

Top 5-100 programme Ekaterinaburg

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Snowball Metrics In Practice

Jennifer Stergiou, Head of Research Operations, University of Leeds

J.R.Stergiou@Leeds.ac.uk

Snowball Metrics Exchange service

- **Globalising Snowball Metrics**
- What is the Snowball Metrics Exchange?
- How is it being used in the UK?
- How does my institution get involved?

The output of Snowball Metrics

- The snowball metrics are set out in a ‘recipe book’ which sets out what they are and how to calculate them – www.snowballmetrics.com/metrics
- Examples include:
 - Application volume
 - Income volume
 - Market share
 - IP Volume
 - Field Weighted Citation Impact
- Metrics can be ‘sliced and diced’ by funder type and by academic discipline, and normalised by FTE

Globalising Snowball Metrics

US

- University of Michigan
- University of Minnesota
- Northwestern University
- University of Illinois at Urbana-Champaign
- Arizona State University
- MD Anderson Cancer Center
- Kansas State University

Australia / New Zealand

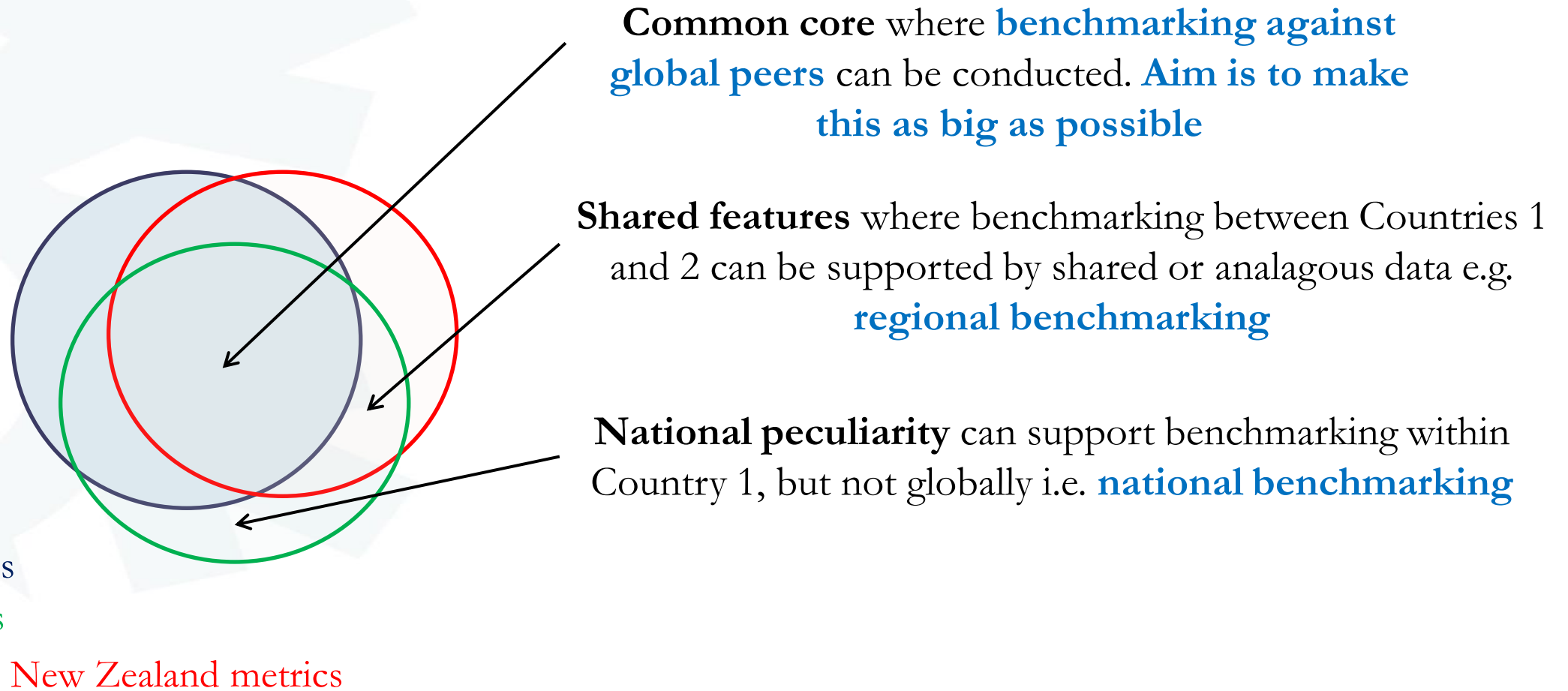
- University of Queensland
- University of Western Australia
- University of Auckland
- University of Wollongong
- University of Tasmania
- Massey University
- The University of Canberra
- Charles Darwin University

Interest and support from:

- Japan RU11 metrics group
- Association of Pacific Rim Universities (APRU)
- European Commission for H2020
- Fundação para a Ciência e a Tecnologia (FCT) in Portugal

Towards global standards for benchmarking

Snowball Metrics denominators should enable global benchmarking as far as possible.



