Research Landscape Analysis

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Overview

- What is Research Landscape Analysis (RLA)? A definition
- Introduction and context to the study
- RLA vs the In-depth Reference Query
- The Research Cycle
- Stages of Engagement
- The 3 pillars of RLA
- Tool – SciVal
- Case study example

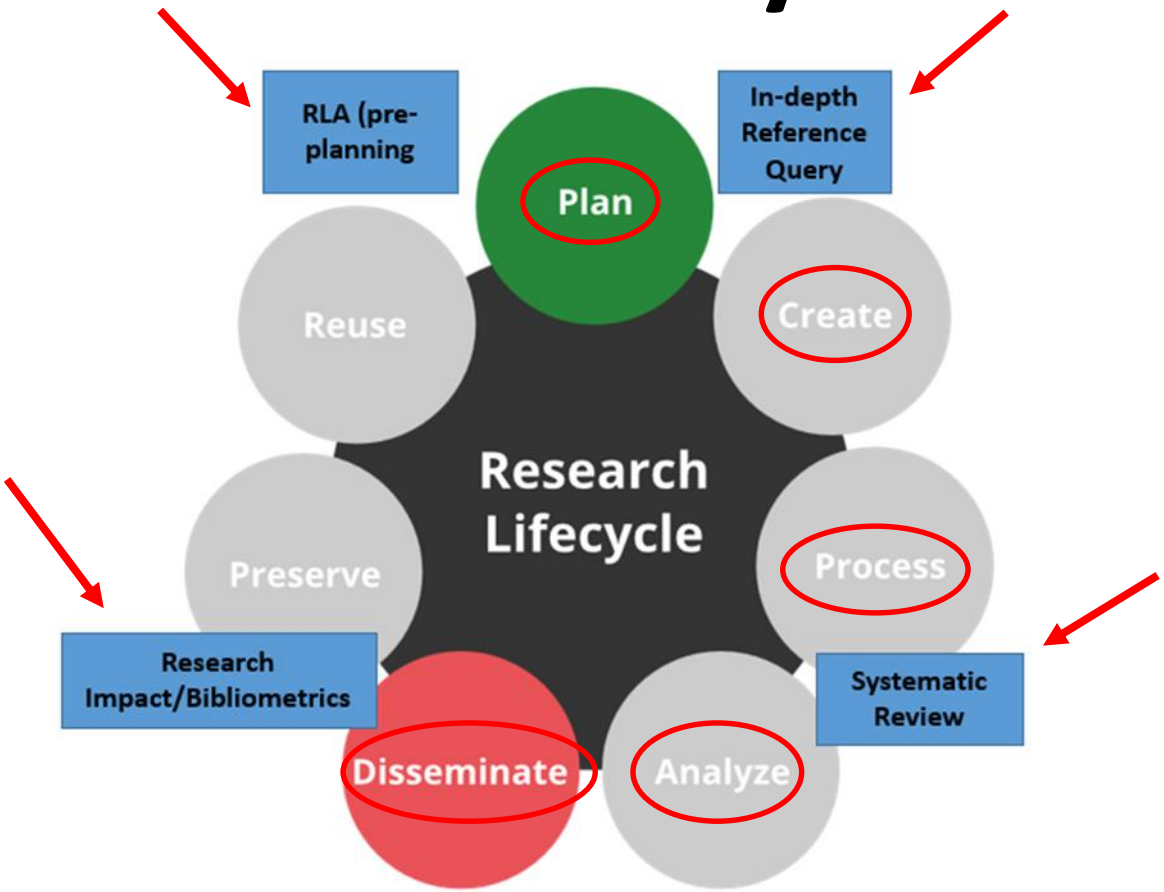
RLA – a definition

- niche research clusters
- gaps/voids in research areas
- topics for further research
- identification of topics of prominence
- possible collaboration/collaborative studies
- experts in the field of study
- funding

