



UNIWERSYTET
MIKOŁAJA KOPERNIKA
W TORUNIU

Wydział Filozofii
i Nauk Społecznych

Darmowe programy do wizualizacji danych

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 VOSviewer Online
Visualizing scientific landscapes

RAWGraphs

Datawrapper

Timeline **JS**



Looker Studio

tableau++public

VOSviewer Online

Visualizing scientific landscapes

<https://www.vosviewer.com/>

- narzędzie bezpłatne (Nees Jan van Eck i Ludo Waltman; Centre for Science and Technology Studies of Leiden University in the Netherlands);
- do mapowania nauki, tj. przedstawiania wyników badań naukowych w formie atrakcyjnej wizualnie mapy powiązań pomiędzy słowami kluczowymi, pojęciami czy autorami, odkrywania luk badawczych;
- pliki csv wyeksportowane z baz;
- wymaga pobrania na komputer i rozpakowania.



The screenshot displays the VOSviewer website. At the top, the logo and name 'VOSviewer' are visible, along with the tagline 'Visualizing scientific landscapes'. A navigation bar contains links: Home, Features, Getting Started, Download (highlighted with a red rectangle), Publications, Products, Course, and Contact. Below the navigation bar, a network visualization of scientific institutions is shown, with nodes representing universities and lines representing connections. The 'Welcome to VOSviewer' section is at the bottom, providing a brief description of the tool's capabilities.

Welcome to VOSviewer

VOSviewer is a software tool for constructing and visualizing bibliometric networks. These networks may for instance include journals, researchers, or individual publications, and they can be constructed based on citation, bibliographic coupling, co-citation, or co-authorship relations. VOSviewer also offers text mining functionality that can be used to construct and visualize co-occurrence networks of important terms extracted from a body of scientific literature.



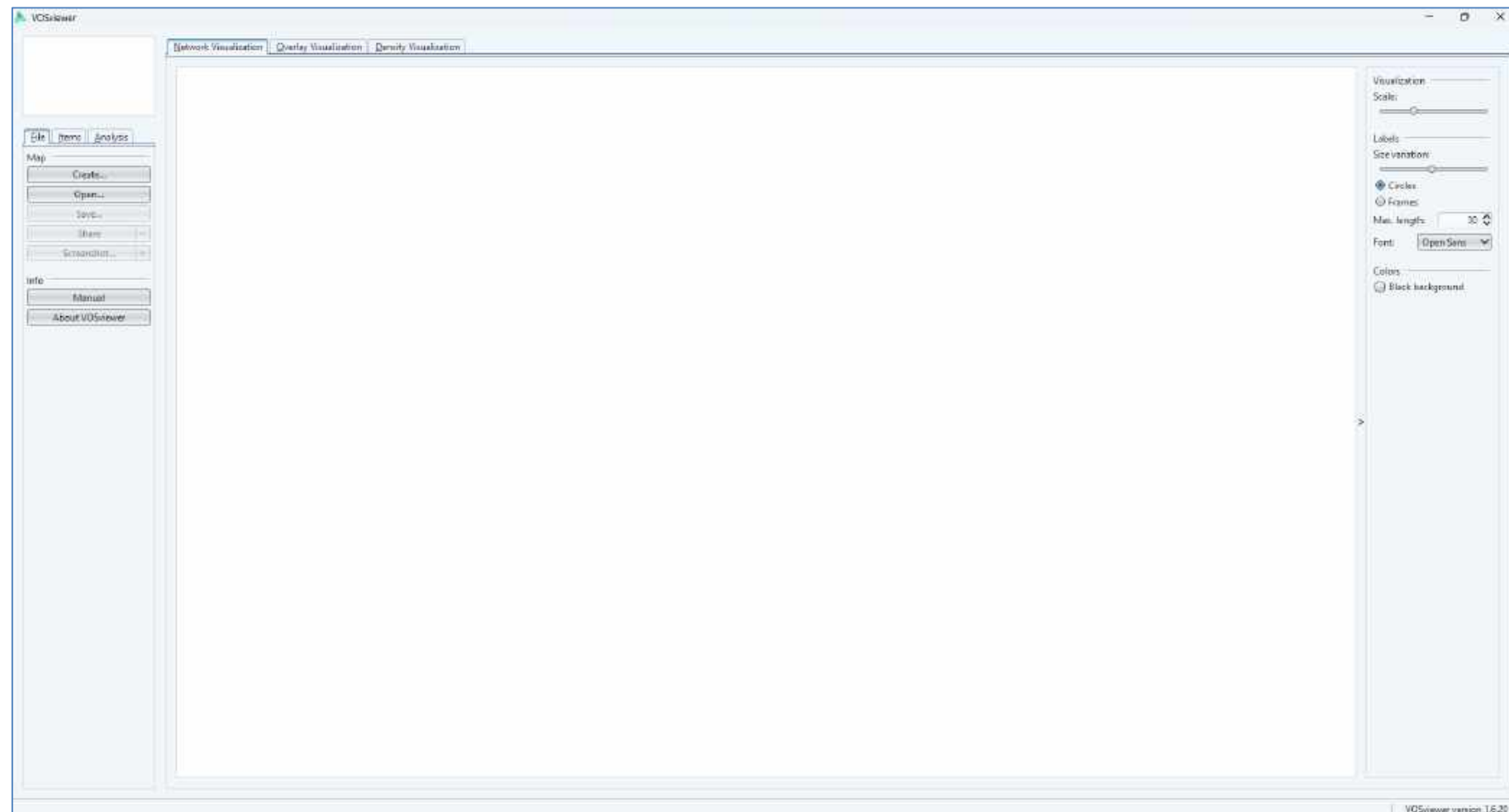
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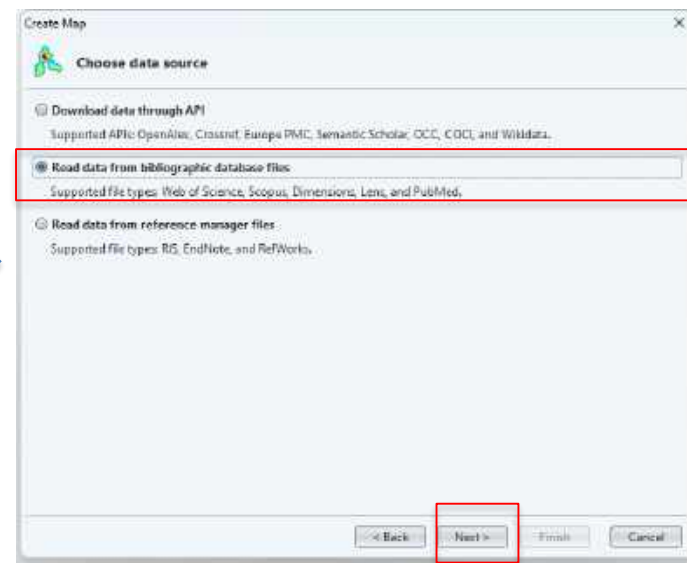
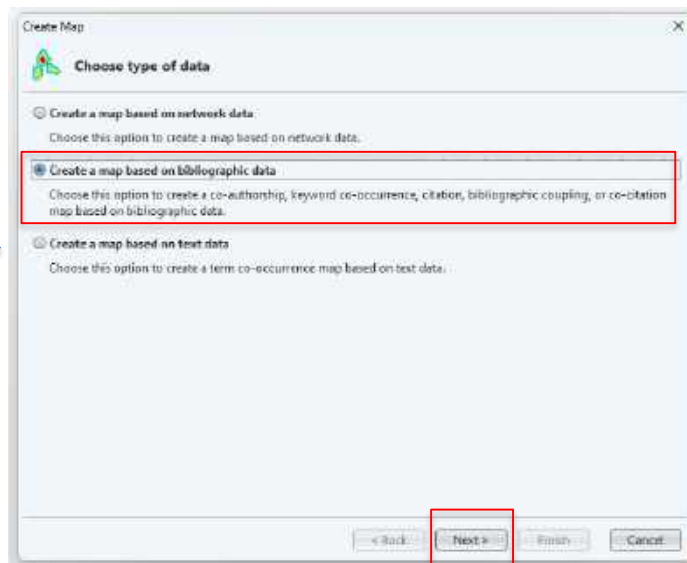
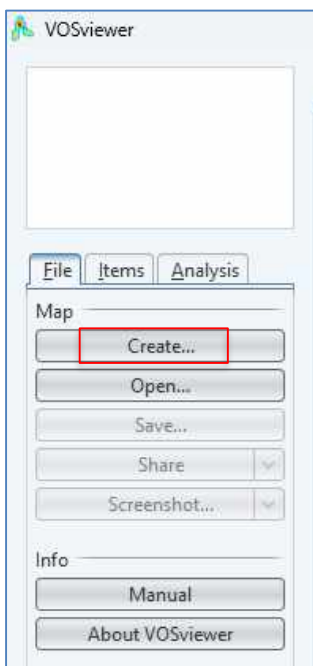
VOSviewer Online

Visualizing scientific landscapes



VOSviewer Online

Visualizing scientific landscapes



VOSviewer Online

Visualizing scientific landscapes

Create Map

Select files

Web of Science Scopus Dimensions Lens PubMed

Scopus files: (0)

Next >



Create Map

Choose type of analysis and counting method

Type of analysis: (0)

- ☒ Co-authorship
- ☐ Co-occurrence
- ☐ Citation
- ☐ Bibliographic coupling
- ☐ Co-citation

Unit of analysis:

- ☒ Authors
- ☐ Organizations
- ☐ Countries

Counting method: (0)

- ☒ Full counting
- ☐ Fractional counting

VOSviewer thesaurus file (optional): (0)

☒ Ignore documents with a large number of authors.
Maximum number of authors per document: 25

☐ Reduce first names of authors to initials

Next >

Współautorstwo

VOSviewer Online

Visualizing scientific landscapes

Create Map

Choose type of analysis and counting method

Type of analysis: ☒ Co-authorship ☐ Co-occurrence ☐ Citation ☐ Bibliographic coupling ☐ Co-citation

Unit of analysis: ☒ Authors ☐ Organizations ☐ Countries

Counting method: ☒ Full counting ☐ Fractional counting

VOSviewer thesaurus file (optional):

☒ Ignore documents with a large number of authors.
Maximum number of authors per document: 25

☐ Reduce first names of authors to initials

< Back Next > Finish Cancel



Create Map

Choose thresholds

Minimum number of documents of an author: 2

Minimum number of citations of an author: 0

Of the 154 authors, 9 meet the thresholds.

