



Just Add Context: Levelling up analysis with Dimensions on Google BigQuery

11 February 2021

Danu Poyner - Dimensions Product Specialist (APAC)

d.poyner@digital-science.com

Part of **DIGITAL**science

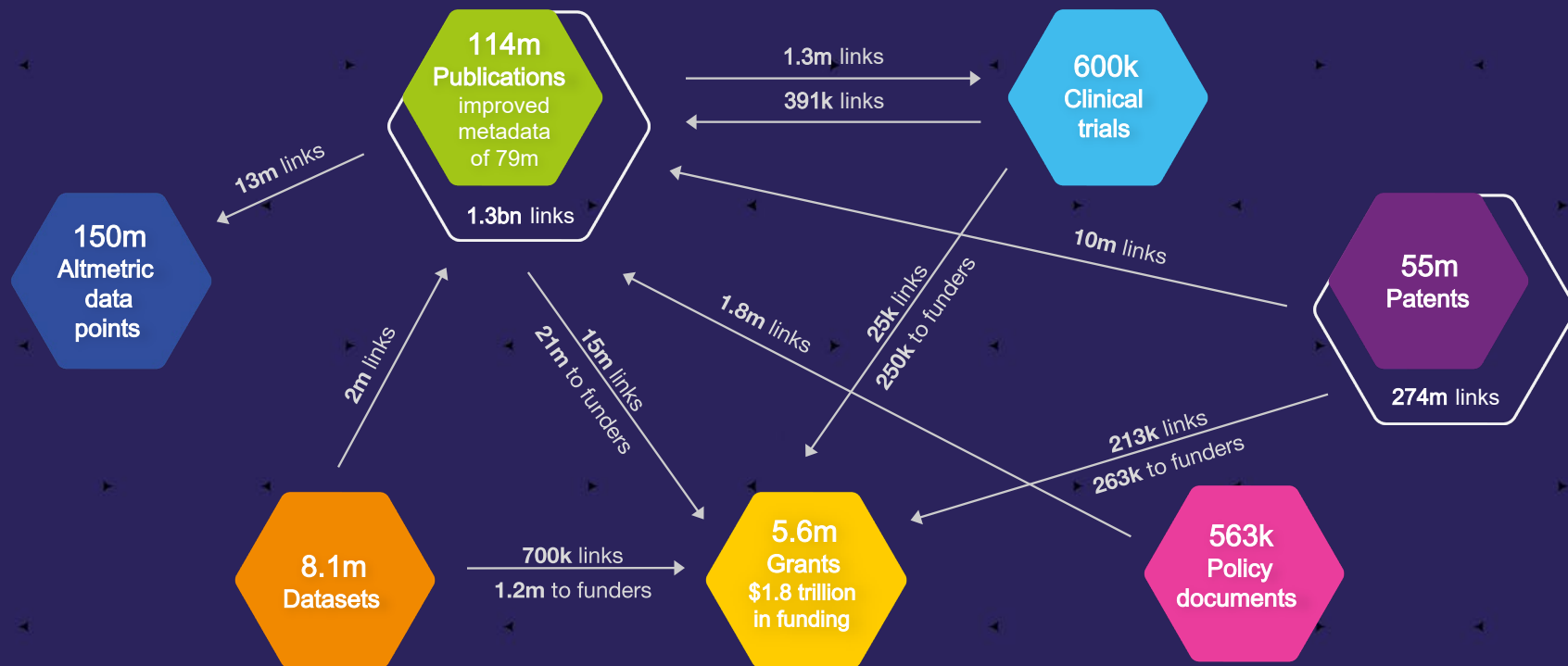
Today's Agenda

- 1) 2-minute Intro: What is Dimensions?
- 2) 2 Lightning Examples
 - a) Covid-19 Research Dashboard
 - b) NZ research collaboration with low-income countries
- 3) How can you get started with Dimensions on Google BigQuery?
- 4) Q&A / Discussion

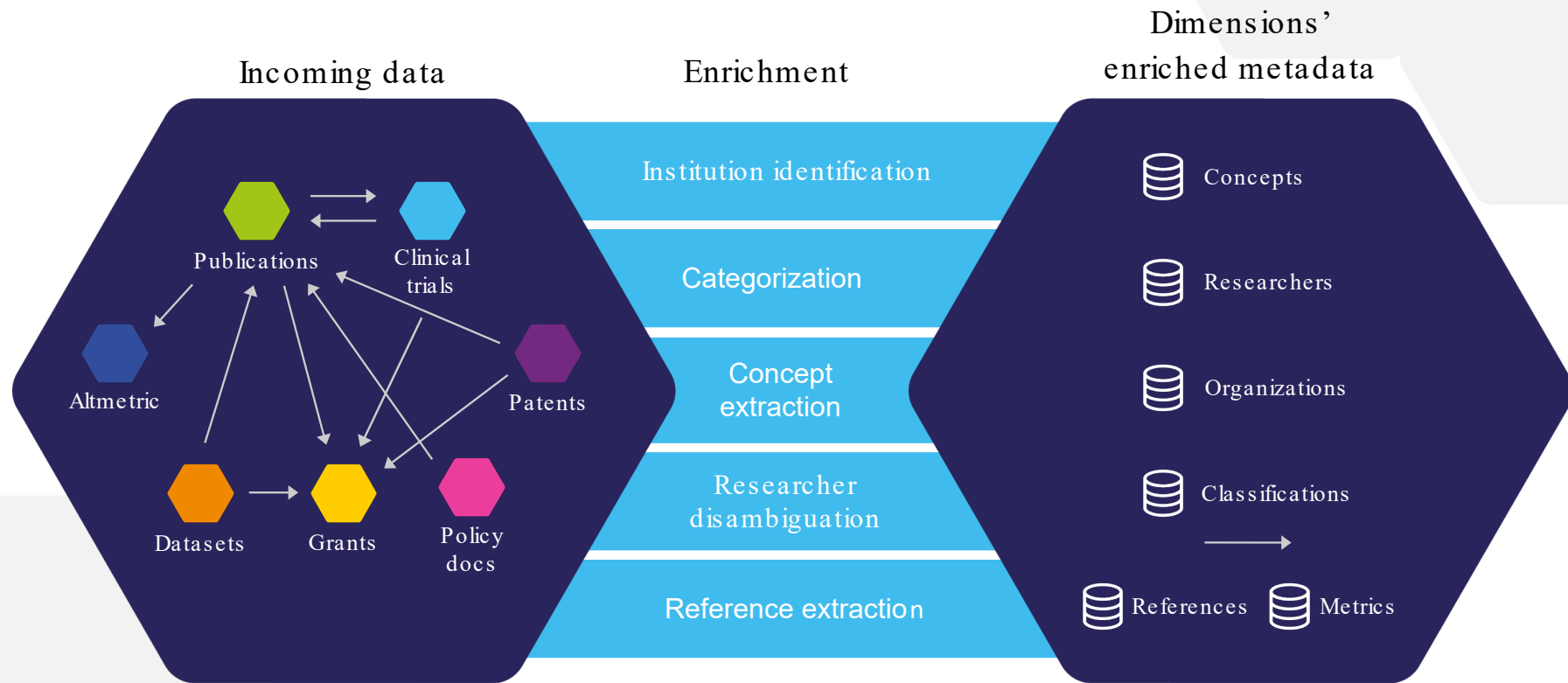


2-minute Intro: What is Dimensions?

Dimensions: A joined-up perspective on research



A modern approach to data curation

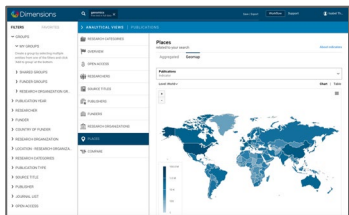


How our academic clients are using Dimensions...