Introduction and context

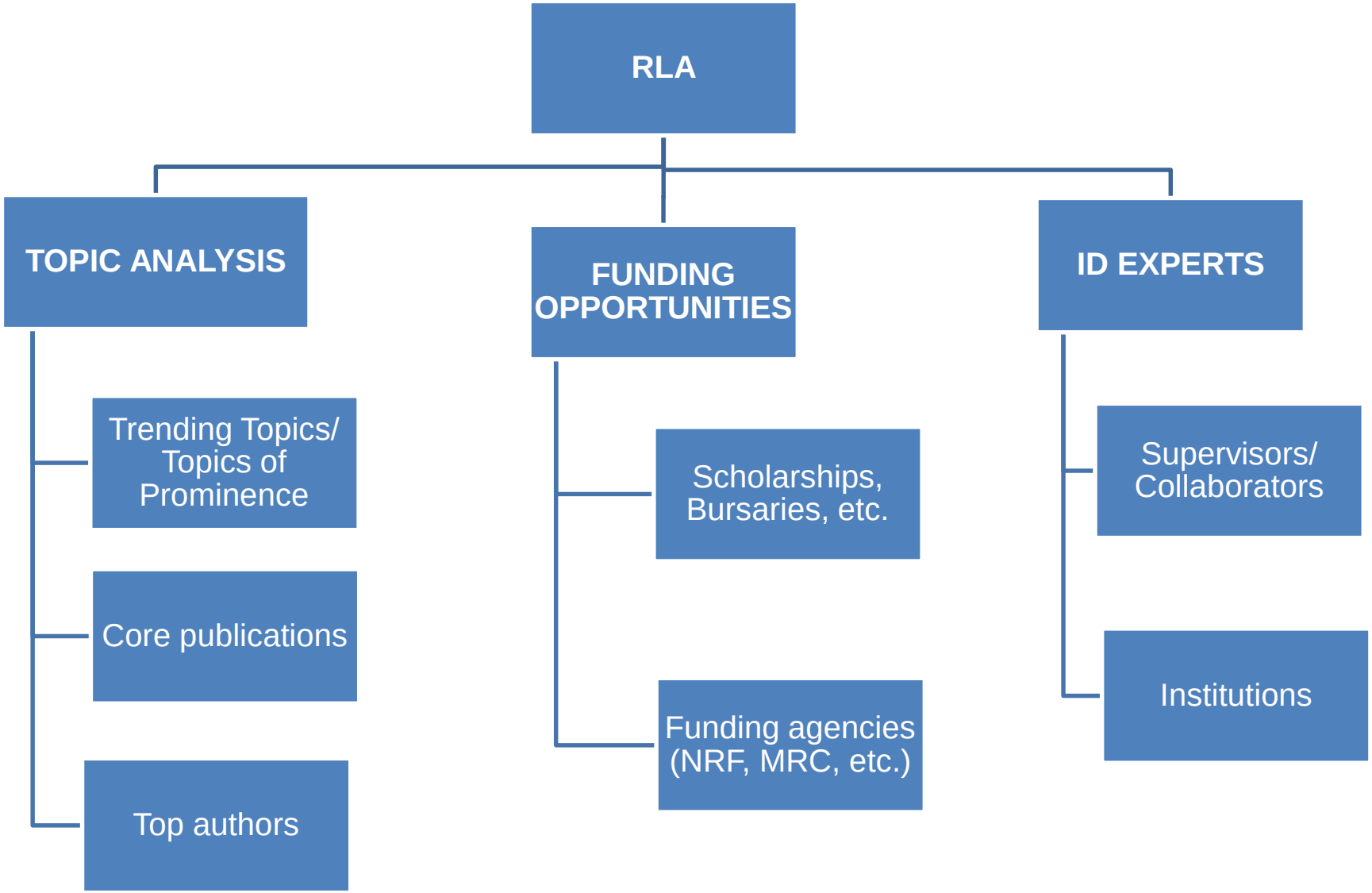
- NDP 2030, SDG 2030 & Green Paper for post-school education & training (2012) - framework
- SDG Goal 4 – Quality education
- Green Paper: “PhD numbers are far too low to meet the country’s need for research and innovation” (South Africa, Department of Higher Education and Training, 2012: 13)
- produce more than 100 doctoral graduates per million per year by 2030
- 1420 PhDs in 2010 to well over 5 000 a year (over 300% increase)
- UCT has reported:
  - very little support for potential postgraduate students at the pre-registration stage
  - duplication-of-topics-issue that supervisors and co-supervisors have been reported