< Back Next > Finish Cancel

VOSviewer Online

Visualizing scientific landscapes

Create Map

 **Choose number of authors**

For each of the 9 authors, the total strength of the co-authorship links with other authors will be calculated. The authors with the greatest total link strength will be selected.

Number of authors to be selected:

< Back **Next >** Finish Cancel



Create Map

 **Verify selected authors**

Selected	Author	Documents	Citations	Total link strength
☒	chan k.w.	2	71	4
☒	chen t.	2	395	4
☒	hollebeck l.d.	2	395	4
☒	li s.y.	2	71	4
☒	srivastava r.k.	2	395	4
☒	zhu j.j.	2	71	4
☒	kim j.m.	2	6	2
☒	han j.	2	16	1
☒	maliani m.m.	2	55	1

< Back Next > **Finish** Cancel



VOSviewer Online

Visualizing scientific landscapes

Unconnected Items

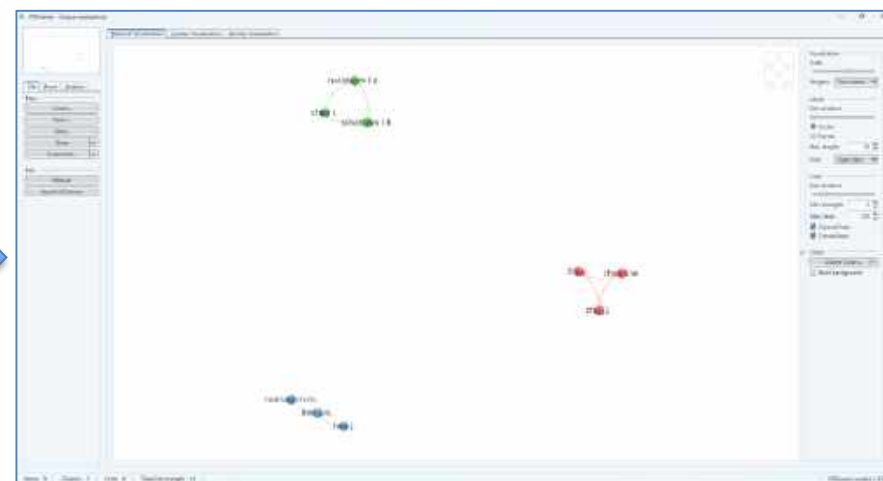


Some of the 9 items in your network are not connected to each other.
The largest set of connected items consists of 3 items.
Do you want to show this set of items instead of all items?