Chancellery, Deans & Planning	Research Office	Library	Faculty & Research	And Beyond
Strategic planning & competitive intelligence <ul style="list-style-type: none">• Peer group analysis & comparisons• Internal benchmarking• Cost-effectiveness of research• Horizon scanning Advocacy <ul style="list-style-type: none">• Impact, value of institutions & research Talent planning & retention Networks & context <ul style="list-style-type: none">• Industry collaboration & revenue generation	Rankings & assessment <ul style="list-style-type: none">• National assessment• International ranking• Custom benchmarking Impact assessment and narrative Funding & grants <ul style="list-style-type: none">• Strategy• Sources (incl. industry)• Trends• ROI assessment Talent <ul style="list-style-type: none">• Recruitment & capability building• Career tracking Collaboration networks	Collection Development <ul style="list-style-type: none">• Holdings & ROI assessment• Publisher negotiations & transformative agreements Open access <ul style="list-style-type: none">• Trends• Citation and impact analysis• Compliance tracking Publication strategy <ul style="list-style-type: none">• Support researchers on where to publish Information hub <ul style="list-style-type: none">• High value data asset for training	Strategy <ul style="list-style-type: none">• Funding trends & opportunities• Faculty output tracking• Find partners and recruit talent• Emerging research trends• Patent analysis Bibliometrics <ul style="list-style-type: none">• Co-citation analysis Use for research <ul style="list-style-type: none">• e.g. Computer Science, Business, Economics, Social Science• Dataset for analysis and visualisation	Commercialization of research <ul style="list-style-type: none">• Science-->Innovation• Tech transfer• Support university spinouts & deep tech• Patent analysis• Find Key Opinion Leaders• Industry partnerships Marketing & Communications <ul style="list-style-type: none">• Market segmentation & targeting• Monitor & grow wider impact & attention, publicity for research

One amazing database – multiple ways to access it

Web App



Search & discovery; top analytical use cases

Dedicated UI, inbuilt visualizations

In the browser, no specialized knowledge required

For everyone

API



Ad hoc analyses
& topic modelling

Full-text search & special functions
e.g. affiliation extraction

Product integrations e.g. CRIS

**For API users
+ data & analytics teams**

Google BigQuery



Fast, large scale analyses;
dynamic dashboards

Join private & public data, access
previously unsurfaced links

Direct integration with BI tools e.g.
Tableau, Qlik, PowerBI

**For data & analytics teams
+ dashboards for everyone**

So what?

Dimensions on BigQuery: So what?

- **Ultimate flexibility**

Analyze however you want: ask and answer questions that you've always wanted to ask.

- **Speed and agility**

Aggregate and manipulate data at a speed that was simply impossible before, to create bespoke real-time insights.

- **Interoperability with other platforms and data**

Integrate with your existing infrastructure, join with your own data, pull into your visualisation tool of choice (e.g. Tableau, Qlik, PowerBI, Plot.ly etc).

Example 1:

A dashboard for exploring COVID-19 research
in near real-time

Dimensions COVID-19 Dashboard

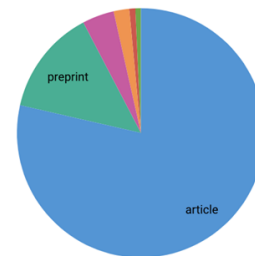
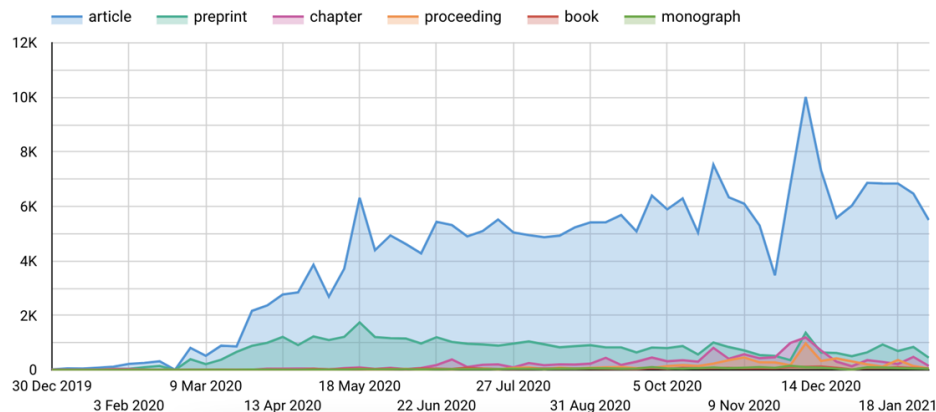
Publications

Report pages: [Publications](#) | [Clinical Trials](#) | [Funding](#)

Total publications	Total organizations	Total countries
308,782	21,460	196

Weekly new publications, by type of publication

Records displayed are sorted based on the week they have been added to the Dimensions database. Note: all document types are included.





Example 2:

“How often does NZ collaborate on research with low-income countries?”

Hundreds of public datasets on GCP Marketplace...

The screenshot displays the Google Cloud Platform Marketplace interface. At the top, a blue header bar contains the Google Cloud Platform logo, a 'Select a project' dropdown, and a search icon. Below the header, the 'Marketplace' section is visible, featuring a search bar labeled 'Search Marketplace'. On the left side, a sidebar lists categories and types. The 'TYPE' section shows 'Data sets' as the selected filter. The 'CATEGORY' list includes: Advertising (10), Analytics (26), Big data (45), Climate (28), Databases (2), Data sets for COVID-19 research... (32), Developer tools (22), Economics (33), Education (3), Encyclopaedic (33), Financial services (52), Genomics (4), Healthcare (39), Machine learning (3), Maps (4), Media and entertainment (2), Public safety (17), Science & research (68), Security (1), Social (3), Transportation (5), and Other (11). The main content area shows '209 results' and a grid of dataset cards. Each card includes a logo, a title, a subtitle, and a brief description. The datasets shown are: 'About COVID-19 Public Datasets' (BigQuery Public Datasets Program), 'Aion On-Chain Transaction Data' (cmorq), 'Algorand On-Chain Transaction Data' (cmorq), 'American Community Survey (ACS)' (United States Census Bureau), 'American Hospital Association Hospital Capacity...' (American Hospital Association), 'Area Deprivation Index (ADI)' (BroadStreet), 'Argentina Real Estate Listings' (Properati), 'Austin Crime Data' (City of Austin), 'Band Protocol Data' (Cloud Public Datasets - Finance), 'Binance Coin On-Chain Transaction Data' (cmorq), 'Births Data Summary' (Centers for Disease Control), 'Bitcoin Cash Cryptocurrency Dataset' (Bitcoin Cash), 'Bitcoin Cash On-Chain Transaction Data' (cmorq), 'Bitcoin Cryptocurrency' (Bitcoin), and 'Bitcoin Diamond On-Chain Transaction Data' (cmorq).

Google Cloud Platform Select a project

Marketplace Search Marketplace

TYPE
Data sets

CATEGORY
Advertising (10)
Analytics (26)
Big data (45)
Climate (28)
Databases (2)
Data sets for COVID-19 resear... (32)
Developer tools (22)
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Encyclopaedic (33)
Financial services (52)
Genomics (4)
Healthcare (39)
Machine learning (3)
Maps (4)
Media and entertainment (2)
Public safety (17)
Science & research (68)
Security (1)
Social (3)
Transportation (5)
Other (11)

209 results

About COVID-19 Public Datasets
BigQuery Public Datasets Program
Getting started with COVID-19 Public Datasets

Aion On-Chain Transaction Data
cmorq
Easy access to on-chain transaction data

Algorand On-Chain Transaction Data
cmorq
Easy access to on-chain transaction data

American Community Survey (ACS)
United States Census Bureau
Detailed US demographic data at various geographic resolutions

American Hospital Association Hospital Capacity...
American Hospital Association
US Hospital Capacity Data aggregated at the county level

Area Deprivation Index (ADI)
BroadStreet
ADI: An index of socioeconomic status for communities

Argentina Real Estate Listings
Properati
Monthly property listing data for Argentina since 2016

Austin Crime Data
City of Austin
City of Austin crime data for 2014 and 2015

Band Protocol Data
Cloud Public Datasets - Finance
Band Protocol data loaded into BigQuery

Binance Coin On-Chain Transaction Data
cmorq
Easy access to on-chain transaction data

Births Data Summary
Centers for Disease Control
Natality Data from CDC Births

Bitcoin Cash Cryptocurrency Dataset
Bitcoin Cash
The Bitcoin Cash blockchain loaded to BigQuery

Bitcoin Cash On-Chain Transaction Data
cmorq
Easy access to on-chain transaction data

Bitcoin Cryptocurrency
Bitcoin
Bitcoin blockchain transactions and blocks

Bitcoin Diamond On-Chain Transaction Data
cmorq
Easy access to on-chain transaction data

World Development Indicators from The World Bank



World Development Indicators (WDI)

The World Bank

The primary World Bank collection of development indicators

[VIEW DATA SET](#) [↗](#)

[OVERVIEW](#)

[SAMPLES](#)

Overview

This dataset contains the most current and accurate global development data available including national, regional and global estimates. Data has been collected from the early 1960's to present and is updated regularly depending on new data available on the indicators. This time series data offers indicators such as agriculture and food security, climate change, population growth, economic growth, education, energy, natural Resources and many more.