Research Cycle

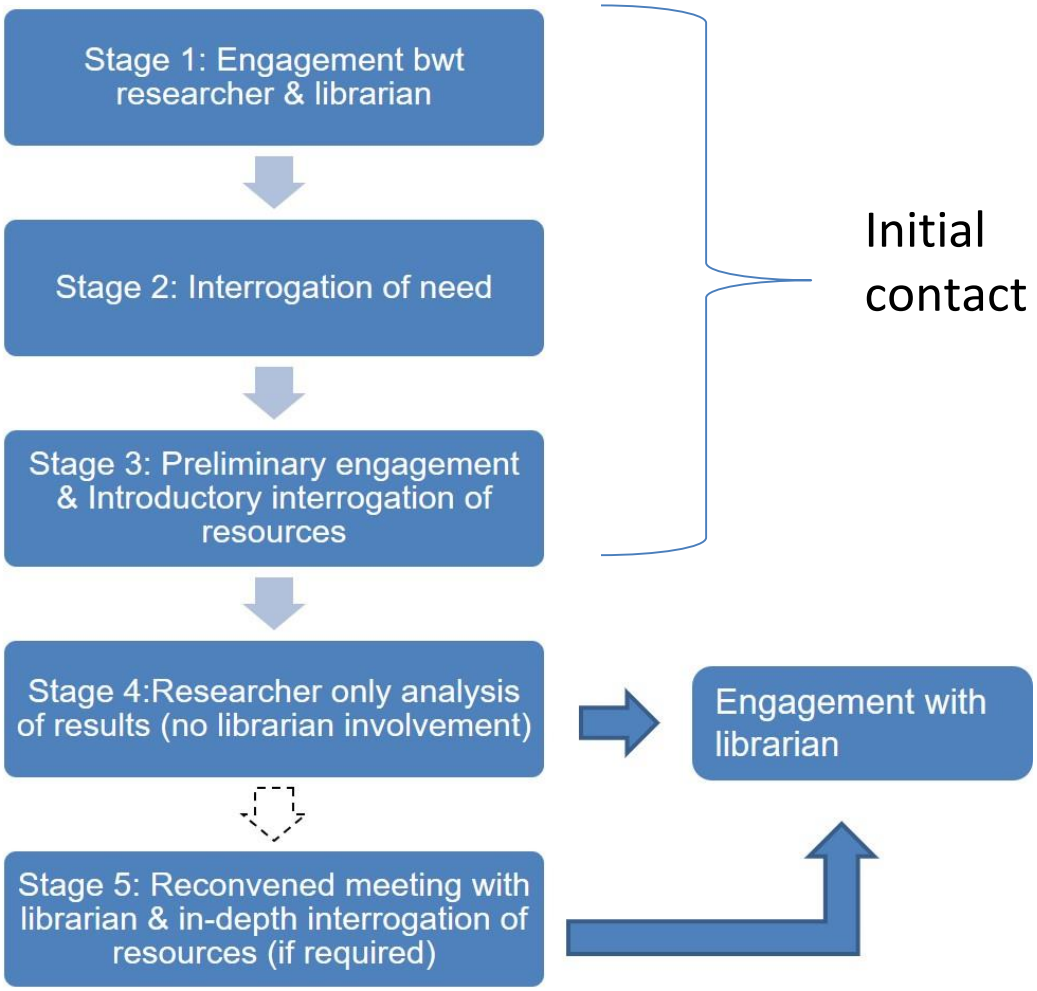


RLA VS REFERENCE QUERY

RLA (pre-resolving topic)	REFERENCE QUERY (post-resolving topic)
Looking for intelligence & trends	Looking for content – articles or books
Tools – analysis	Tools – discovery
Identification of topic, funding opportunities, experts, seminal works	Responding to a topic
Use SciVal and Scopus	Use Scopus and ScienceDirect


RLA
TOPIC ANALYSIS
FUNDING OPPORTUNITIES
ID EXPERTS
Trending Topics/ Topics of Prominence
Core publications
Top authors
Scholarships, Bursaries, etc.
Funding agencies (NRF, MRC, etc.)
Supervisors/ Collaborators
Institutions