Yes

No

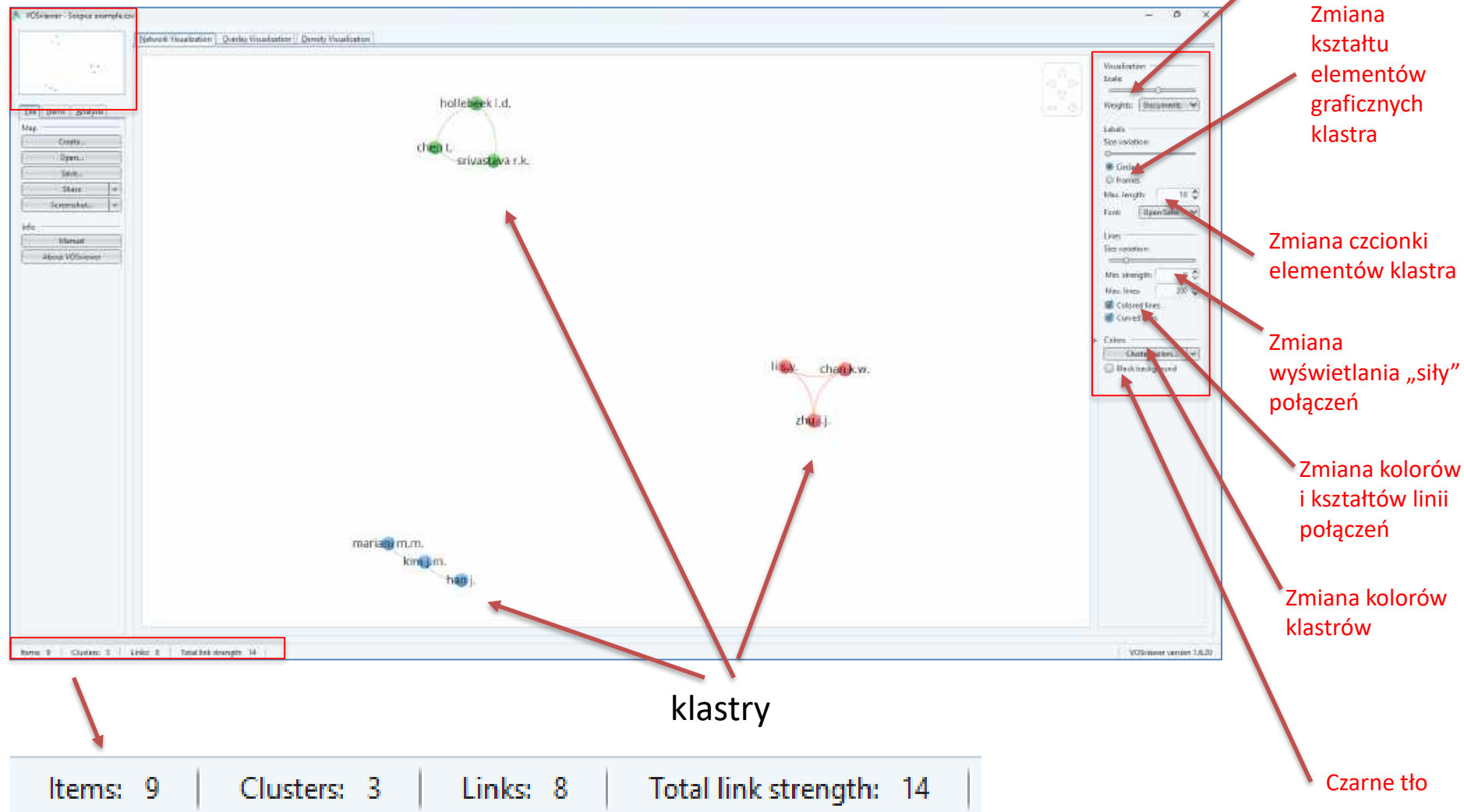
Cancel



VOSviewer Online Visualizing scientific landscapes

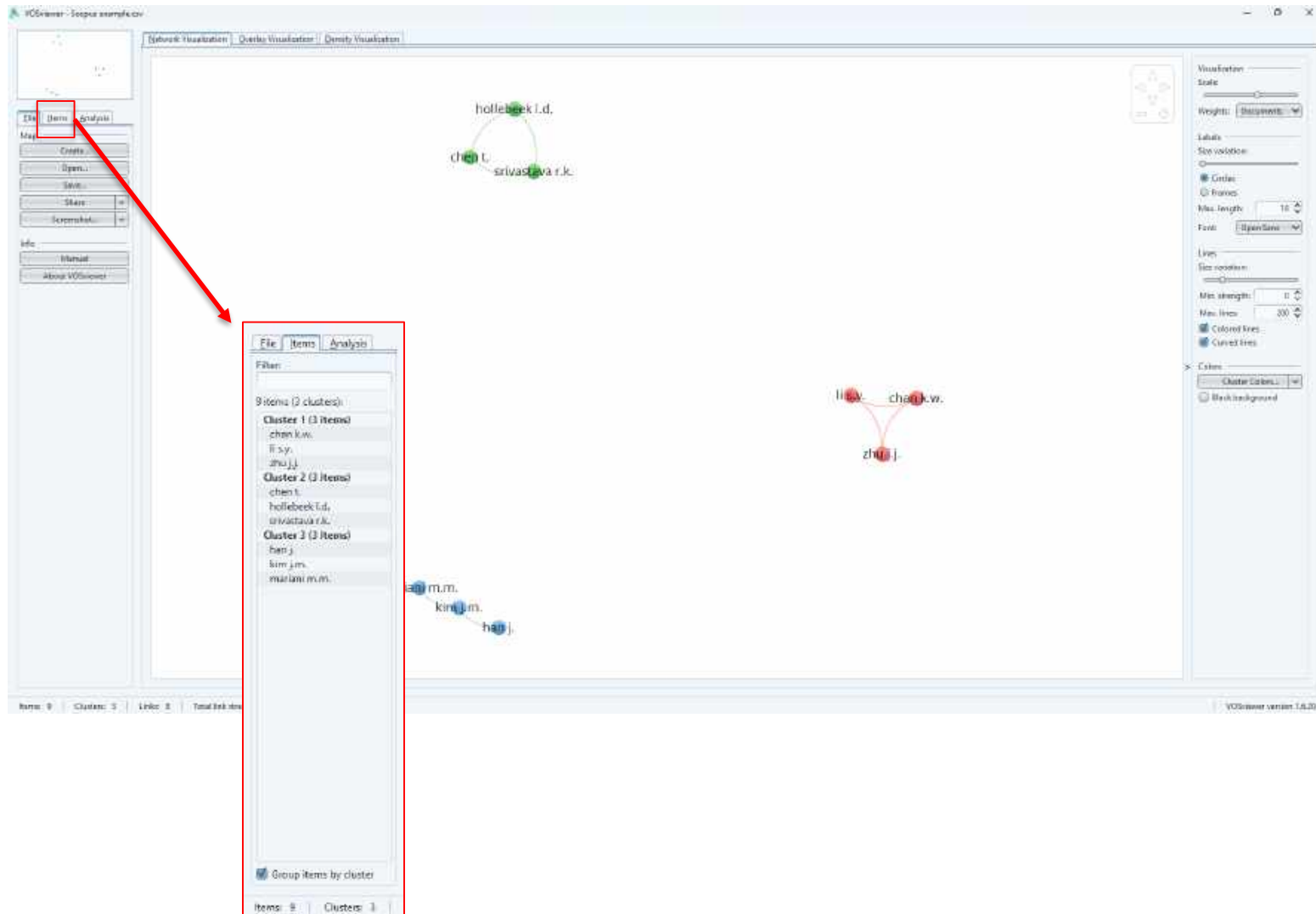
Podgląd mapy

Powiększanie czcionki dla nazw/tytułów klastra



VOSviewer Online

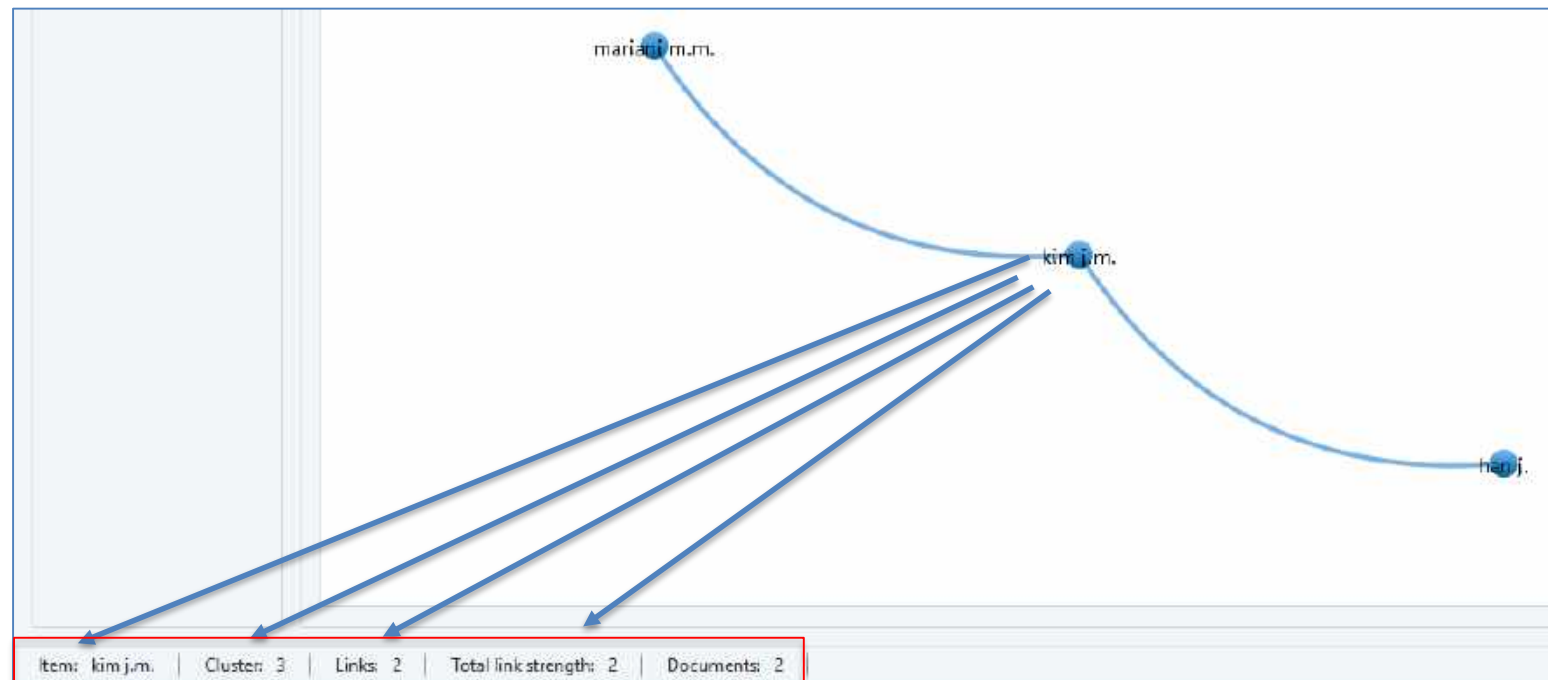
Visualizing scientific landscapes





VOSviewer Online

Visualizing scientific landscapes



Badany
autor

Numer
klastra

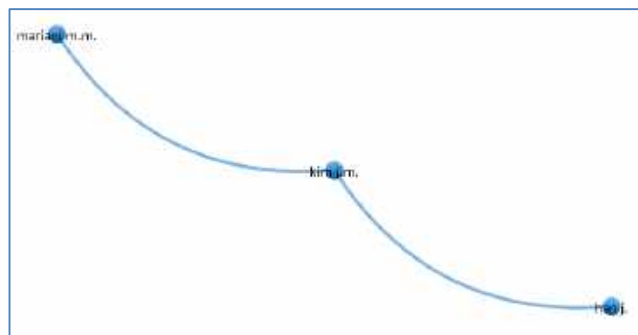
Liczba powiązań
(współautorów)

Liczba artykułów
współautorskich

Liczba dokumentów danego
autora ogółem

VOSviewer Online

Visualizing scientific landscapes



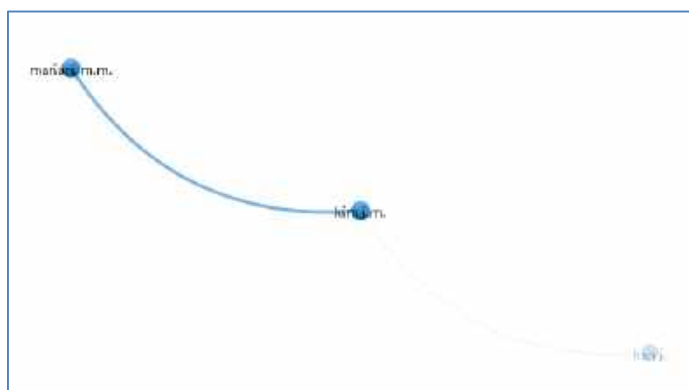
Item: kim j.m.

Cluster: 3

Links: 2

Total link strength: 2

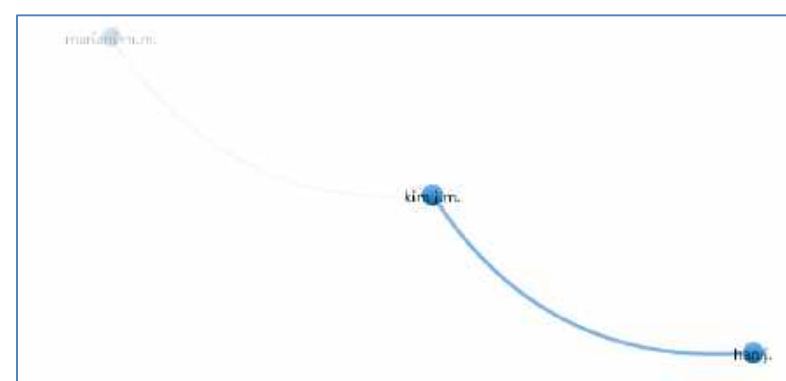
Documents: 2



Item 1: kim j.m.

Item 2: mariani m.m.

Link strength: 1



Item 1: han j.

Item 2: kim j.m.