This public dataset is hosted in Google BigQuery and is included in BigQuery's 1TB/mo of free tier processing. This means that each user receives 1TB of free BigQuery processing every month, which can be used to run queries on this public dataset. Watch this short video to learn how to get started quickly using BigQuery to access public datasets. [What is BigQuery](#) [↗](#)

Additional details

Type: [Datasets](#)

Last updated: 31/01/2020

Category: [Healthcare](#), [Financial services](#), [Economics](#)

Dataset source: [The World Bank](#) [↗](#)

Cloud service: BigQuery

Update frequency: Annually

World Bank data has an 'income_group' indicator

[FEATURES & INFO](#) [SHORTCUT](#) [HIDE PREVIEW FEATURES](#)

Explorer [+ ADD DATA](#)

?

Viewing pinned projects.

- usfs_fia
- utility_eu
- utility_us
- wikipedia
- wise_all_sky_data_release
- words
- world_bank_global_population
- world_bank_health_population
- world_bank_intl_debt
- world_bank_intl_education
- world_bank_wdi
 - country_series_definitions
 - country_summary
 - footnotes
 - indicators_data
 - series_summary
 - series_time
- worldpop

EDITOR × WORLD_... × WORLD_... × INDICAT... × COUNTR... × [COMPOSE NEW QUERY](#)

country_summary [QUERY TABLE](#) [COPY TABLE](#) [DELETE TABLE](#) [EXPORT](#)

currency_unit	STRING	NULLABLE	Currency unit (such as the dollar, euro, peso, rupee) issued as a coin or banknote, a standard unit of value and a unit of account.
special_notes	STRING	NULLABLE	Country special notes for data and metadata users.
region	STRING	NULLABLE	World Bank region to which a country belongs.
income_group	STRING	NULLABLE	World Bank income group to which a country belongs after the country classification is completed every year.
wb_2_code	STRING	NULLABLE	World Bank 2 digit code value of the country.
national_accounts_base_year	STRING	NULLABLE	Base year is the base or pricing period used for constant price calculations in the country's national accounts. Price indexes derived from national accounts aggregates, such as the implicit deflator for gross domestic product (GDP), express the price level relative to base year prices.
national_accounts_reference_year	STRING	NULLABLE	Reference year is the year in which the local currency constant price series of a country is valued. The reference year is usually the same as the base year used to report the constant price series. However, when the constant price data are chain linked, the base year is changed annually, so the data are rescaled to a specific reference year to provide a consistent time series. When the country has not rescaled following a change in base year, World Bank staff rescale the data to maintain a longer historical series. To allow for cross-country comparison and data aggregation, constant price data reported in World Development Indicators are rescaled to a common reference year (2010) and currency (U.S. dollars).
sna_price_valuation	STRING	NULLABLE	SNA price valuation shows whether value added in the national accounts is reported at basic prices (B) or producer prices (P). Producer prices include taxes paid by producers and thus tend to overstate the actual value added in production. However, value added can be higher at basic prices than at producer prices in countries with high agricultural subsidies.
lending_category	STRING	NULLABLE	World Bank lending category to which a country belongs after the operational guidelines are completed every year.
other_groups	STRING	NULLABLE	Other types of grouping approved by the WDI team.
system_of_national_accounts	STRING	NULLABLE	System of National Accounts identifies whether a country uses the 1968, 1993, or 2008 System of National Accounts (SNA). The 2008 SNA is an update of the 1993 SNA and retains its basic theoretical framework.
alternative_conversion_factor	STRING	NULLABLE	Alternative conversion factor identifies the countries and years for which a World Bank-estimated conversion factor has been used in place of the official exchange rate (line rf in the International Monetary Fund's [IMF] International Financial Statistics). See later in Sources and methods for further discussion of alternative conversion factors.

How often did University of Auckland collaborate on research with low-income countries from 2010 onwards?"

```
SELECT  p.year ,
        count(distinct CASE WHEN income_group = 'Low income' THEN p.id ELSE null END) low_income,
        count(distinct CASE WHEN income_group = 'Lower middle income' THEN p.id ELSE null END) lower_middle,
        count(distinct CASE WHEN income_group = 'Upper middle income' THEN p.id ELSE null END) upper_middle_income,
        count(distinct CASE WHEN income_group = 'High income' THEN p.id ELSE null END) high_income,
        count(distinct p.id) all_publications
FROM
  `dimensions-ai.data_analytics.publications` p,
  unnest(authors) a1,
  unnest(a1.affiliations_address) aff1,
  unnest(authors) a2,
  unnest(a2.affiliations_address) aff2
inner join `dimensions-ai.data_analytics.grid` g1
  on aff1.grid_id = g1.id
inner join `bigquery-public-data.world_bank_wdi.country_summary` wb
  on g1.address.country_code = wb.two_alpha_code
WHERE
  aff2.grid_id = 'grid.9654.e'
  and aff1.grid_id != aff2.grid_id
  and p.year >= 2010
group by p.year
order by year desc
```


How often did University of Auckland collaborate on research with low-income countries from 2010 onwards?”

year	low_income	lower_middle	upper_middle_income	high_income	all_publications
2021	5	42	158	458	535
2020	19	260	1056	3574	4049
2019	7	250	935	3311	3734
2018	8	243	773	3046	3369
2017	22	234	654	2810	3097
2016	9	185	591	2482	2759
2015	7	148	413	2165	2362
2014	5	143	415	2075	2280
2013	2	150	369	2020	2159
2012	5	144	324	1766	1885
2011	3	125	289	1504	1625
2010	1	30	156	1326	1399

How often did NZ institutions collaborate on research with low-income countries from 2010 onwards?”

name	low_income	lower_middle	upper_middle_income	high_income	all_publications	low_as_percentage
Canterbury Health Laboratories	22	50	47	368	369	5.962060
Middlemore Hospital	12	26	54	1048	1054	1.138520
University of Otago	153	949	2570	18274	19452	0.786552
Landcare Research	14	76	425	1741	1850	0.756757
Auckland University of Technology	35	327	1007	5241	5804	0.603032
University of Auckland	93	1954	6133	26537	29253	0.317916
Victoria University of Wellington	23	322	1230	7161	7775	0.295820
Massey University	23	553	1824	8135	9206	0.249837
University of Waikato	11	204	928	4300	4790	0.229645
University of Canterbury	15	1341	2477	8907	9625	0.155844

How many NZ-affiliated researchers have dual affiliation with low-income countries from 2010 onwards?”

name	country	low_income	lower_middle	upper_middle_income	high_income	all_researchers
University of Otago	New Zealand	17	41	209	2224	2379
University of Auckland	New Zealand	6	86	446	2989	3324
Auckland University of Technology	New Zealand	2	34	86	467	543
AgResearch	New Zealand	2	2	26	284	309
Massey University	New Zealand	2	56	145	869	1018
Lincoln University	New Zealand	1	13	42	205	253
University of Canterbury	New Zealand	1	36	106	760	864

How can you get started with Dimensions on Google BigQuery?

