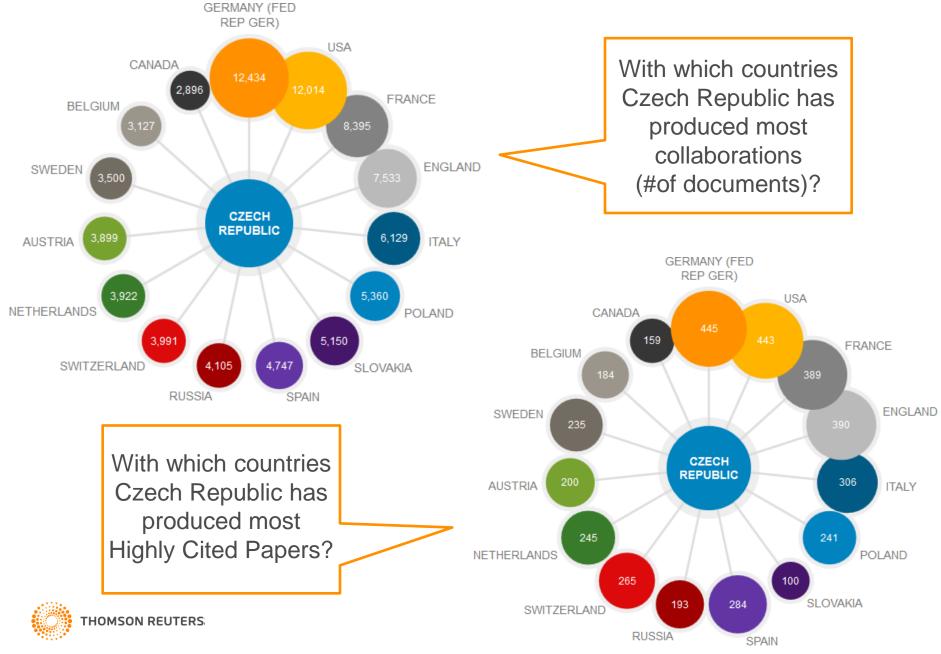


# How much Czech Republic is collaborating internationally?

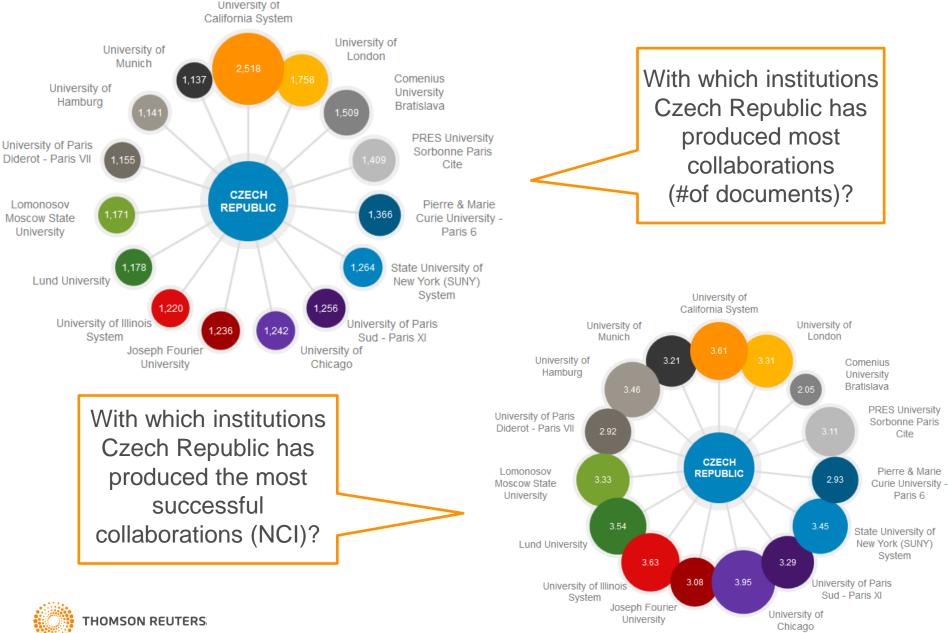




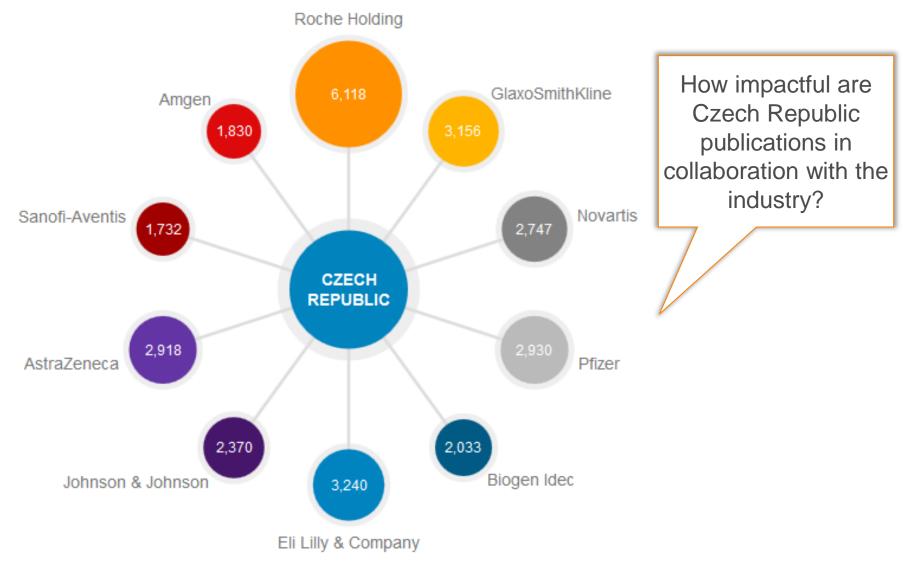
#### **International Collaborations - Countries**



## **International Collaborations - Institutions**



# Industry Collaborations – Impact of publications





# In which disciplines are Czech Republic researchers most active?

MATERIALS SCIENCE, MULTIDISCIPLINARY				