International mapping - example

- UK HESA Cost Centres : US HERD codes, e.g.
 - UK HESA Code 102 Clinical Dentistry, maps to
 - US HERD Codes F3d and F3e Dental Surgery and Dentistry
- Snowball funder types : US FundRef classification

Shared classification	FundRef	HESA funder-types
Federal / National Government	govfed	Research Councils
Government Non-Federal	govnon	UK public sector
Foundation	founda	UK charity
Corporate	corpor	UK industry Overseas industry
Academic	academ	Other sources
Professional Associations and Societies	assoc	Other sources
International	intern	EU Government Other overseas sources
Other sources	othern	Other sources

Snowball Metrics Exchange service

- Globalising Snowball Metrics
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The Snowball Metrics Exchange service



Facilitates the exchange of **encrypted** Snowball Metrics between institutions who agree to share information

‘I’ll show you mine if you show me yours’

The Snowball Metrics Exchange service

- **Any institution** using Snowball Metrics can become a member of the Exchange service
- The service is **free of charge** to use
- Only **metric values** will be exchanged. Data underlying the metrics will never be exchanged and will remain behind the institutions' firewalls
- **CRIS system** could communicate directly with exchange service to upload and download metrics via APIs

OR

- Institutions can install the service on a server behind their firewall and then use **spreadsheets** to upload and download their metrics

The Snowball Metrics Exchange service

- The institutional members are responsible for generating their own Snowball Metrics **according to the recipes**
 - Generate metrics using a management information system OR
 - Generate metrics on a spreadsheet
- Once registered with the service each institution can choose to be a member of **one or more ‘benchmarking clubs’** or to exchange metrics via ‘one to one’ relationships with other members
 - Example benchmarking clubs:
 - UK Russell Group Universities
 - Members of Top 5-100 programme
 - A group of your own choosing
- Institutions may **choose** to accept or decline requests to share **all or some** Snowball Metrics – institutions retain control of their metrics

The Snowball Metrics Exchange service



Encrypt and
upload metrics for
future exchange



'Broker' service to
relay the
encrypted metrics

Manage metric
entitlements



Download/retriev
e the encrypted
metrics shared by
participating
institutions

The Snowball Metrics Exchange service

The Snowball Metrics Exchange service
= Uploader + SMX + Downloader

Pre-requisites:

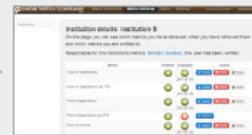
Institution A+B have added metric values to the Uploader e.g. **Institution B - Scholarly output 2015 = 1.376**

&

Institution A+B have agreed to share encrypted metric values and have set up entitlements in the SMX

1. Institution A makes request through their Downloader to retrieve **Scholarly output 2015** from Institution B

2. SMX checks metric entitlements (see pre-requisites) and make request through the Institution B Uploader API **Scholarly output 2015**



5. Institution A downloads metrics and decrypts them through their Downloader e.g. **Scholarly output = 1376**

4. SMX relays encrypted metric values to institution A's Downloader e.g. **Scholarly output = *&%\$**

3. Uploader of Institution B sends encrypted metric values to the SMX e.g. **Scholarly output = *&%\$**

The Snowball Metrics Exchange service - Uploader


Snowball Metrics Uploader
Metrics
Users
Settings

- Overview
- Input Metrics**
- Applications Volume
- Awards Volume
- Success Rate
- Academic-Industry Leverage
- Business Consultancy Activities
- Process Metrics**
- Income Volume
- Market Share
- Contract Research Volume
- Output Metrics**
- Scholarly Output
- Citation Count
- h-Index

Applications Volume

Applications Volume calculates the number and price of research grant applications that are submitted to external funding bodies.

Metric	Available	Manage	Notes
Count of applications	✔	↩ Replace ✖ Delete ✎ Edit ✖ Delete	
Count of applications per FTE	✖	↩ Add	
Price of applications	✔	↩ Replace ✖ Delete ✎ Edit ✖ Delete	
Price of applications per FTE	✖	↩ Add	

The Snowball Metrics Exchange (SMX)

Institutions

- University of Leeds**
- University of St Andrews
- University of Oxford
- Imperial College London
- University College London
- University of York
- King's College London
- University of Bristol
- University of Southampton
- The University of Sheffield
- University of Birmingham
- University of Exeter
- University of Manchester
- University of Edinburgh
- University of Liverpool
- Invite institution

Metrics entitlement: University of Leeds

Jenni Stergiou is responsible for this institutions metrics and has been verified.