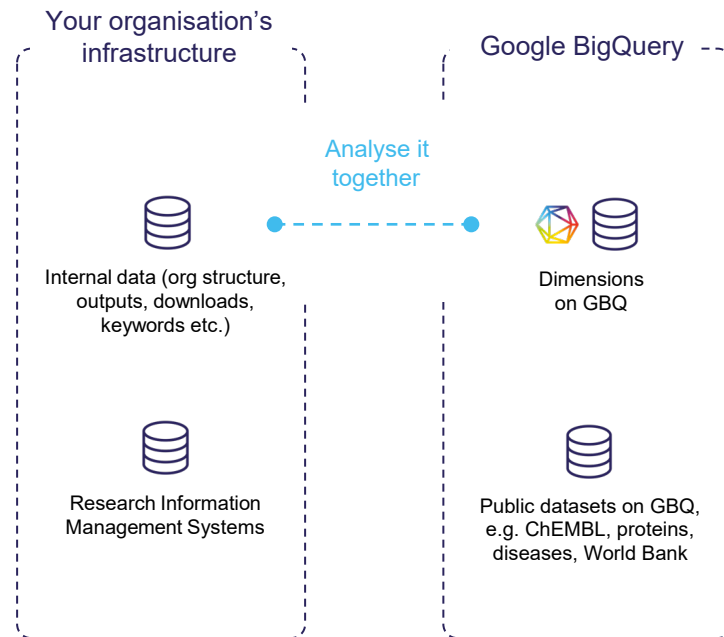
Why Google BigQuery?

- A cloud-based data warehouse where users can store and analyse their large datasets.
- We chose Google BigQuery as it is designed to be a very cost effective data warehouse: no ongoing maintenance costs, no set-up costs, and a low overall cost of ownership. Designed for fast analytics on massive datasets.
- Eliminates the need for expensive local server infrastructure.
- Work with the data immediately: Just log in to start querying.
 - Allows you to save valuable developer time: no need for an ingest pipeline or on-going maintenance.

Infrastructure
as it should be -
barely visible,
hugely supportive
and affordable

Create broader context: Add your own data

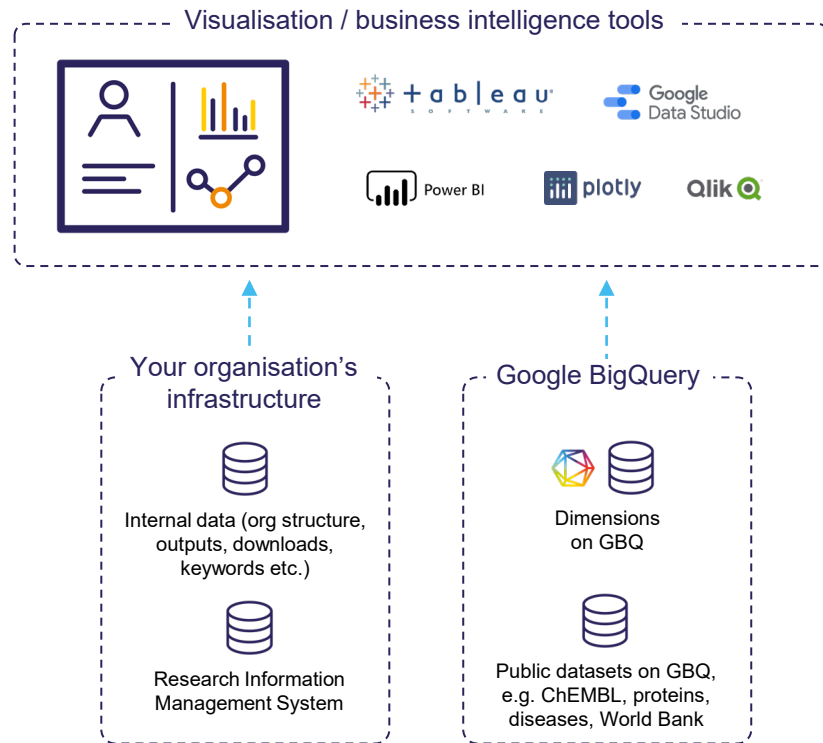
- Join with your own internal datasets securely.
- Expand to other public & private datasets.



Augment your infrastructure:

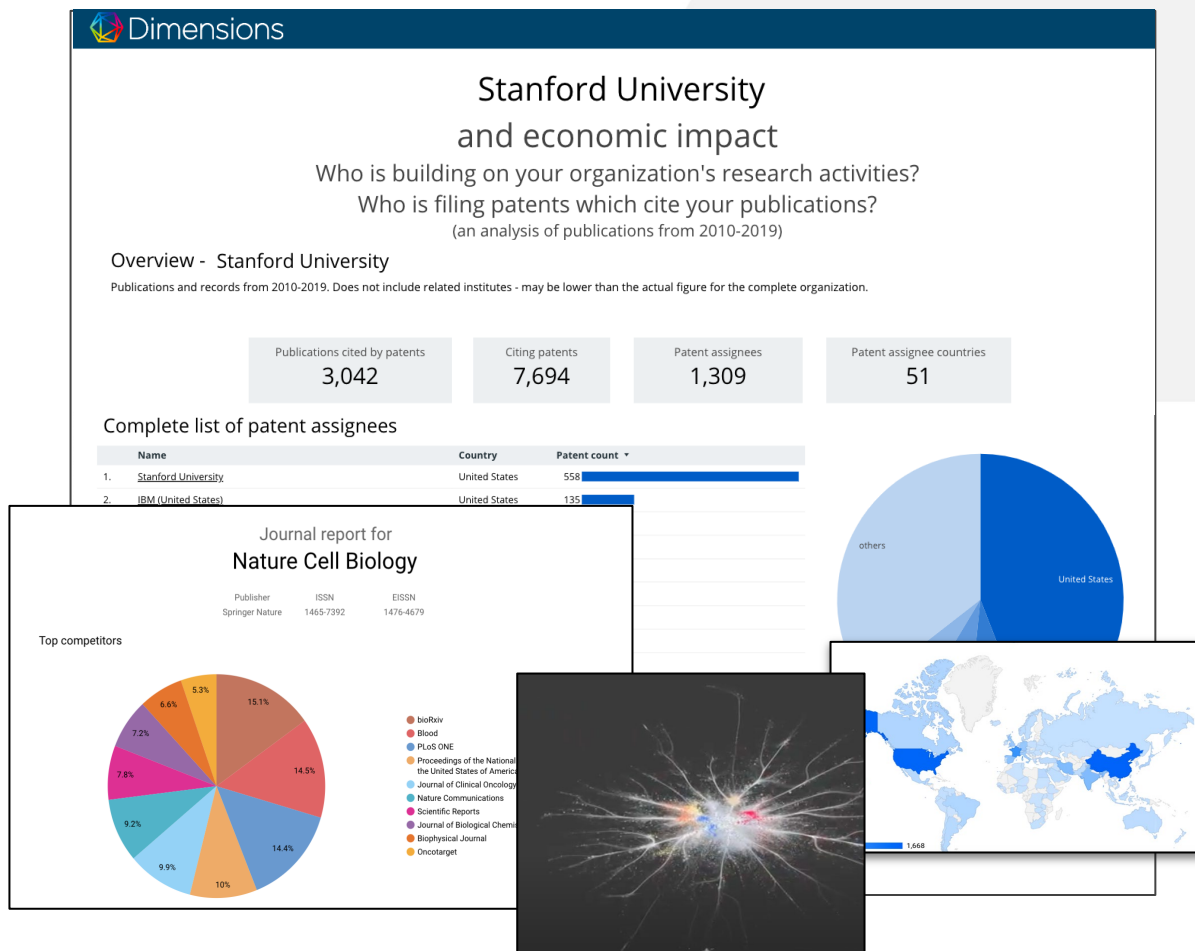
Do all this with the tools you already use

- Direct connectors to BI & data viz tools.
- Programmatic access via client libraries.