Stages of Engagement



Tool - SciVal

An analytical tool to measure research performance relative to other entities

220 nations / 9,000 research institutions worldwide

Visualize research performance

At a glance snapshots

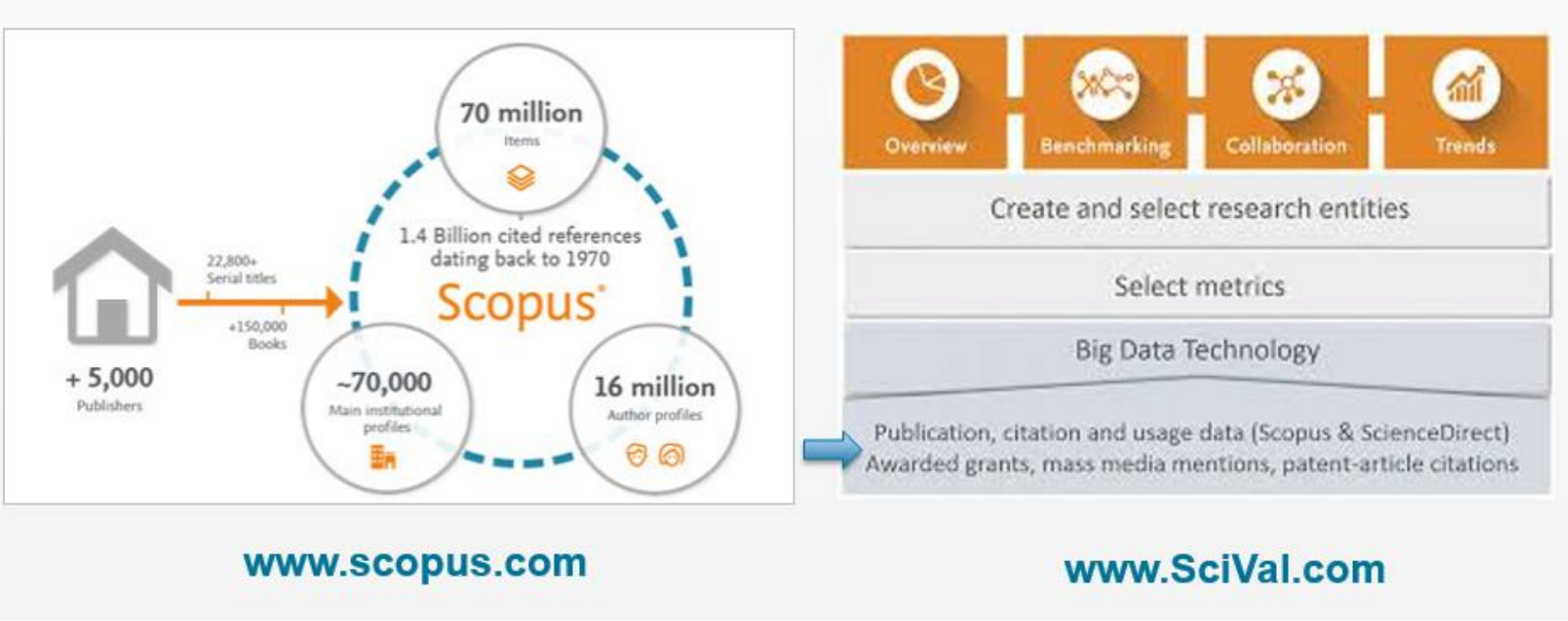
Benchmark your progress

Compare research entities

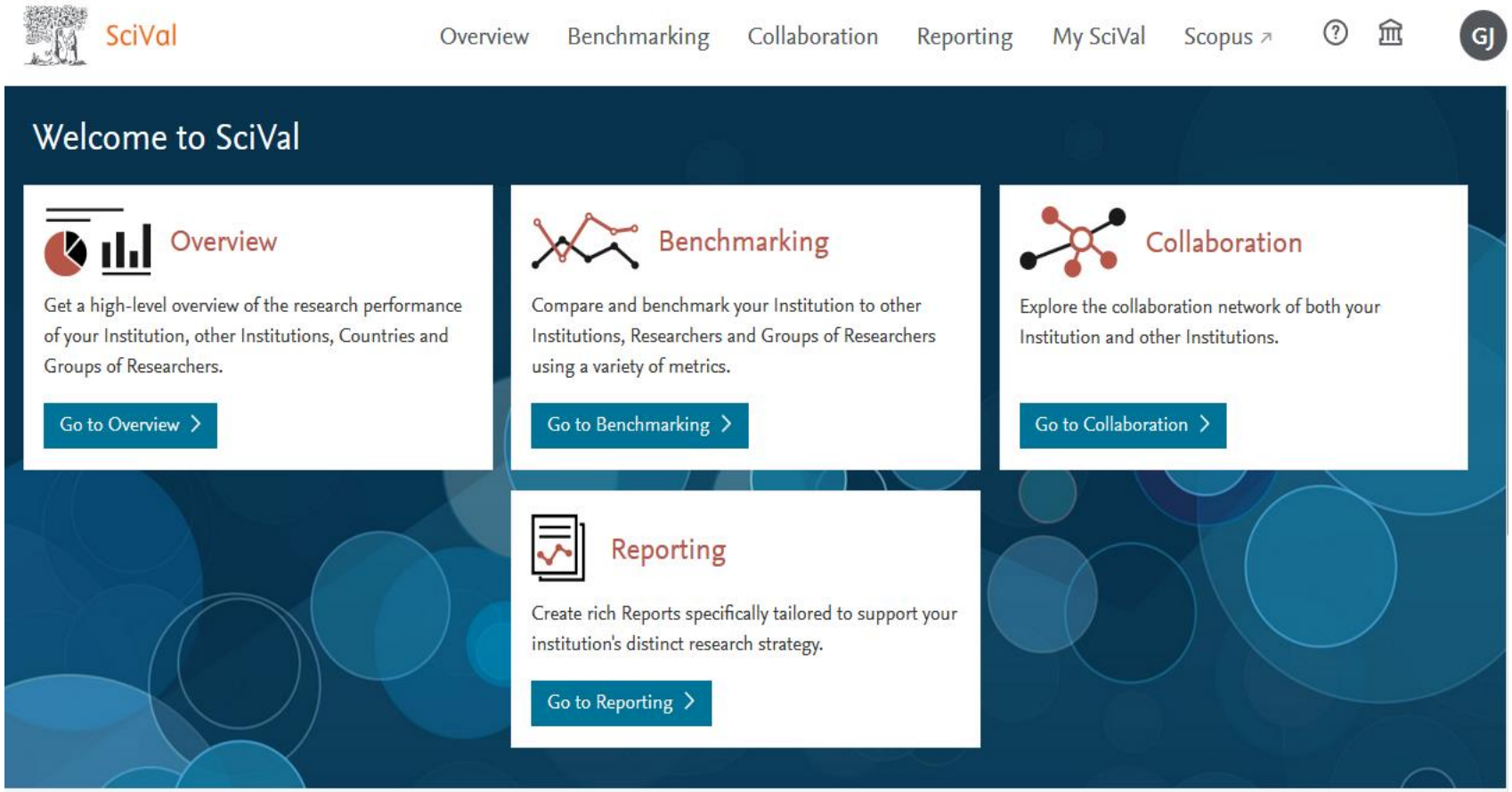
Develop collaborative partnerships

Current and potential collaboration

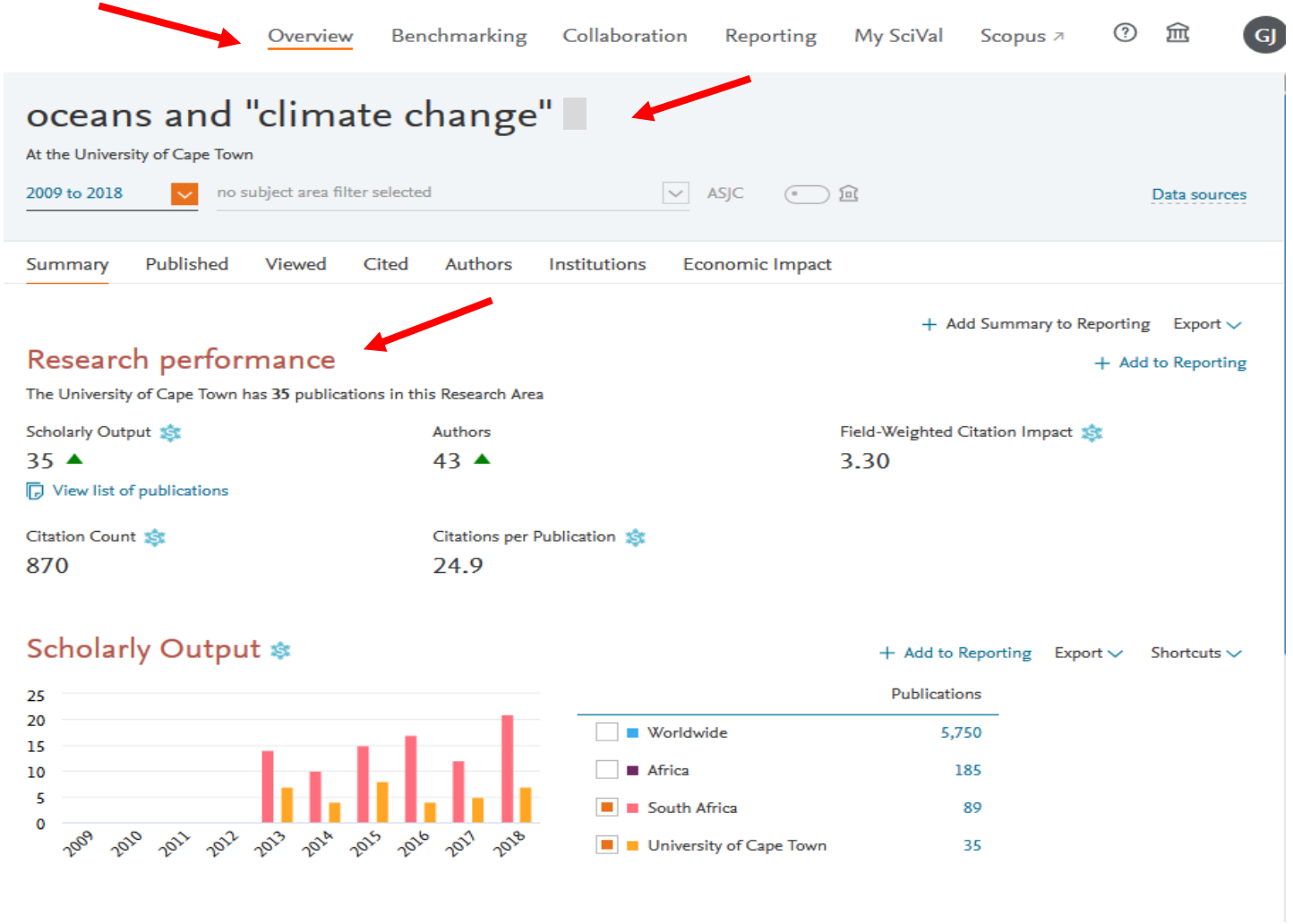
Scopus - SciVal source data



Case study example: oceans and “climate change”



Overview Module



UCT LIBRARIES

Top Authors at UCT & Worldwide

oceans and "climate change"

At the University of Cape Town

2009 to 2018 | no subject area filter selected | ASJC

Summary | Published | Viewed | Cited | Authors | Institutions | Economic Impact

Most active Authors in this Research area

Top 100 authors at University of Cape Town in this Research Area, by Scholarly Output over the period 2009 to

Note that some authors may no longer be affiliated with University of Cape Town.