6,378	CHEMISTRY, MULTIDISCIPL 4,341	PLANT SCIENCES 3,636		ONCOLOGY <b>3,568</b>
BIOCHEMISTRY & MOLECULAR BIOLOGY 5,557	CHEMISTRY, ANALYTICAL 3,534		AST	RONOMY & ROPHYSICS
	PHYSICS,		2,637	
CHEMISTRY, PHYSICAL 4,576	MULTIDISCIPLINARY 3,112		GENE 1,946	ETICS & HEREDITY



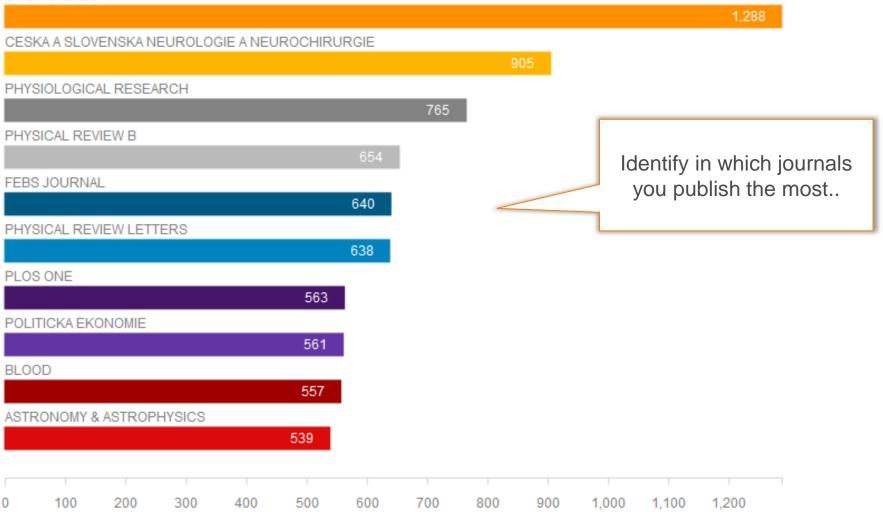
# How much Czech Republic researchers collaborate in the disciplines they are most active?