From idea to impact: View and analyse Dimensions data however you want

- Same data, new ways to look at it.
- Build custom dashboards that provide answers on a specific topic.



Try it out! All content relevant to COVID-19 has been made available openly on BigQuery

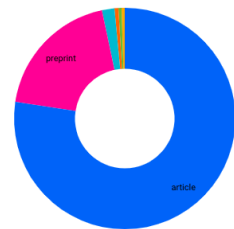
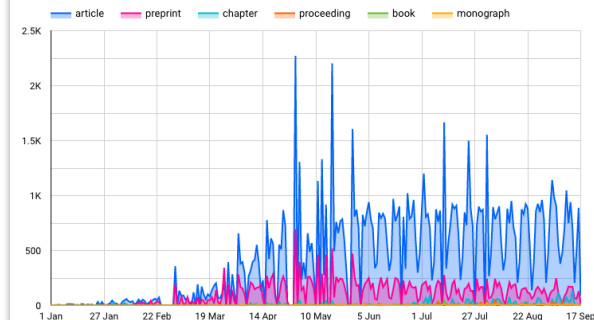
- Explore how Dimensions on BigQuery works.
- Data covers:
 - Publications (180k+)
 - Grants
 - Datasets
 - Clinical trials
- Take a look at our [interactive Covid-19 dashboard](#).
- Make your own dynamic dashboard using BigQuery + Google's free data visualization tool Data Studio (or connect to Qlik etc).

Find the data [here](#), and explore [our documentation here to get started](#).

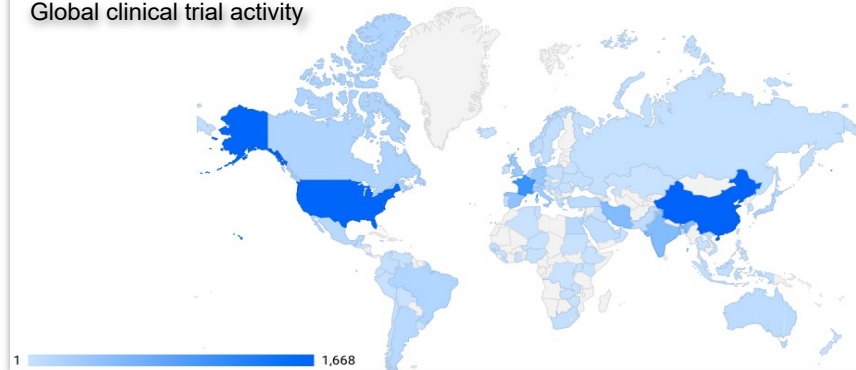


Daily new publications by type

Records displayed are sorted based on the day they were added to the Dimensions database.



Global clinical trial activity



Part of **DIGITAL**science

Q&A / Discussion

Danu Poyner - Dimensions Product Specialist (APAC)
d.poyner@digital-science.com

BOOK A TIME TO CHAT:
<https://calendly.com/d-poyner>

Thank you!

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ADDITIONAL SLIDES- NOT
PART OF PRESENTATION

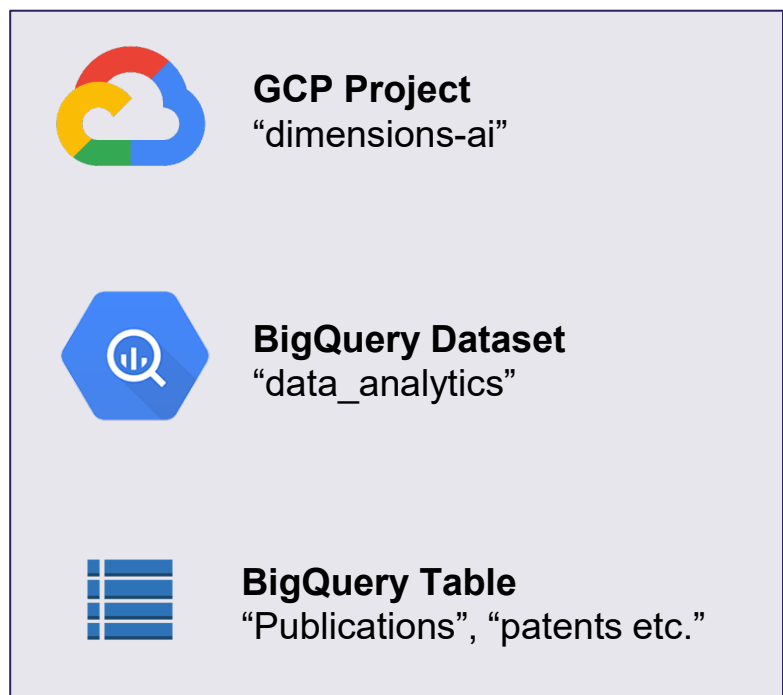
How does Dimensions on Google BigQuery work?

Google BigQuery

- Cloud Data Warehouse – the ease/simplicity of Google Docs applied to data warehouses and analytics.
- Uses ANSI SQL for performing queries – minimal learning curve from other OLTP and OLAP database systems.
- Highly scalable, easily capable of analysing petabytes of data.
- Zero infrastructure – serverless approach – completely managed by Google.
- Easy Sharing of datasets between colleagues, teams and external parties.



Dimensions on BigQuery: How it works



Dimensions Data Feed:

- Daily update of data.
- Automatically kept up-to-date (transparently).
- Monthly snapshots also available.
- Contains the same data used in the web application and Analytics API.
- No ETL to configure or manage.

A Simple Query

```
SELECT COUNT(*) as count  
FROM dimensions-ai.data_analytics.publications  
WHERE year = 2019
```



GCP Project
"dimensions-ai"



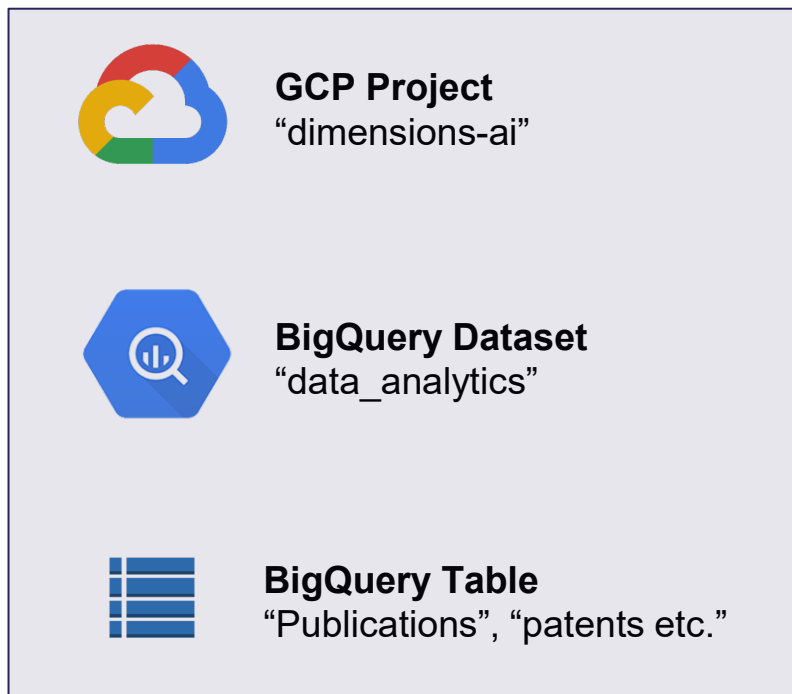
BigQuery Dataset
"data_analytics"