Add to panel

	Name	Scholarly Output
1.	Ansorge, Isabelle Jane	6
2.	Maury, Olivier	4
3.	Vichi, Marcello	3
4.	Barnard, Phoebe	2
5.	Cook, Timothée Romuald	2
6.	Dufois, François	2
7.	Marsac, Francis	2
8.	Meadows, Michael E.	2
9.	Rouault, Mathieu J.	2
10.	Ryan, Peter G.	2
11.	Swart, Sebastiaan	2
12.	Thomalla, Sandy J.	2
13.	Altieri, Katye E.	1

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Most active Authors in this Research area

Top 100 authors worldwide in this Research Area, by Scholarly Output over the period 2009 to 2018

Add to panel

	Name	Scholarly Output
1.	Bopp, Laurent	43
2.	Hobday, Alistair J.	32
3.	Doney, Scott C.	28
4.	Munday, Philip L.	27
5.	Sathyendranath, Shubha	25
6.	Cheung, William W.L.	23
7.	Duarte, Carlos M.	21
8.	Byrne, Maria	20
9.	Dunne, John Patrick	20
10.	Pörtner, Hans-O.	19
11.	Rosa, Rui	19
12.	Zhou, Tianjun	19
13.	Abe-Ouchi, Ayako	17

Top 5 Publications in SA

Title	Authors	Year	Scopus Source	Citations
Global imprint of climate change on marine life View abstract View in Scopus	Poloczanska, E.S., Brown, C.J., Sydeman, W.J. and 17 more	2013	Nature Climate Change	572
Global Carbon Budget 2016 View abstract View in Scopus	Le Quéré, C., Andrew, R.M., Canadell, J.G. and 64 more	2016	Earth System Science Data	424
Global Carbon Budget 2017 View abstract View in Scopus	Le Quéré, C., Andrew, R.M., Friedlingstein, P. and 74 more	2018	Earth System Science Data	177
Fifteen years of ocean observations with the global Argo array View abstract View in Scopus	Riser, S.C., Freeland, H.J., Roemmich, D. and 24 more	2016	Nature Climate Change	125
Tropical sea surface temperatures for the past four centuries reconstructed from coral archives View abstract View in Scopus	Tierney, J.E., Abram, N.J., Anchukaitis, K.J. and 6 more	2015	Paleoceanography	82
Climate change impacts on coral reefs: Synergies with local effects, possibilities for	Ateweberhan, M., Feary, D.A., Keshavmurthy, S. and 3 more	2013	Marine Pollution Bulletin	72

Contributing institutions in SA

Most active Institutions in this Research Area

+ Add to Reporting Export Shortcuts

Show top 10 contributing Institutions in South ... in this Research Area, by number of publications

Institution	Scholarly Output	Citations
1. University of Cape Town	35 ▲	870
2. Council for Scientific and Industrial Research South Africa	11 ▲	715
3. University of the Witwatersrand	9 ▲	181
4. Rhodes University	7 ▲	85
5. University of Stellenbosch	7 ▲	44
6. University of KwaZulu-Natal	6	31
7. University of Pretoria	6 ▲	35
8. University of the Western Cape	6 ▲	54
9. Nelson Mandela University	5	613
10. University of Zululand	5 ▲	64

Collaborating institutions worldwide

Most active Institutions in this Research Area

+ Add to Reporting Export Shortcuts

Show top 10 collaborating Institutions (worldwide) in this Research Area, by number of publications co-authored with University of Cape Town

Institution	Co-authored publications	Citations received for co-authored publications	Co-authors
1. CNRS	11 ▲	309	12 ▲
2. CSIRO	9 ▲	362	12 ▲
3. IRD	7 ▲	199	9 ▲
4. CEA	6 ▲	175	4 ▲
5. Universite de Versailles	6 ▲	175	4 ▲
6. NOAA	6 ▲	314	11 ▲
7. ComUE Paris-Saclay	6 ▲	175	5 ▲
8. PSL Research University	6 ▲	161	7 ▲
9. Ecole Normale Superieure	5	151	4
10. Universite de Montpellier	5 ▲	108	7 ▲

Scopus

Document details

1 of 1

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Biogeosciences Open Access
Volume 10, Issue 6, 19 January 2013, Pages 4037-40

Sea-air CO_2 fluxes in the Southern

Lenton, A.[a], Tilbrook, B.[a,b], Law, R.M.[c], Bakk
Lovenduski, N.S.[i], Matear, R.J.[a], McNeil, B.I.[j], M
Sweeney, C.[p], Takahashi, T.[q]

[a]Centre for Australian Weather and Climate Research
[b]Antarctic Climate Ecosystems Co-operative Research
[c]Centre for Australian Weather and Climate Research

View additional affiliations

Abstract

The Southern Ocean (44-75° S) plays a critical role in
regions. Different approaches have been used to esti
observations, ocean biogeochemical models, and atn
Cycle Assessment and Processes) project, we combin
variability in Southern Ocean sea-air CO_2 fluxes betv
median annual sea-air CO_2 flux of -0.42±0.07 PgC y
calculated using surface observations. The circumpol
median: -0.04±0.07 PgC yr^{-1} and observations: +0.0