The ticks and crosses on this page indicate which metrics you have entitled this institution to access. Clicking a cross turns it into a tick and entitles the institution to mutually share the chosen metric.

You can entitle the institution to mutually share a group of metrics (e.g. all input metrics) or to all metrics by clicking the radio buttons next to the metric group title. Remember to click on the blue 'save' button to save your changes.

Once you have made the selected metrics available in your 'Snowball Metrics uploader', this institution will be able to download and view them through their 'Snowball Metrics Downloader'.

You can remove an institutions entitlement by clicking a tick which changes it to a cross. This will prevent any future download of the selected metric by this institution. Note that if you have previously entitled and uploaded the corresponding metric then the institution may have already downloaded the metric.

Only when both columns are ticked will the selected metric be able to be exchanged.

	University of Leeds	Queen's University Belfast
Metric Entitlements		
Input Metrics		<input type="checkbox"/>
Count of applications	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Count of applications per FTE	<input type="checkbox"/>	<input type="checkbox"/>
Price of applications	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Price of applications per FTE	<input type="checkbox"/>	<input type="checkbox"/>
Count of awards	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Count of awards per FTE	<input type="checkbox"/>	<input type="checkbox"/>
Value of awards	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Overview

Input Metrics

Applications Volume

Awards Volume

Success Rate

Academic-Industry Leverage

Business

Consultancy Activities

Process Metrics

Income Volume

Market Share

Contract Research Volume

Output Metrics

Scholarly Output

Citation Count

h-Index

Field-Weighted

Citation Impact

Outputs in the Top

1% by Citation Count

Outputs in the Top

5% by Citation Count

Outputs in the Top

10% by Citation

Count

Applications Volume

Applications Volume calculates the number and price of research grant applications that are submitted to external funding bodies.

Count of applications

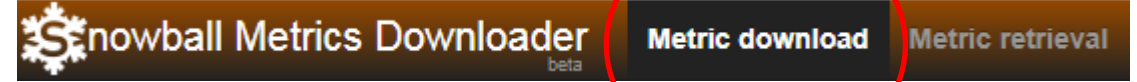
Metric UUID: 325463b0-e785-4caf-ad47-80024dbec2bb
X-axis: financial-quarter
Y-axis: applications-volume
CSV structure: institution (uuid), financial-quarter-start (datetime), financial-quarter-end (datetime), applications-volume (int), classification-type (id), classification-id (id), classification-shared (id), funder-type (id), funder-id (id), funder-type-shared (id), data-source (id), data-currency-date (datetime), measurement-date (datetime)

You can download an example CSV file here: [count-of-applications.csv](#), for ease of use we have included the field names on the first row. Please make sure you delete this row before adding the metric.

The following Excel sheet contains all the fields required to create a valid CSV file and the different identifiers that are used in the metric: [count-of-applications.xlsx](#). This sheet also contains helper columns that can be used to look up required ID's.

To facilitate easier benchmarking between different countries, a shared classification for Funder and Subject area classifications has also been developed and can be found in the [user guide](#).

The Snowball Metrics Exchange service- Downloader

Metric	Entitled	Available	Action	
Count of applications		 2017-09-04	Update	Delete
Count of applications per FTE				
Price of applications		 2017-09-04	Update	Delete
Price of applications per FTE				
Count of awards		 2017-09-04	Update	Delete Notes
Count of awards per FTE				
Value of awards		 2017-09-04	Update	Delete Notes
Value of awards per FTE				

Overview

Input Metrics

Applications Volume

Awards Volume

Success Rate

Academic-Industry

Leverage

Business Consultancy

Activities

Process Metrics

Applications Volume

Applications Volume calculates the number and price of research grant applications that are submitted to external funding bodies.

Count of applications

Institution	Metrics
University of Exeter	Download View metric
University of Liverpool	Download View metric

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How is it being used in UK? - Russell Group

- Snowball metrics exchange currently being **piloted** / **tested** with the UK Russell Group of Research Intensive Universities
- *Fill in – who are the Russell group*

Russell Group Benchmarking Agreement



- Agreement to share input & process metrics every 6 months:
 - Applications volume
 - Applications value
 - Awards volume
 - Awards value
 - Success rate – volume
 - Success rate – value

- Agreed to share metrics with Russell Group
- Analysis to determine which other institutions we wish to approach
- Requests to share metrics from other UK & International institutions considered on basis of:
 - Whether they are a competitor (similar performance to Leeds or better) in one or more academic disciplines
 - Whether we may be interested in collaborating
- Using data from Snowball benchmarking agreement alongside other sources of data such as SciVal

Snowball Metrics Exchange service

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How does my institution get involved?