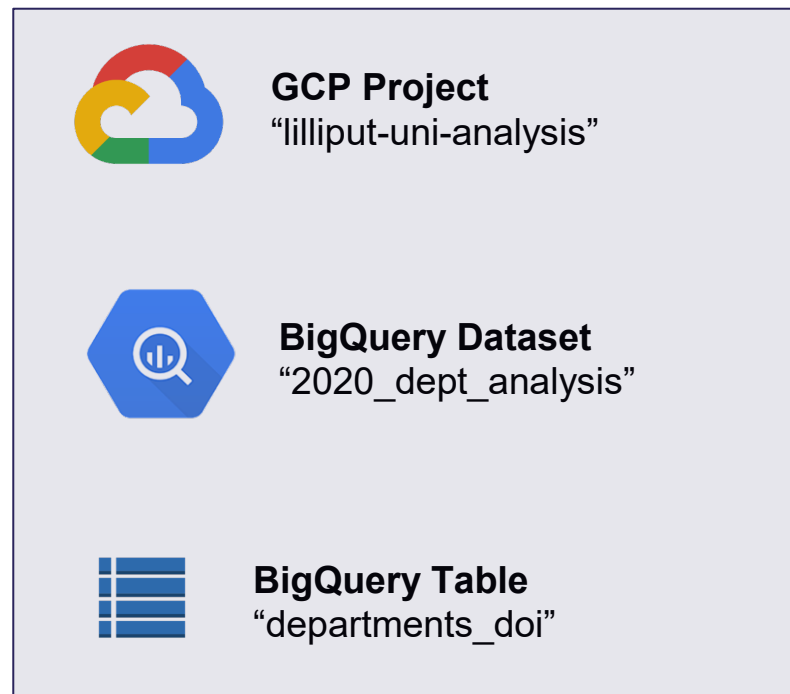
BigQuery Table
"publications"

Read access onto this dataset and tables contained within is provided. We keep it maintained with Dimensions data.

Dimensions on BigQuery: How it works



Data we share to you.



Your data – you control all access rights.

Another Simple Query

SELECT

d.dept_code, year, metrics.field_citation_rate,
category_for.first_level.codes as for_codes

FROM

'lilliput-uni-analysis.2020_analysis.departments_doi' d

LEFT JOIN

'dimensions-ai.data_analytics.publications' p

ON p.doi = d.doi

Pulling data from
Dimensions dataset
based on a list of your
own departments and
DOI pairs (your data).

Shared read access onto
Dimensions datasets.

GBQ model = less need for JOINS

```
{
  "first_level": {
    "codes": [
      "11",
      "13",
      "17"
    ],
    "full": [
      {
        "id": "2211",
        "code": "11",
        "name": "Medical and Health Sciences"
      },
      {
        "id": "2213",
        "code": "13",
        "name": "Education"
      },
      {
        "id": "2217",
        "code": "17",
        "name": "Psychology and Cognitive Sciences"
      }
    ]
  }
}
```

```
SELECT
  COUNT(c.id) as tot, category
FROM
  `covid-19-dimensions-
  ai.data.clinical_trials` c,

  UNNEST(category_for.first_level.full) AS
  category

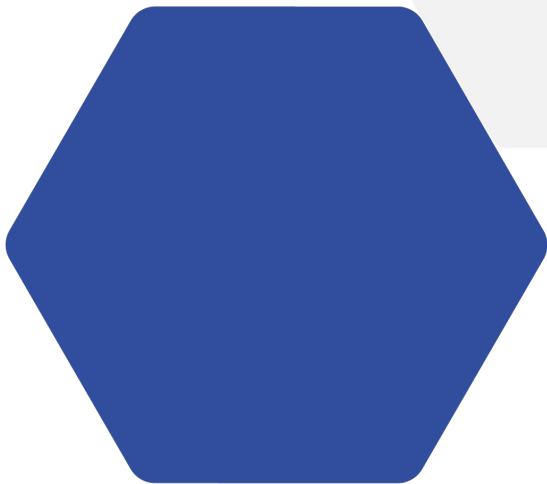
GROUP BY category
ORDER BY tot DESC
LIMIT 10
```

<https://cloud.google.com/solutions/bigquery>

- data-warehouse#querying_data

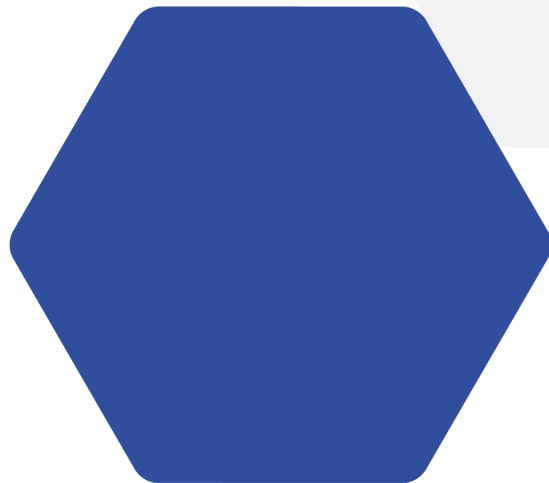
Moving data in and out

- **Web UI** – import/export via CSV, JSON files, Google Sheets.
 - Allows for exploring the data, answering simple one-off questions, preparing queries for other avenues below.
- **Programmatic access** – Google provided REST API endpoints with client libraries allowing full control over BigQuery.
 - Execute queries, import/export datasets etc. (we run our Dimensions daily ingest ETL using the Google provided client libraries).
- **BI Tool integrations** – most popular business intelligence tools allowing integrations, allowing data to be sourced from BigQuery.
 - i.e. Data Studio, Qlik, PowerBI, Tableau



Programmatic Data Access

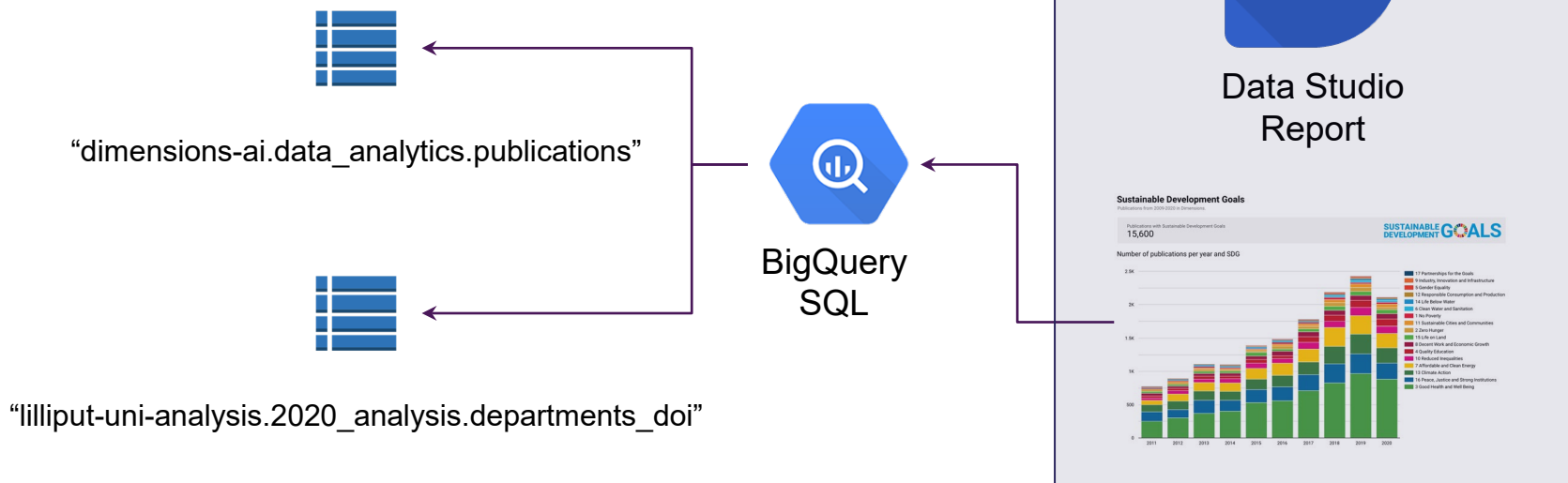
- Simple REST API to control all aspects of BigQuery (creating datasets, tables, performing queries etc)
- Client libraries provided by Google (Python, NodeJS etc).
- Advanced data access methods for bulk data access – BigQuery Storage API
- BigQuery Storage API – provides a binary serialised (Avro), transaction safe, parallelizable method for pulling down very large queries.
- Export Jobs – export large tables/queries off onto Google Cloud Storage (JSON, Avro, CSV etc).