SciVal Topic Prominence

Topic: dissolved inorganic carbon | ocean | CO2 sink

Prominence percentile: 97.592

Topic of prominence

Indexed keywords

GEOBASE Subject Index: air-sea interaction | annual variation | carbon dioxide | carbon flux | numerical model

Regional Index: Southern Ocean

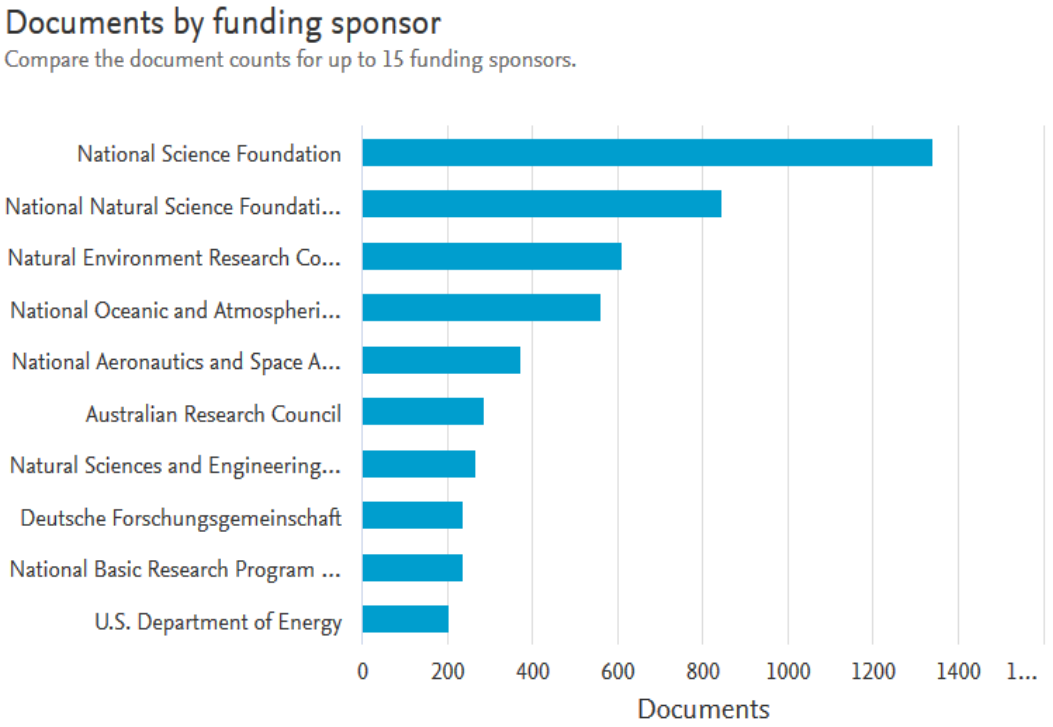
Funding opportunities

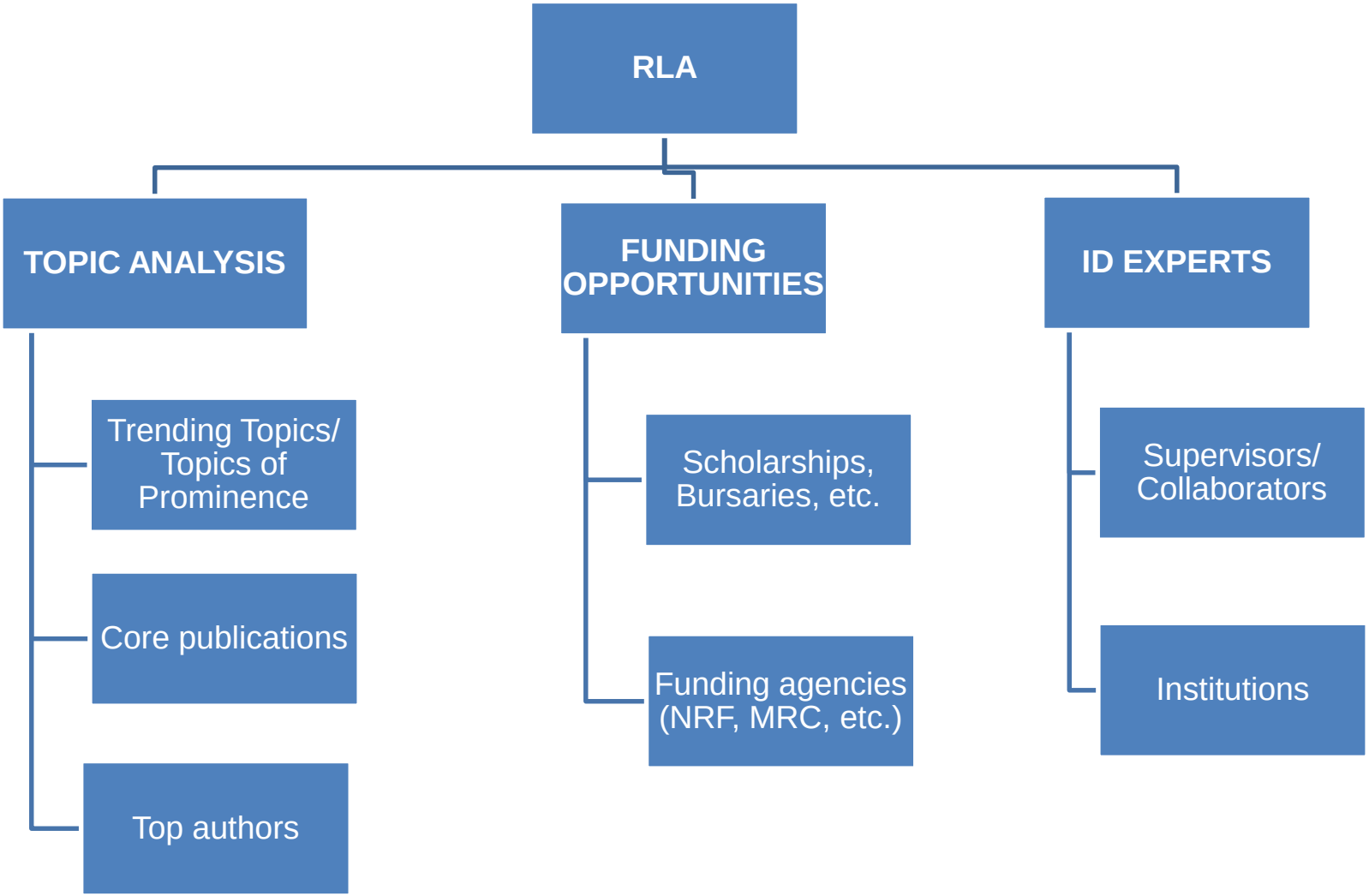
Funding details

Funding sponsor	Funding number	Acronym
National Science Foundation	0944761	NSF
National Science Foundation	ANT 06-36879	NSF
National Oceanic and Atmospheric Administration	NA08OAR4320754	NOAA
National Oceanic and Atmospheric Administration	NA12OAR4310058	NOAA
National Science Foundation	OCE-1155240	NSF
National Science Foundation	OPP-0823101	NSF

Top Funders

Funding sponsor	Documents
National Science Foundation	1338
National Natural Science Foundation of China	843
Natural Environment Research Council	608
National Oceanic and Atmospheric Administration	558
National Aeronautics and Space Administration	369
Australian Research Council	284
Natural Sciences and Engineering Research Council of Canada	265

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Core publications
Top authors
Scholarships, Bursaries, etc.
Funding agencies (NRF, MRC, etc.)
Supervisors/ Collaborators
Institutions

UCT LIBRARIES

oceans & "climate change"

TOPIC ANALYSIS

Trending topics/Topics of Prominence

Core publications

Top authors

Trending topics

Dissolved inorganic carbon, ocean, CO2 sink

Core publications at UCT:

- Fifteen years of ocean observations with the global Argo array (cited 126 times)
- How well do global ocean biogeochemistry models simulate dissolved iron distributions? (cited 68 times)

Core publications in Africa:

- Global imprint of climate change on marine life (cited 577 times)
- Global Carbon Budget 2017 (cited 181 times)

Most active authors at UCT (# of publications):

- Ansorge, Isabelle Jane
- Maury, Olivier
- Vichi, Marcello

Most active authors in Worldwide (# of publications):

- Bopp, Laurent
- Hobday, Alistair J.
- Doney, Scott C.

oceans & "climate change"

↓

FUNDING OPPORTUNITIES

↓

Scholarships & bursaries, etc.

↓

Funding agencies

Scholarships and bursaries ; Funding agencies:

Article: North-south palaeohydrological contrasts in the central mediterranean during the holocene: Tentative synthesis and working hypotheses
Funding agency: Swiss National Science Foundation

Article: Reconciling conflicts in pelagic fisheries under climate change
Funding agencies: AZTI-Tecnalia, Calgary Laboratory Services, Commonwealth Scientific and Industrial Research Organisation

Supervisors/Collaborators
At UCT:
Prof Michael Meadows
Professor Peter G. Ryan
Dr Isabelle Jane Ansorge

Institutions
Contributing institutions worldwide
CNRS (France) Centre national de la recherche scientifique
NOAA (USA) National Oceanic and Atmospheric Administration
UCT (#117)

Collaborating institutions (with UCT) worldwide
CNRS (France) Centre national de la recherche scientifique
CSIRO (Commonwealth Scientific and Industrial Research Organisation)

Concluding remarks

- SciVal well suited for the Sciences and Health Sciences
- SciVal – Social Sciences, Humanities & Arts research
- RLA and Health Sciences engagement
- RLA and SciVal will increase postgraduate participation in research degrees
- Further SciVal product investigation and Dimensions investigation

Thank you

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