Link strength: 1



VOSviewer Online

Visualizing scientific landscapes





VOSviewer Online

Visualizing scientific landscapes

Network Visualization

Overlay Visualization

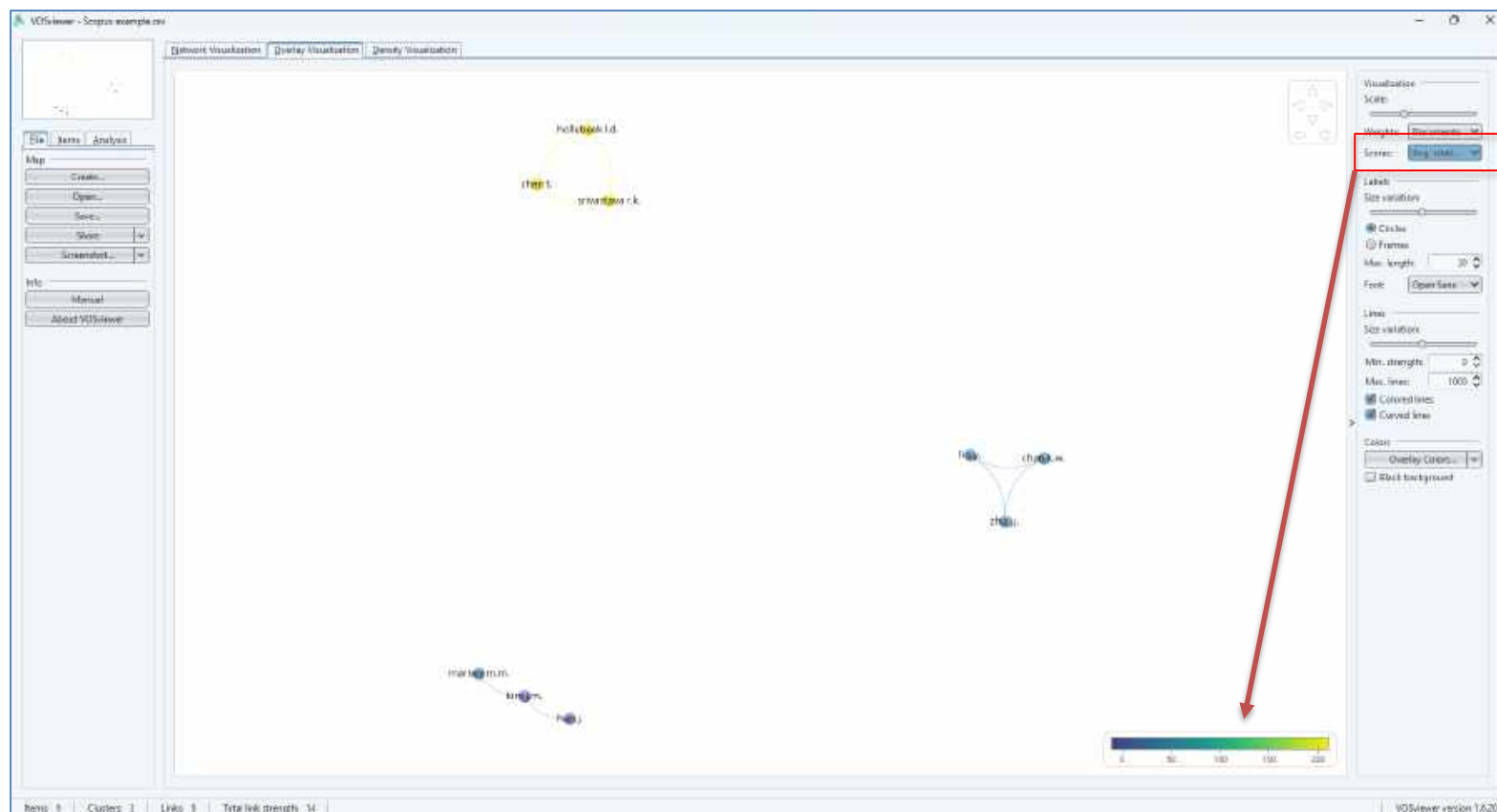
Density Visualization





VOSviewer Online

Visualizing scientific landscapes



VOSviewer Online

Visualizing scientific landscapes

The screenshot displays the VOSviewer Online web application interface. The main window shows a network visualization with three green nodes labeled 'hollebeck i.d.', 'chris t.', and 'srivastava r.k.' connected by lines. A red arrow points from the 'Save...' option in the left sidebar to a file save dialog box. The dialog box has a 'File Name' field and a 'Files of Type' dropdown menu showing various image formats like PNG, JPEG, PDF, etc. The status bar at the bottom indicates 'Items: 3', 'Clusters: 1', 'Links: 8', and 'Total link strength: 14'. The version number 'VOSviewer version 1.6.20' is visible in the bottom right corner.

VOSviewer - Scopus example.csv

Network Visualization | Overlay Visualization | Density Visualization

File | Items | Analysis

Map

Create...

Open...

Save...

More

Screenshot...

Save...

Print...

Copy to clipboard

Options...

Visualization

Scale

Weights: Citations

Labels

Size variation

Circles

Frames

Max. length: 30

Font: Open Sans

Lines

Size variation

Min. strength: 6

Max. lines: 300

Colored lines

Curved lines

Colors

Cluster Colors

Black background

File Name:

Files of Type:

PNG (Portable Network Graphics) files (*.png)

EPS (Encapsulated PostScript) files (*.eps)

GIF (Graphics Interchange Format) files (*.gif)

JPG (Joint Photographic Engineering Group) files (*.jpg)

PDF (Portable Document Format) files (*.pdf)

PNG (Portable Network Graphics) files (*.png)

SVG (Scalable Vector Graphics) files (*.svg)

SWF (Small Web Format) files (*.swf)

TIF (Tagged Image File Format) files (*.tif)

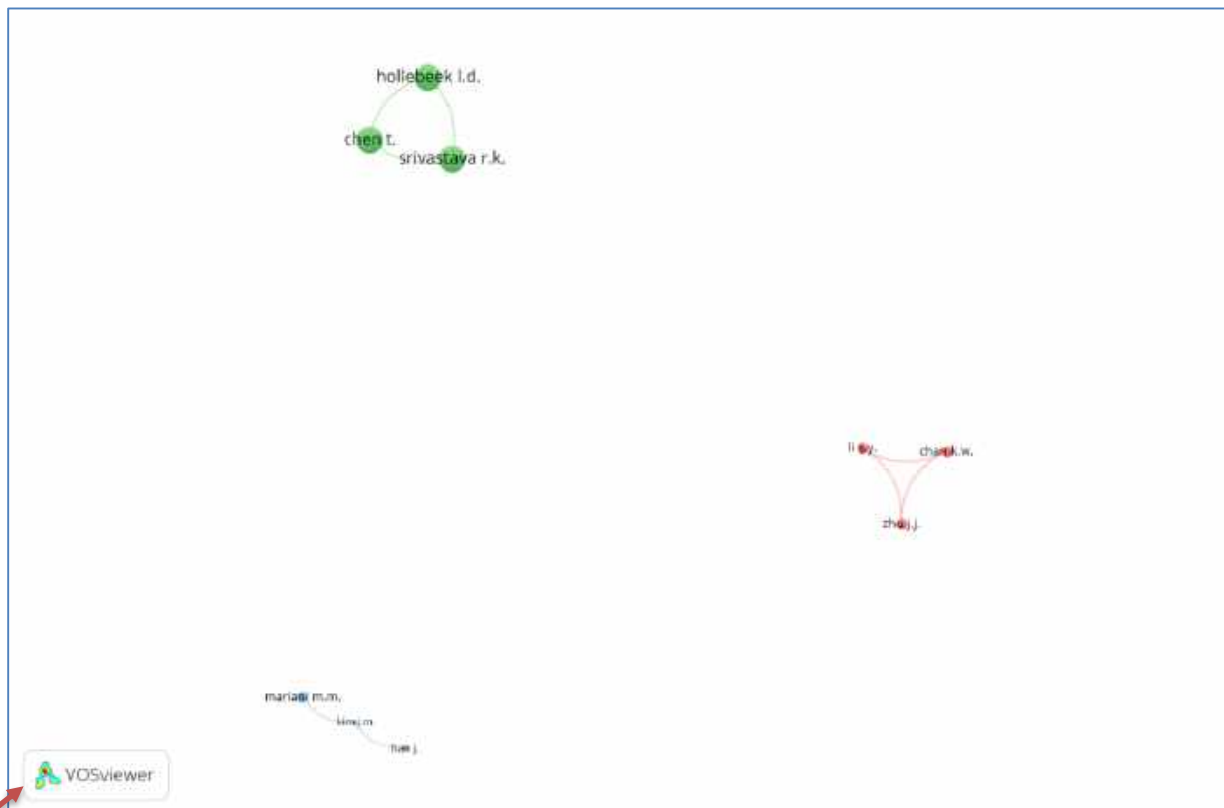
Items: 3 | Clusters: 1 | Links: 8 | Total link strength: 14

VOSviewer version 1.6.20



VOSviewer Online

Visualizing scientific landscapes



VOSviewer Online

Visualizing scientific landscapes

Create Map

Choose type of analysis and counting method

Type of analysis: ☒ Co-authorship ☐ Co-occurrence ☐ Citation ☐ Bibliographic coupling ☐ Co-citation

Unit of analysis: ☒ Authors ☒ Organizations ☐ Countries

Counting method: ☒ Full counting ☐ Fractional counting

VOSviewer thesaurus file (optional):

☒ Ignore documents co-authored by a large number of organizations
Maximum number of organizations per documents: 25

Warning: Scopus data on organizations may not have been harmonized. Organization names may not have a consistent format.

< Back Next > Finish Cancel



Create Map

Choose thresholds

Minimum number of documents of an organization: 2

Minimum number of citations of an organization: 0

Of the 91 organizations, 7 meet the thresholds.