Google Data Studio

Shareable “Google Doc” like report link.



Publications from 2009-2020 in Dimensions.

2,013

[illegible]

BigQuery Costs

Charges associated with Google BigQuery are based on two factors:

- How much data is involved (i.e. ‘touched’) in a query.
- How much data is stored on an ongoing basis in tables you own.

The UN Sustainable Development Goals (SDG) Data Studio report for example costs approximately a few cents to generate - even though this touches most of the different data sources over a wide range of years and does an international comparison against the organization in question.



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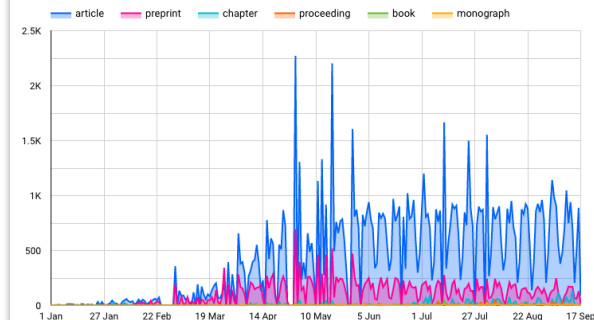
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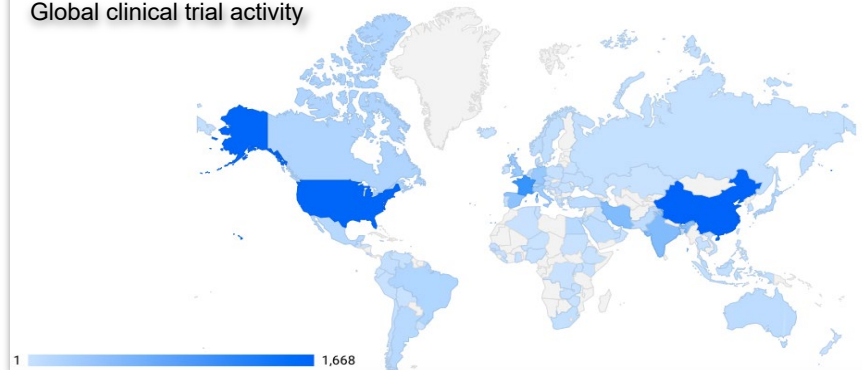


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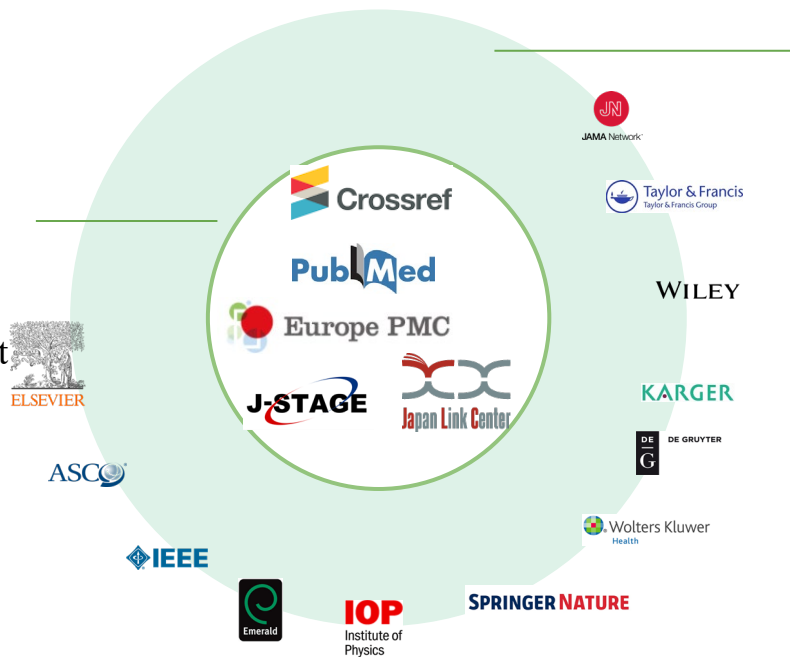


Part of **DIGITAL**science

Data and indicators in Dimensions

Publications

- 115M records based on metadata
- 'Backbone' for Dimensions
- OA tagging
- Rule-based document type identification



- Full text for 78,620,438 publications (direct relationships with >130 publishers)
- Improved representation compared to the 'backbone' record
 - Additional metadata
 - Fill gaps
 - Deep indexing

Open access data

- More than 32M open access publications
- Based on Unpaywall data integration and additional improvements by Dimensions
- All publications categorized as
 - Closed
 - Gold (Pure gold, Hybrid, Bronze)
 - Green (published, accepted, submitted)



Datasets



DATASETS

- More than 8 million datasets
- Sourced from DataCite and Figshare
- Linked to publications, supporting grants and funders
- Filters for research organizations, funders, researchers and more

DATA CITE

				
				
				800+ more

FIGSHARE & FIGSHARE HOSTED REPOSITORIES

				
				
				70+ more

Grants data



GRANTS

- Project funding
- Over 5M grants from 600+ funders globally
- \$1.8 trillion of funding
- Sourcing
 - Direct relationships with funders
 - Data available via APIs
 - Data available via websites which we crawl

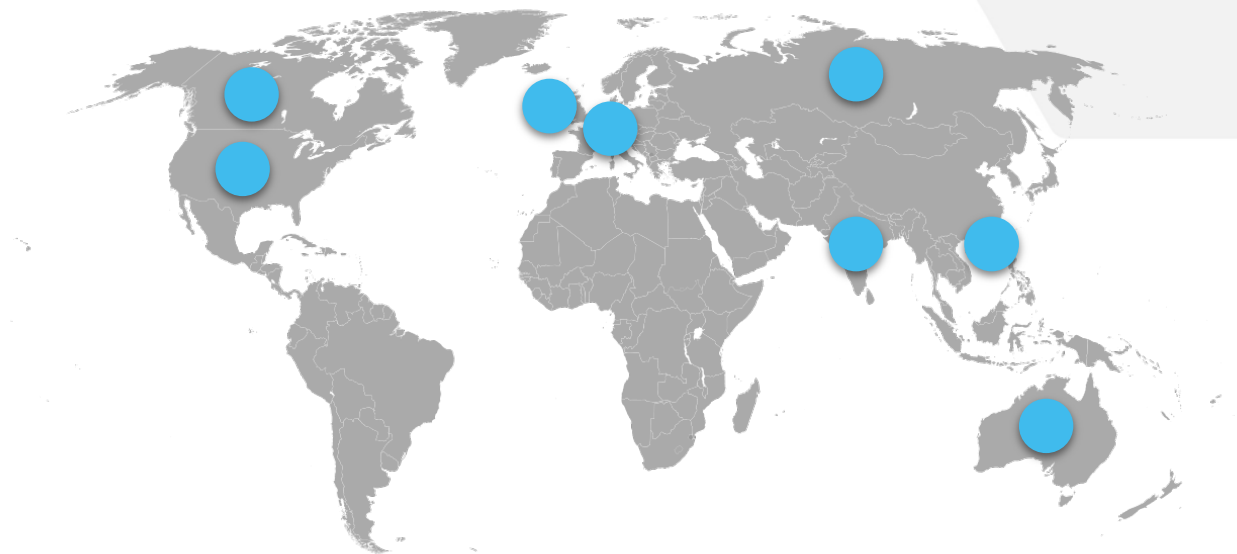
The screenshot shows a web browser window with the URL `app.dimensions.ai`. The page has a dark blue header with the 'Dimensions' logo. On the left is a sidebar menu with sections 'MY ACCOUNT' and 'ABOUT DIMENSIONS'. The 'About the grants data' page is active, displaying a table of funders and their GRID IDs. A text block above the table explains that Dimensions checks all sources of grant data for new data each month, with the latest update being in May 2019.