ASTRONOMY & ASTROPHYSICS 66.89%	CHEMISTRY, PHYSICAL <b>57.36%</b>	BIOCHI & MOLI BIOLOC <b>46.99%</b>	ECULAI GY	F MATERIALS SCIENCE, MULTIDISCIP 46%	
PHYSICS, MULTIDISCIPLINARY 63.98%	PLANT SCIENCES				
	45.68%				
GENETICS & HEREDITY 62.74%	ONCOLOGY <b>40.5%</b>		CHEMIS MULTIDI 37.34%	try, Scip	CHEMISTRY, ANALYTICAL <b>34.41%</b>



# Assess your journal strategy in all disciplines with journal ranking indicators

CHEMICKE LISTY

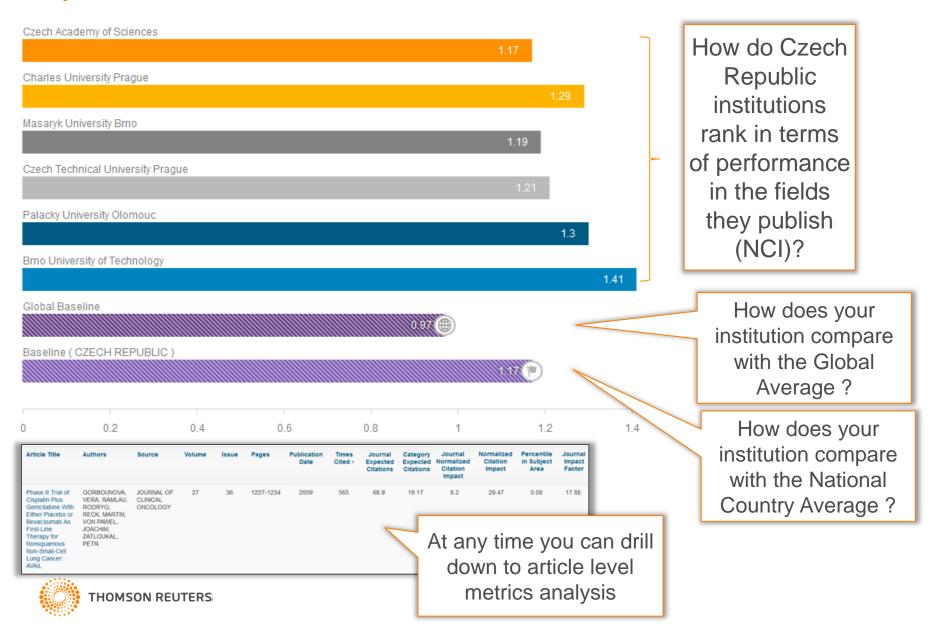




# Institutional Comparisons – Monitor your Productivity



#### Institutional Comparisons –Normalized Citation Impact for 2008-2012



#### CURRENTLY APPROXIMATELY 600 INCITES CUSTOMERS WORLDWIDE

Selected major InCites customers in Europe:

#### **Ministries and Government Agencies**

Austria Bulgaria **Czech Republic** France Greece Hungary Ireland Portugal Romania Russia Slovakia Slovenia Turkey U.K.

#### **Research Institutes and Universities**

Max Planck Society Kings College London KTH Royal Institute of Technology **Russian Academy of Sciences** University of Geneva Utrecht University University of Oslo Catholic University in Leuven University of Helsinki University of Barcelona University of Vienna Masaryk University Brno **University of West Bohemia Pilsen IPN Methodology Project** 



#### **THANK YOU!**