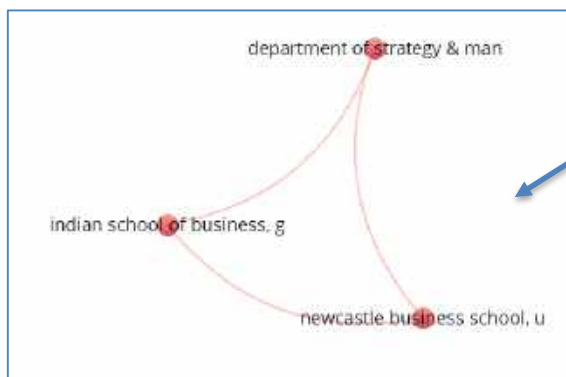
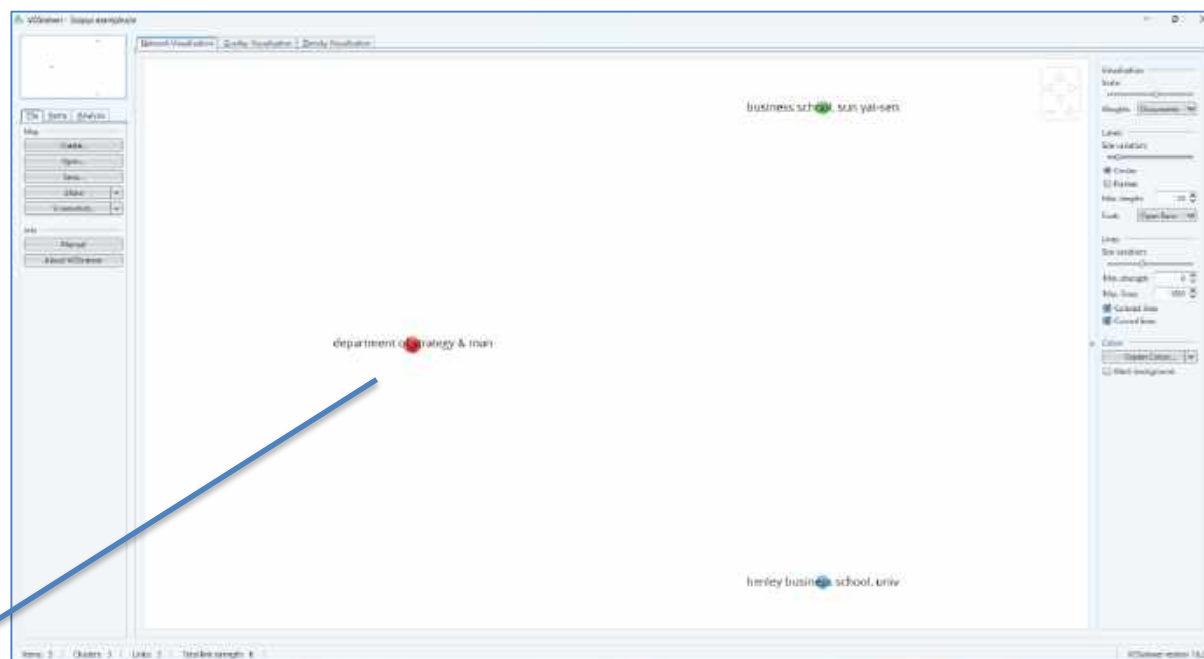
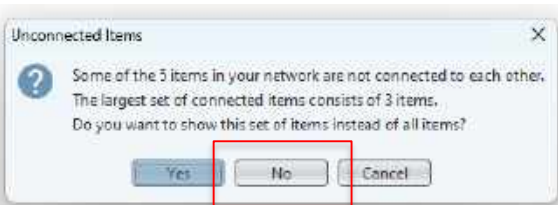
< Back Next > Finish Cancel

Współautorstwo instytucji



VOSviewer Online

Visualizing scientific landscapes





VOSviewer Online

Visualizing scientific landscapes



Item: indian school of business, gachibowli, hyderabad, telangana 500032, india	Cluster: 1	Links: 2	Total link strength: 4	Documents: 2
---	------------	----------	------------------------	--------------

Pełna nazwa instytucji

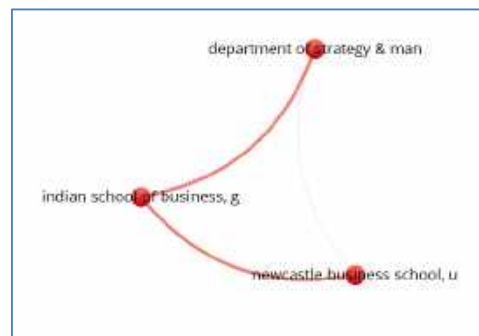
Numer
klastra

Liczba instytucji
współpracujących

Liczba dokumentów
powstałych we
współpracy

VOSviewer Online

Visualizing scientific landscapes



Total link strength: 4



Link strength: 2



Link strength: 2

VOSviewer Online

Visualizing scientific landscapes

Create Map

Choose type of analysis and counting method

Type of analysis:

- ☒ Co-authorship
- ☐ Co-occurrence
- ☐ Citation
- ☐ Bibliographic coupling
- ☐ Co-citation

Unit of analysis:

- ☐ Authors
- ☐ Organizations
- ☒ Countries

Counting method:

- ☒ Full counting
- ☐ Fractional counting

VOSviewer thesaurus file (optional):

☒ Ignore documents co-authored by a large number of countries

Maximum number of countries per document:

< Back **Next >** Finish Cancel



Create Map

Choose thresholds

Minimum number of documents of a country:

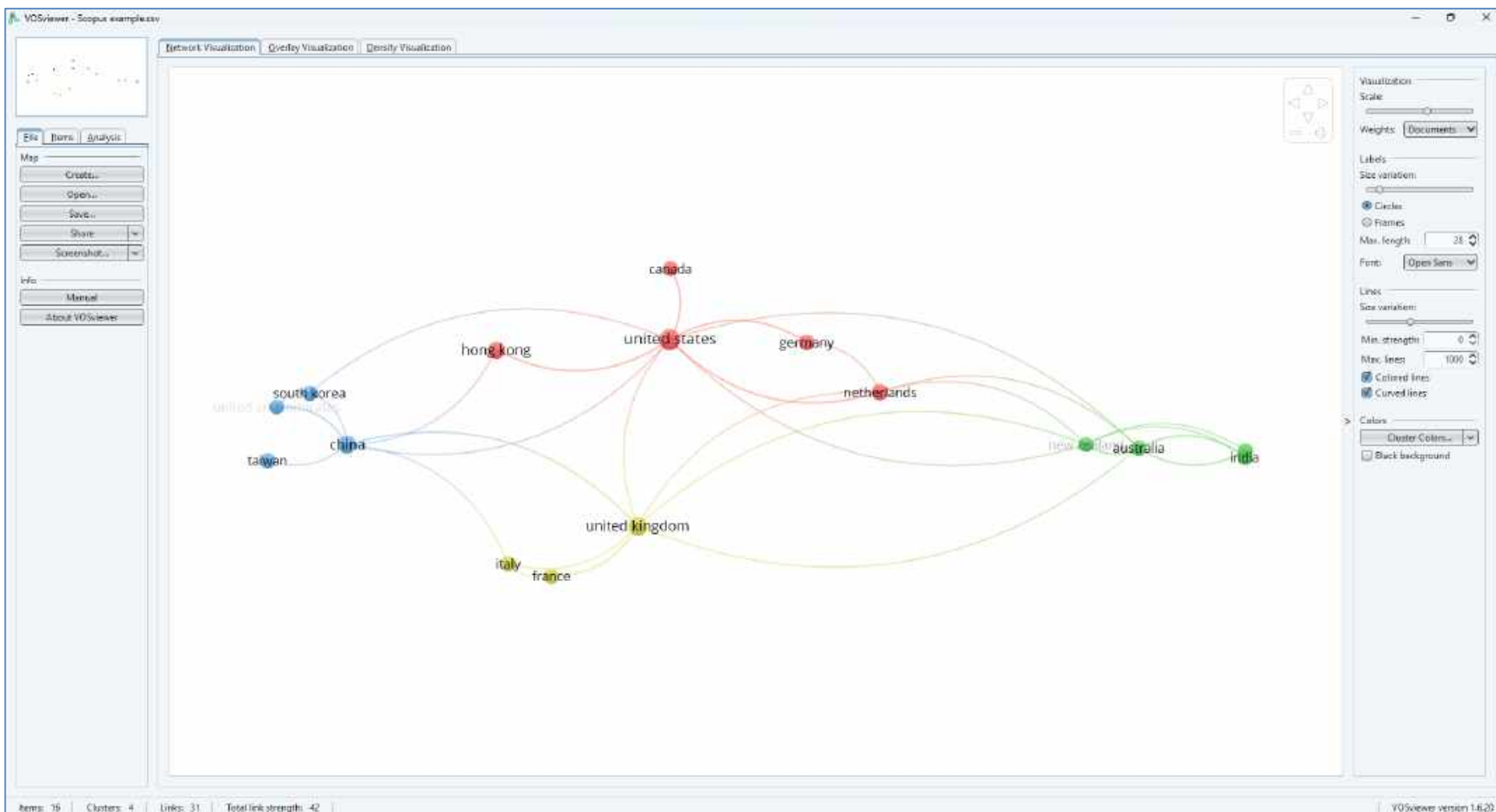
Minimum number of citations of a country:

Of the 25 countries, 16 meet the thresholds:

< Back **Next >** **Finish** Cancel

Współautorstwo krajów

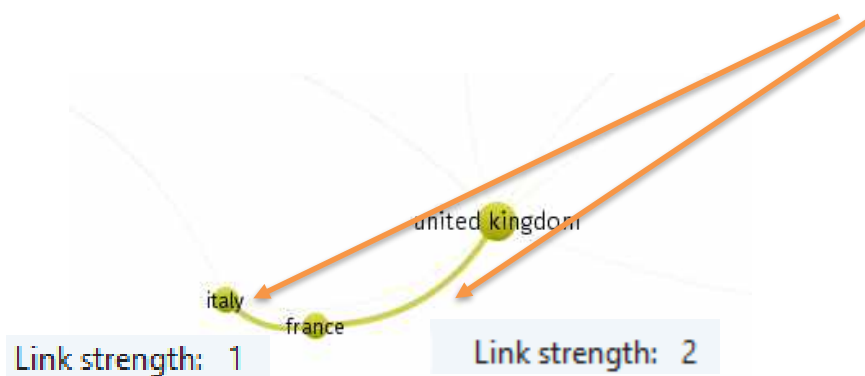
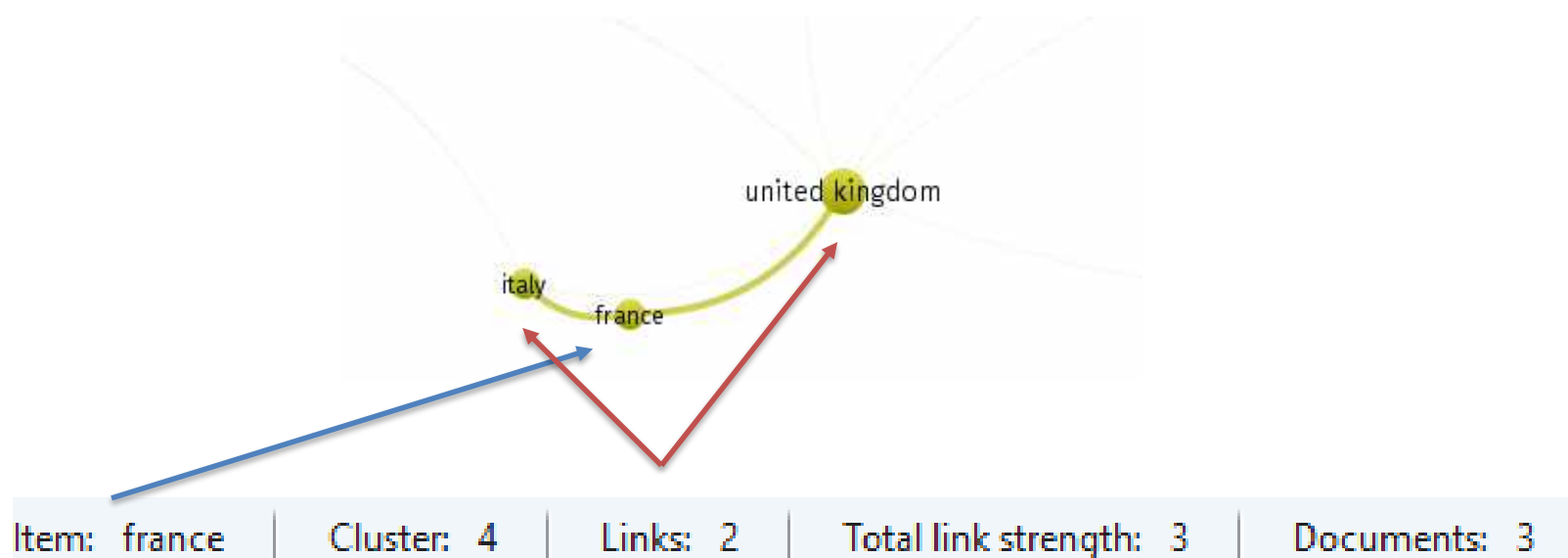
VOSviewer Online Visualizing scientific landscapes



Współautorstwo krajów

VOSviewer Online

Visualizing scientific landscapes





VOSviewer Online

Visualizing scientific landscapes

Create Map

Choose type of analysis and counting method

Type of analysis: ☐ Co-authorship ☒ Co-occurrence ☐ Citation ☐ Bibliographic coupling ☐ Co-citation

Unit of analysis: ☒ All keywords ☐ Author keywords ☐ Index keywords

Counting method: ☒ Full counting ☐ Fractional counting

VOSviewer thesaurus file (optional):

< Back Next > Finish Cancel



Create Map

Choose threshold

Minimum number of occurrences of a keyword: 2

Of the 224 keywords, 18 meet the threshold.

< Back Next > Finish Cancel

Analiza słów kluczowych



VOSviewer Online

Visualizing scientific landscapes

Create Map

Verify selected keywords

Selected	Keyword	Occurrences	Total link strength
☒	knowledge sharing	1	4
☒	customer co-creation	2	3
☒	customer feedback	2	3
☒	customer knowledge sharing	3	3
☒	social media marketing	2	3
☒	customer engagement	2	2
☒	service-dominant logic	2	2
☒	value co-creation	2	2
☒	customer citizenship behavior	2	1
☒	customer reviews	2	1
☒	ewom	2	1
☒	financial performance	2	1
☒	innovation	3	1
☒	social media	3	1
☒	feedback	2	0
☒	online communities	2	0
☒	online review	3	0
☒	online reviews	3	0

< Back Next > **Finish** Cancel



Unconnected Items

Some of the 18 items in your network are not connected to each other. The largest set of connected items consists of 7 items. Do you want to show this set of items instead of all items?

Yes **No** Cancel

VOSviewer Online

Visualizing scientific landscapes



online communities

Item: online communities	Cluster: 7	Links: 0	Total link strength: 0	Occurrences: 2
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Create Map

 **Choose type of analysis and counting method**

Type of analysis: ⓘ

- ☐ Co-authorship
- ☐ Co-occurrence
- ☒ Citation
- ☐ Bibliographic coupling
- ☐ Co-citation

Unit of analysis:

- ☒ Documents
- ☐ Sources
- ☐ Authors
- ☐ Organizations
- ☐ Countries

Counting method: ⓘ

- ☒ Full counting
- ☐ Fractional counting

VOSviewer thesaurus file (optional): ⓘ

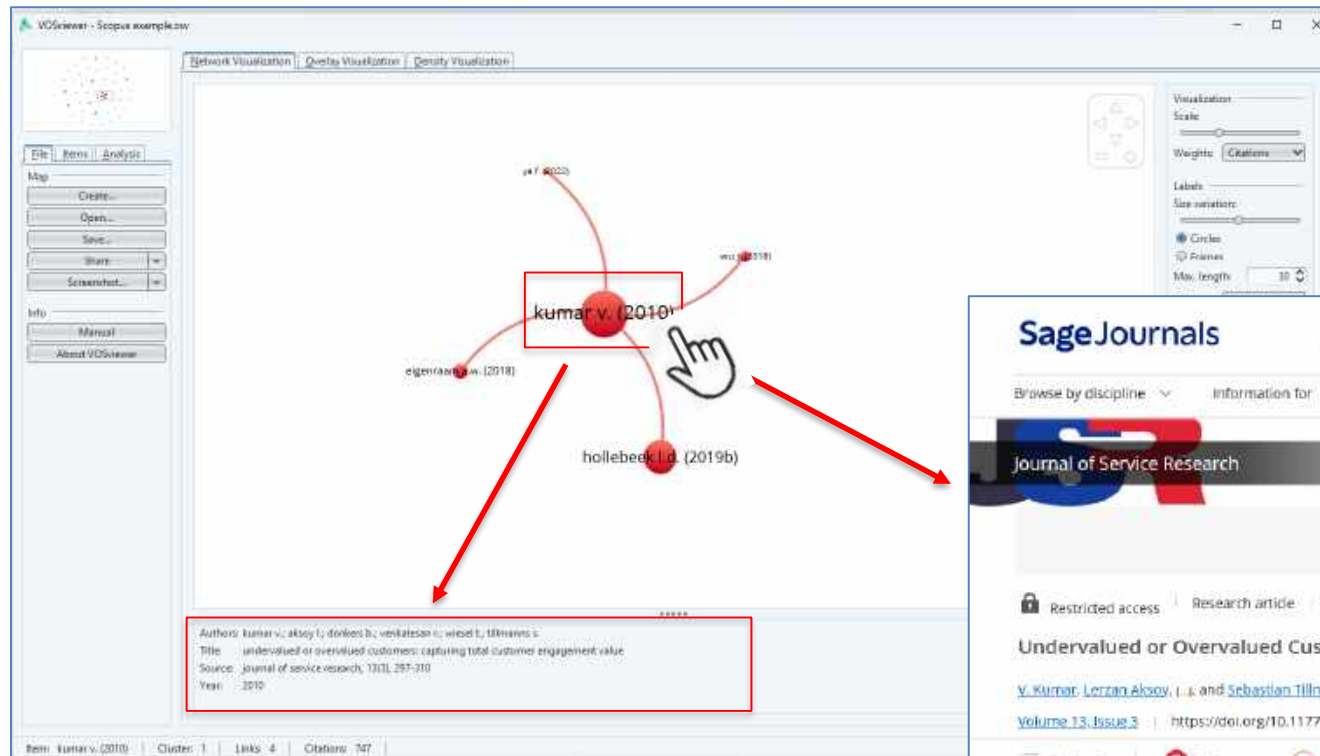
< Back Next > Finish Cancel

Analiza cytowań



VOSviewer Online

Visualizing scientific landscapes



Sage Journals
 Search this journal | Enter search terms...
[Advanced search](#)

Browse by discipline | Information for

Journal of Service Research
 Impact Factor: **9.8** / 5-Year Impact Factor: **13.4**