Funder	GRID ID	Country
Japan Society for the Promotion of Science (JSPS)	grid.54432.34	Japan
National Natural Science Foundation of China (NSFC)	grid.419696.5	China
Natural Sciences and Engineering Research Council (NSERC)	grid.452912.9	Canada
National Research Foundation (NRF)	grid.425534.1	South Africa
Russian Foundation for Basic Research (RFBR)	grid.452899.b	Russia
Federal Ministry of Education and Research (BMBF)	grid.5586.e	Germany
German Research Foundation (DFG)	grid.424150.6	Germany
European Commission (EC)	grid.270680.b	Belgium
Directorate for Mathematical & Physical Sciences (NSF MPS)	grid.457875.c	United States
Social Sciences and Humanities Research Council (SSHRC)	grid.183804.6	Canada
Directorate for Engineering (NSF ENG)	grid.457810.f	United States
Swiss National Science Foundation (SNF)	grid.425888.b	Switzerland
National Endowment for the Humanities (NEH)	grid.422239.c	United States
National Science Foundation (NSF)	grid.431093.c	United States

Patents data



- United States
- European Patent Office
- Germany
- World Intellectual Property Organisation (WIPO)
- Australia
- United Kingdom
- Canada
- Russian Federation
- France
- India
- Nicaragua
- Hong Kong
- New Zealand
- Switzerland
- Ireland



...most patent registries will be included in Dimensions by early 2021.

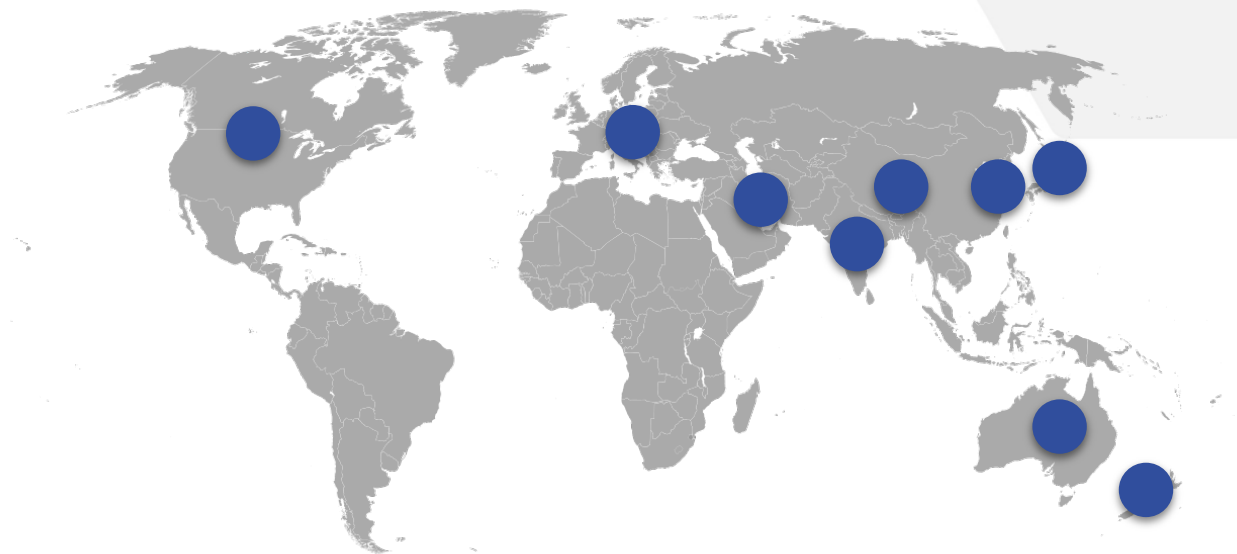
Clinical trials data



CLINICAL TRIALS

- ClinicalTrials.gov
- EU-CTR
- UMIN-CTR
- ISRCTN
- ANZCTR
- CHICTR
- NTR
- GCTR
- CTRI
- CRIS
- IRCT

... and more are coming



Policy documents data

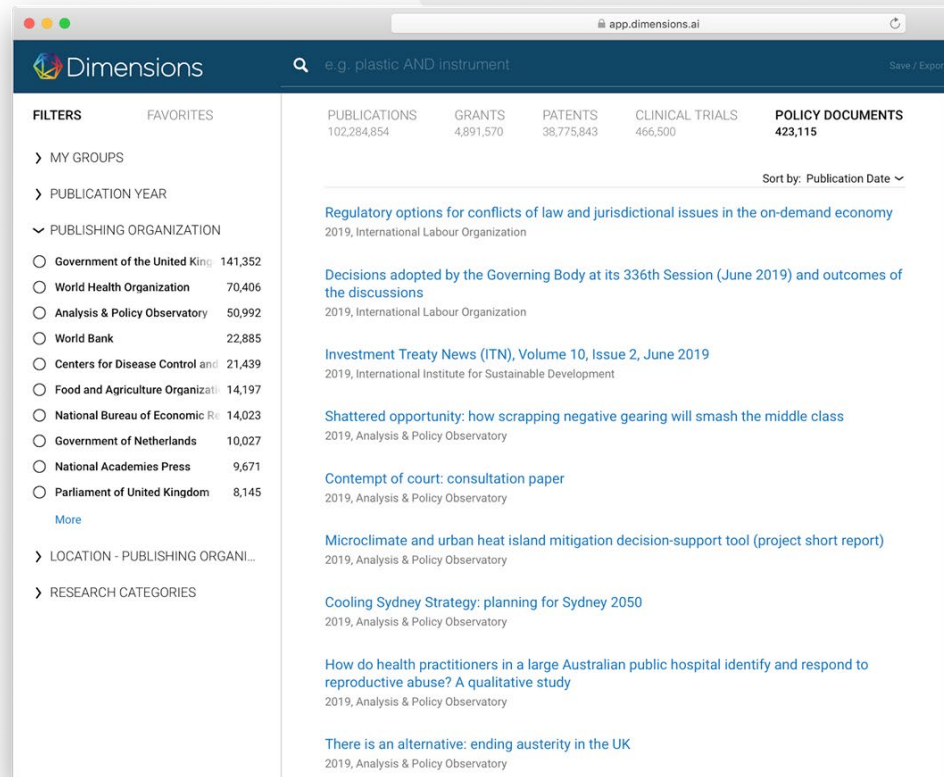


POLICY DOCUMENTS

Over 500,000 policy document records, linked to publications

Including but not limited to:

- World Health Organization
- World Bank
- Centers for Disease Control & Prevention
- Government of the United Kingdom
- Analysis and Policy Observatory
- NZ Treasury



Publication indicators in Dimensions

Publication citations

The publication citations value is the number of times that a publication has been cited by other publications in the database. Citing publications can be of any publication type.

Field Citation Ratio (FCR)

The Field Citation Ratio (FCR) is an article-level metric that indicates the relative citation performance of an article, when compared to similarly-aged articles in its subject area. A value of more than 1.0 indicates higher than average citation, when defined by Field of Research Subject Code, publishing year and age. The FCR is calculated for all publications in Dimensions which are at least 2 years old and were published in 2000 or later.

Relative Citation Ratio (RCR)

The Relative Citation Ratio (RCR), developed by the National Institutes of Health (US), indicates the relative citation performance of an article when comparing its citation rate to that of other articles in its area of research. A value of more than 1.0 shows a citation rate above average. The article's area of research is defined by the articles that have been cited alongside it. The RCR is calculated for all PubMed publications which are at least 2 years old.

Recent citations

The recent citations value is the number of citations that were received in the last two years. It is currently reset at the beginning of each calendar year.

Altmetric Attention Score

The Altmetric Attention Score is a weighted count of all of the online attention Altmetric have found for an individual research output. This includes mentions in the mainstream news, social networks, Wikipedia, blogs and more.