- Institutions
- Invite institution**

Invite

Please complete the form below to invite a new institution to join the Snowball Metrics Exchange service. Following invitation, the invitee will receive an email containing a link to register. Please note that by inviting a new user, you are acting as their sponsor and so this user will not go through any further verification and will automatically be granted access to the Snowball Metrics Exchange.

Administrative contact

First name

Last name

Email

Invitation message

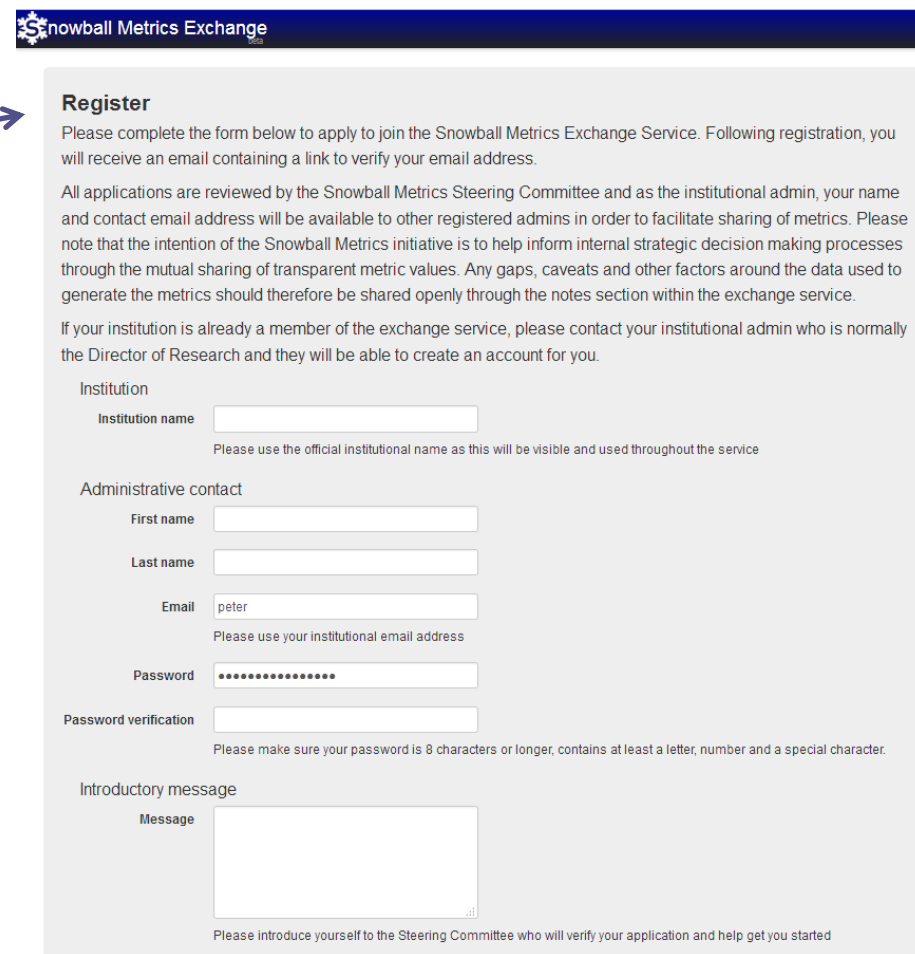
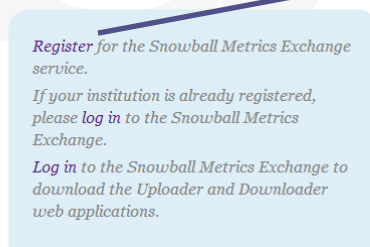
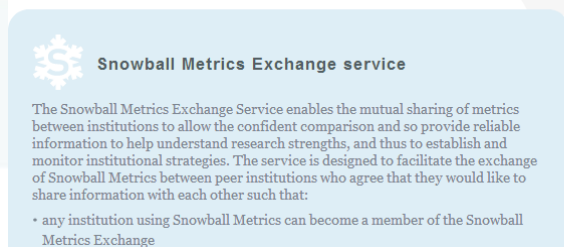
Message

Please add a short message to the person you would like to invite to participate in the Snowball Metrics Exchange service

[Submit invitation](#)

Through invitation by an existing member

How does my institution get involved?



Register by going to the Snowball Metrics website:

<https://www.snowballmetrics.com/metrics-exchange/>

OR

Direct to:

<https://www.snowballmetrics.exchange/user/register>

Recap: Benefits for universities

- Trusted comparison of metrics on a robust standard (comparing apples to apples)
- Universities are in control
- Methods (recipes) are not proprietary
- Metrics are agnostic to systems or suppliers – anyone can use them for their own purposes
- Ability to choose and control with whom one shares/benchmarks (the crossroad / traffic light model)
- Ability to benchmark nationally and internationally