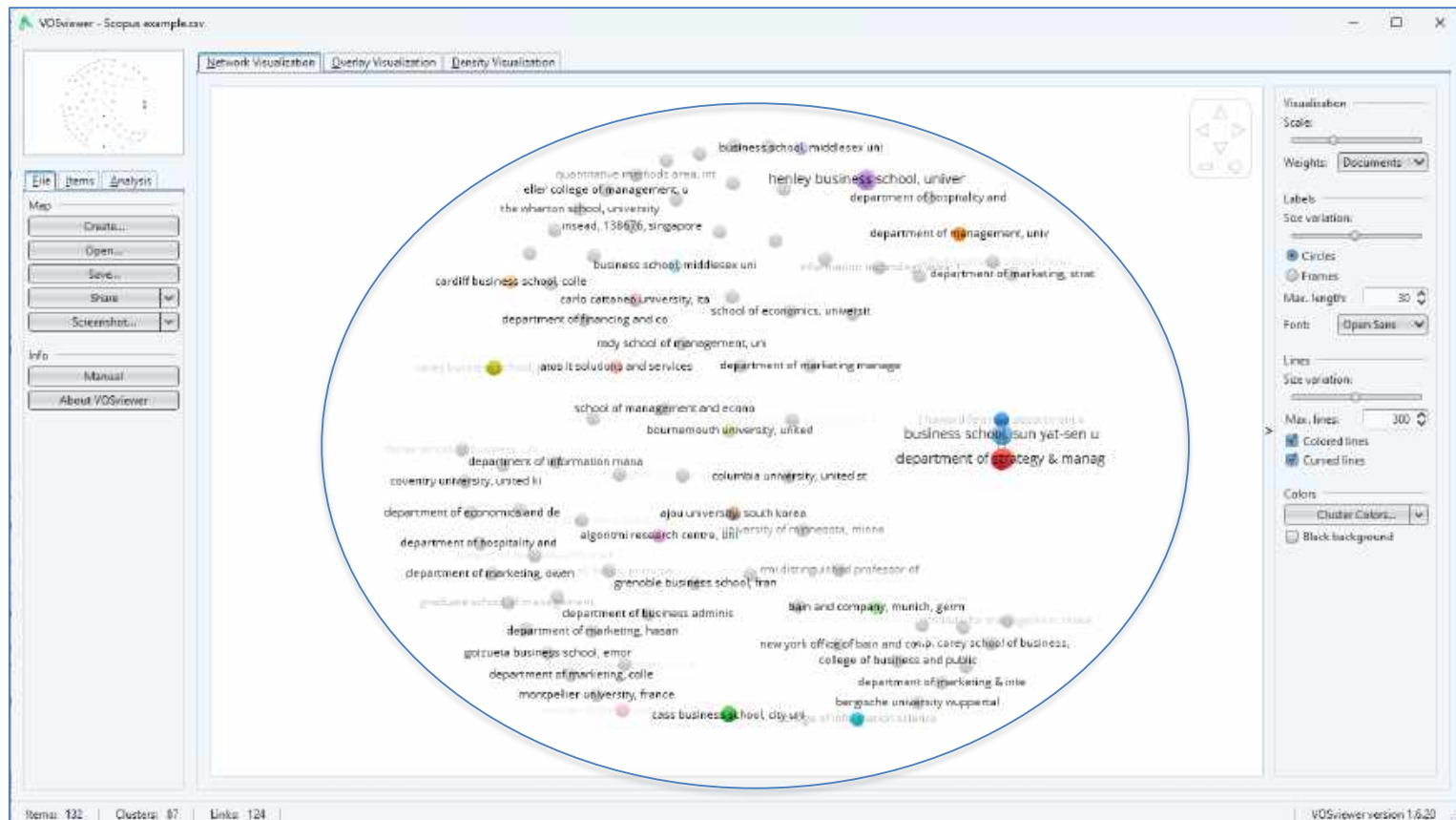
Restricted access | Research article | First published online August 11, 2010

Undervalued or Overvalued Customers: Capturing Total Customer Engagement Value
[V. Kumar](#), [Lerzan Aksoy](#), [L. J. Donkers](#), [B. Venkatesan](#), [T. Wiesel](#), and [S. Tillmanns](#) | [View all authors and affiliations](#)
 Volume 13, Issue 3 | <https://doi.org/10.1177/1094670510375602>

Contents | Get access | Cite article | Share options | Information, rights and permissions

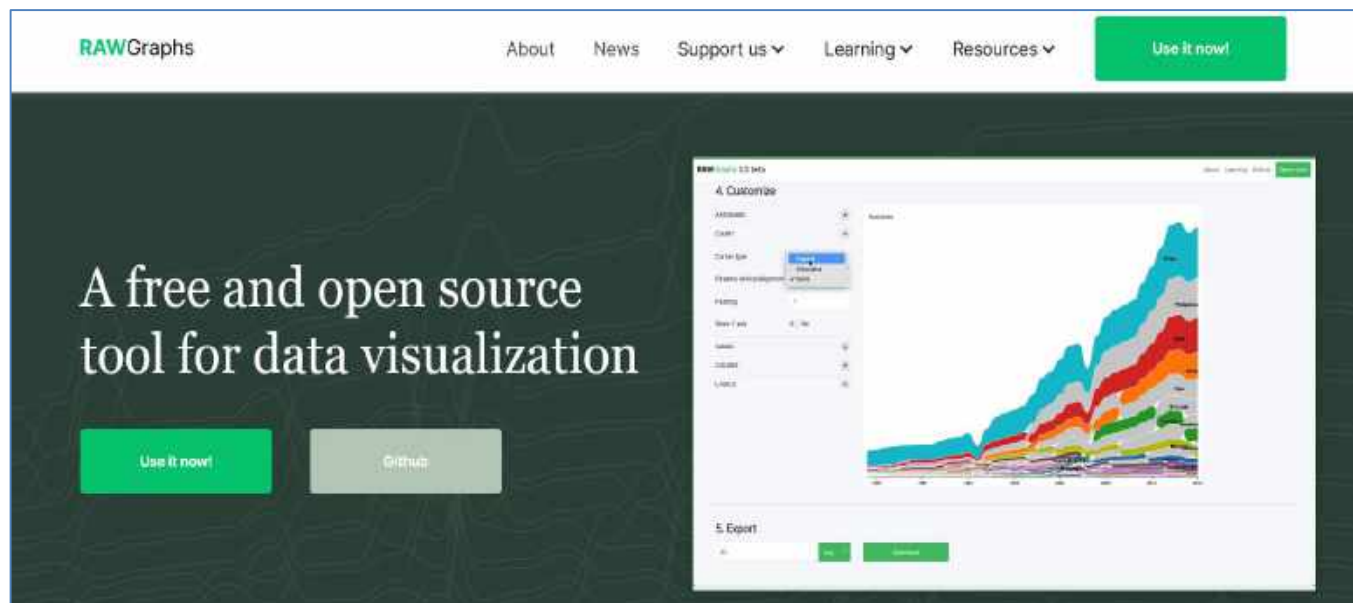
Abstract
 Customers can interact with and create value for firms in a variety of ways. This article proposes that assessing the value of customers based solely upon their transactions with a firm may not be sufficient, and valuing this engagement correctly is crucial in avoiding undervaluation and overvaluation of customers. We propose four components of a customer's engagement value (CEV) with a firm. The first component is customer lifetime value (the customer's purchase behavior), the second is customer referral value (as it relates to incentivized referral of new customers), the third is customer influencer value (which includes the

VOSviewer Online
Visualizing scientific landscapes



RAWGraphs <https://app.rawgraphs.io/>

- internetowa aplikacja, oparta na Open Source,
- nie wymaga żadnej instrukcji obsługi – po prostu wgrywamy dane z poziomu przeglądarki, na serwer (jest też możliwość skorzystania z baz dostępnych na stronie), wybieramy rodzaj wizualizacji (chmury tagów, wykresy kolumnowe i wiele innych),
- dane wejściowe TSV, CSV, DSV lub JSON,
- 30 modeli wizualnych,
- eksport projektu do grafiki wektorowej lub rastrowej,
- nieskomplikowane narzędzie do tworzenia prostych i czytelnych wizualizacji.



1. Load your data

DATA PARSING OPTIONS

Column: id Year

Presumably separator: ;

Default separator: ;

Default locale: en

DATA TRANSFORMATION

Stack as: Column

41 Rows

22 Columns

id	Name	id	Title	id	Language	id	Release Year	id	Status	id	Score	id	Epis
1	Docu-Series	1	WITEN BARRY PETER	1	Documentary	1	2010	1	Pending	1	10	1	10
2	Docu-Series	2	Captive	2	Documentary	2	2011	2	Pending	2	8	2	8
3	Docu-Series	3	Memorial: The Art of	3	Documentary	3	2011	3	Pending	3	8	3	8
4	Docu-Series	4	Five days later	4	Documentary	4	2011	4	Pending	4	8	4	8
5	Docu-Series	5	Not a day's rest: the	5	Documentary	5	2011	5	Pending	5	8	5	8
6	Docu-Series	6	The aspects	6	Documentary	6	2011	6	Pending	6	8	6	8
7	Docu-Series	7	Issues of Guilt	7	Documentary	7	2012	7	Pending	7	8	7	8
8	Docu-Series	8	THEORY OF THE	8	Documentary	8	2012	8	Pending	8	8	8	8

ADD NEW DATA: Load data from a file or a URL, or from a database

Copy to clipboard

RAW Data 2.0

About Loading Data

Show: All charts

Allyl Diagram
Combining proportions

A complex visualization showing a network of nodes and edges, likely representing a complex system or process.

[View Code](#) [View Data](#)

Arc Diagram
Network

A visualization showing a network of nodes and edges, likely representing a complex system or process.

Bar chart
Combining proportions

A visualization showing a distribution of data, likely representing a complex system or process.

Beeswarm plot
Multivariate, time series, proportions

A visualization showing a distribution of data, likely representing a complex system or process.

Bumpchart
Time series, proportions, sequences

A visualization showing a distribution of data, likely representing a complex system or process.

Circle Packing
Hierarchical, proportions

A visualization showing a distribution of data, likely representing a complex system or process.

Convex hull
Combining proportions

A visualization showing a distribution of data, likely representing a complex system or process.

Hexagonal binning
Combining proportions

A visualization showing a distribution of data, likely representing a complex system or process.

Mantle Plot
Combining proportions, time series, proportions

A visualization showing a distribution of data, likely representing a complex system or process.

Radar Chart
Combining proportions

A visualization showing a distribution of data, likely representing a complex system or process.

Streamgraph (area chart)
Time series, proportions, sequences

A visualization showing a distribution of data, likely representing a complex system or process.

Voronoi plot
Combining proportions

A visualization showing a distribution of data, likely representing a complex system or process.

Load system chart

A visualization showing a distribution of data, likely representing a complex system or process.

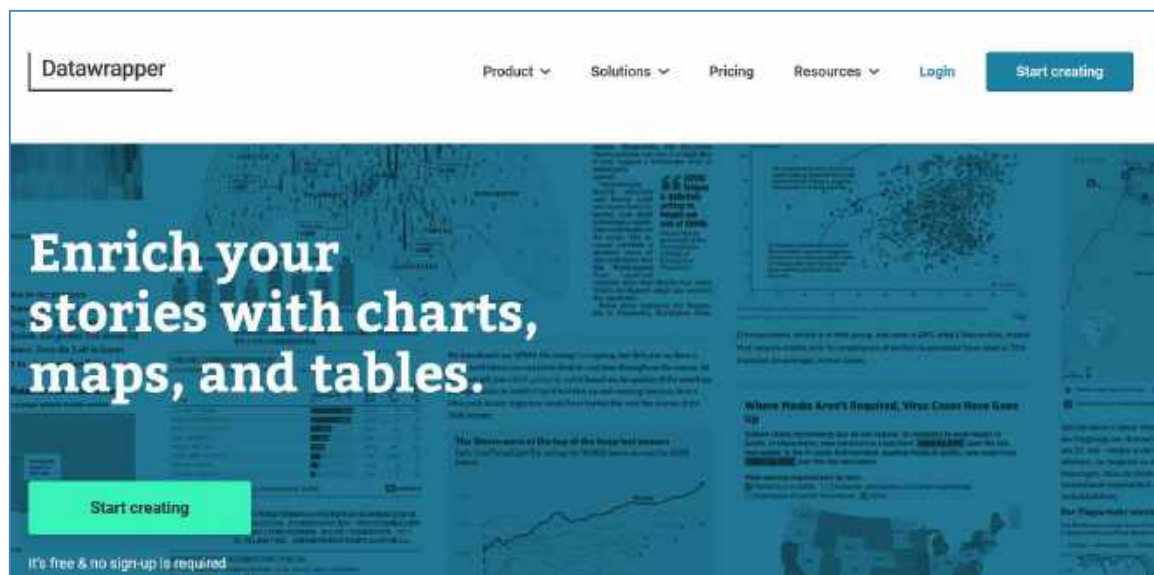
[illegible]



Datawrapper

<https://www.datawrapper.de/>

- Datawrapper GmbH
- umożliwia tworzenie, publikowanie, osadzanie i eksportowanie wizualizacji bez konieczności logowania,
- wgrywamy dane, wybieramy formę wizualizacji, personalizujemy i publikujemy,
- 19 różnych typów wykresów, trzy typy map i bardzo elastyczne tabele,
- efekty wizualizacji można później w prosty sposób eksportować do pliku PNG, PDF lub SVG,
- niezależnie od planu, w którym wizualizacja została utworzona, można jej użyć w we wszystkich drukowanych i cyfrowych publikacjach, slajdach, raportach, na stronach internetowych itp. (przy planie bezpłatnym konieczna etykieta „Utworzono za pomocą Datawrapper”).





Datawrapper

Datawrapper

Create new ...

Sign in



Welcome to Datawrapper [Learn how to create your first chart.](#)

1 Upload Data

2 Check & Describe

3 Visualize

4 Publish & Embed

Chart type Refine Annotate Layout



Bar Chart



Stacked Bars



Grouped Bars



Split Bars



Bullet Bars



Column Chart



Stacked Columns



Grouped Columns



Lines



Multiple Lines



Area Chart



Scatter Plot



Dot Plot



Range Plot



Arrow Plot



Election Donut



Pie Chart



Multiple Pies



Donut Chart



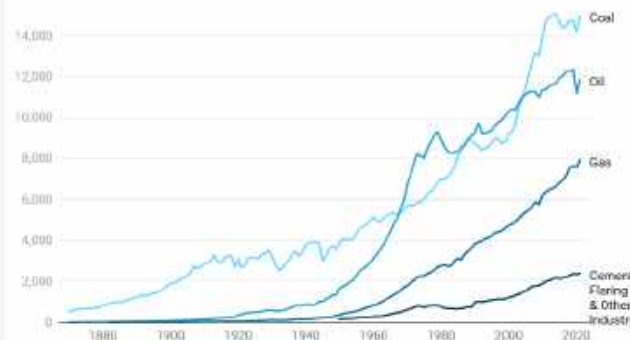
Multiple Donuts



Table

Global CO2 emissions by fuel and industry

Global CO2 emissions from fossil-fuel burning, cement manufacture, and gas flaring, in million metric tonnes, 1850-2021



Annual production-based emissions of carbon dioxide (CO₂) from fuel, measured in tonnes. This is based on territorial emissions, which do not account for emissions embedded in traded goods.

Source: Our World in Data - Get the data - Created with Datawrapper

PREVIEW

Size (px)

600

42%



Controlled check



Dark Mode



Hint: In case the visualization doesn't look like you expected, you should try to [transpose the data](#)

← Back

Proceed →

- Northwestern University Knight Lab
- narzędzie typu Open Source,
- umożliwia tworzenie bogatych wizualnie, interaktywnych osi czasu (i tylko nich),
- tworzenie osi odbywa się w czterech krokach <http://timeline.knightlab.com/#make> ,
- wykorzystuje arkusz kalkulacyjny Google – traktując go jako szablon,
- oś tworzy się upuszczając daty, tekst i linki do multimediów w odpowiednich kolumnach,
- następnie wypełniony arkusz publikuje się w Internecie.





Timeline JS

THE BRIEF HISTORY OF ARTIFICIAL INTELLIGENCE



Report: M. M. M.

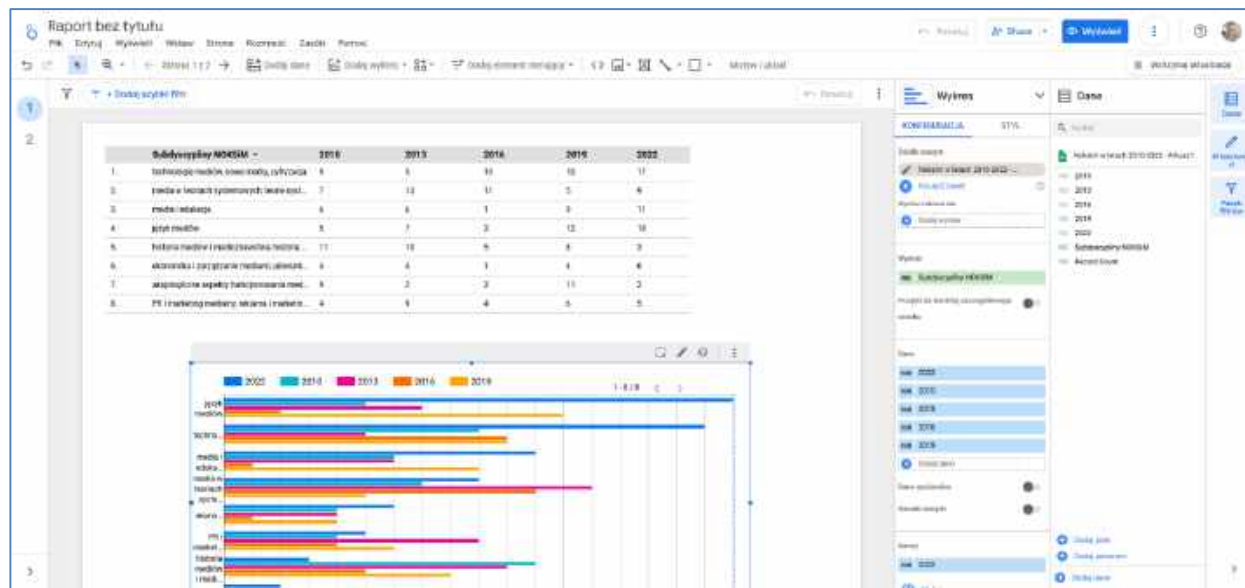
Source: The Brief History of Artificial Intelligence (AI) Timeline



https://cdn.knightlab.com/libs/timeline3/latest/embed/index.html?source=1DPzqGvdaetSRuZVWAbeljNVqJctCd6qFpulmRz1Afi0&font=Default&lang=en&initial_zoom=2&height=650



- pulpit nawigacyjny i narzędzie Google do analityki biznesowej;
- mamy możliwość pobierania danych z różnych źródeł, systemów i narzędzi Google (jak np. Search Console, Google Ads, Ads 360, Search Ads 360, Ad Manager 360, YouTube Analytics, Google Sheets, Campaign Manager) lub innych źródeł danych;
- aby móc tworzyć raporty, konieczne jest posiadanie konta Google;
- po utworzeniu i zalogowaniu się należy przejść na stronę internetową <https://lookerstudio.google.com/overview>;
- w następstwie zalogowania się do systemu ukaże się kilka przykładowych raportów, które pozwolą na zapoznanie się z interfejsem, jego wyglądem oraz danymi;
- dane mogą być przedstawione w postaci tabel lub wykresów;
- dodatkowo w sieci dostępne są wizualizacje i komponenty tworzone przez społeczność, które zwiększają atrakcyjność raportu oraz pozwalają na rozbudowę funkcjonalności;
- raporty można udostępniać raportów konkretnym osobom, poprzez np. podanie adresu e-mail, jak i pracować nad tym samym raportem w tym samym czasie.



<https://public.tableau.com/app/discover>

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- The screenshot shows the Tableau Desktop interface. The 'Columns' shelf contains 'Product Type' and 'Location'. The 'Rows' shelf contains 'SUM(Sales)'. The 'Marks' card is set to 'Bar'. The 'Dimensions' pane on the left shows a hierarchy: Location (Area Code, Location), Market, Market Size, State, Product (Product Code, Product Name, Product Type, Product Size, Type), FactTable (Area Code, Date, ProductID (FactTable), Measure Names). The 'Measures' pane on the right shows 'SUM(Sales)' and 'SUM(Profit)'. A blue arrow points from the 'Profit' field in the Measures pane to the 'SUM(Sales)' field in the Rows shelf. The chart displays sales data for various product types and locations, with a color-coded legend for Location: Green for Coffee, Yellow for Espresso, and Grey for Tea.



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Dziękuję za uwagę

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