Fact File

2018-2019 Annual Report

Crossref

Table of contents

Crossref strives for balance. Different people have always wanted different things from us and, since our founding, we have brought together diverse organizations to have discussions—sometimes contentious—to agree on how to help make scholarly communications better. Being inclusive can mean slow progress, but we've been able to advance by being flexible, fair, and forward-thinking.

We have been helped by the fact that Crossref's founding organizations defined a clear purpose in our original certificate of incorporation, which reads: "To promote the development and cooperative use of new and innovative technologies to speed and facilitate scientific and other scholarly research."

As Crossref prepares to turn 20 in January 2020, it's an opportunity

to reflect on achievements and highlights from 2018-19 and also ponder the preceding decades. Change is a constant at Crossref but the organization has never strayed from its initial defined purpose. Our services and value now extend well beyond persistent identifiers and reference linking, and our connected open infrastructure benefits our 11,000+ membership as well as all those involved in scholarly research. This expansion is exactly what was envisioned to meet the goal of "speeding and facilitating" research.

This annual report is different from previous years'; it has been expanded into a 'fact file' so that we can invite comments on the path ahead, based on transparent access to data about our membership, activities, and finances. As we were pulling together the charts and tables for this annual report we noticed stark differences in where Crossref is today compared to years past.

The rate of membership growth has accelerated and we now have over 180 new members joining every month, leading to one of the most striking changes we found. The lowest three membership tiers now account for 46% of revenue (up from 25% in 2011)

while the highest three tiers account for 36% (down from 56% in 2011). Today, the typical Crossref member has just a few hundred registered content items.

One way we have been able to accommodate this growth efficiently is by collaborating with sponsors in different countries. Very small members can join via a local sponsor that is able to provide technical, financial, language, and administrative support. We now have more members joining via sponsors, who otherwise would largely not be able to join at all. While you'd need to be a millionaire by US standards to join directly from Indonesia in our lowest fee tier, the sponsors program—supported often by government investment in science and education—has enabled Indonesian organizations to join Crossref in large numbers, supporting their aim to become one of the fastest-growing nations in open research, and to help that research be discovered.

Crossref has repeatedly stayed ahead of developments in the community

In 2007, when the Similarity Check working group discussions and pilot started, there was disagreement on the board about whether Crossref should provide such a service and whether it was a strategic priority for members. By the end of the pilot, when the decision came to launch a production service, it was seen as essential and a top priority. This conclusion has been borne out in recent research into the value of Crossref; Similarity Check is one of the services of most importance to members.

Adding preprints as a content type was controversial at the time. The board discussed the topic of "duplicative works" for about two years with strong opinions on all sides. The working group delivered a good set of policies and technical specifications and in the July 2015 board meeting there was a majority —but not 100%—agreement on the motion to approve. We implemented preprints as a content type just in time to accommodate the snowballing of preprint servers emerging from existing and new members.

Another example of a former—and current— area of contention is the approach to metadata. When Crossref first launched, there were lengthy discussions about what metadata we should collect. The initial focus was on the minimal set of metadata to enable reference matching in support of reference linking. In the beginning, neither article titles, lists of authors, references, nor abstracts were included in the minimal metadata set. We supported them as optional but most members opted out. However, the huge set of metadata that Crossref collects and disseminates now is seen as essential, providing a lot of value for members in terms of discoverability.

Today, Crossref enables metadata retrieval on a large scale—an average of more than 600 million queries per month—through a variety of interfaces, most notably the REST API (Public, Polite, and Plus versions). The metadata is used by thousands of organizations and services—both commercial and not-for-profit—increasing the discoverability of member content. In fact, members of all stripes have long initiated projects to expand the metadata Crossref is able to collect and disseminate: from facilitating text mining (through license and full-text URLs); to enabling better connections with and evidence of contributions (through Funder IDs, ORCID iDs, and soon CRediT roles and ROR IDs).

These are all examples of where Crossref has successfully "promoted the cooperative use of new and innovative technologies" and where we meeting our mission to make scholarly communications a little bit better. As ever, we need to thank our brilliant staff for their unfailing resilience, balance, and diligence, in these times of dynamic change.

Considering the value and future of Crossref

Research is global, and supporting a diverse global community is a challenge. This year, we conducted our first wide-ranging investigation into what people value from Crossref. This involved telephone interviews with over 40 community members as well as an online survey of 600+ respondents.

The results of this research are referenced throughout this fact file and a report will be available online publicly. We will be discussing the insights in various forums and posing some questions, such as: How should Crossref balance the different dynamics in the community? Are the right members involved in key decisions? Are the sustainability model we have and the fees we charge fair? Are we on the right track and which initiatives should be top or bottom priorities?

Director of MIT Press, Amy Brand, recently reflected that Crossref is currently at a crossroads[1], envisioning that "*The Crossref of 2040 could be an even more robust, inclusive, and innovative consortium to create and sustain core infrastructures for sharing, preserving, and evaluating research information.*"

We welcome this public commentary and encourage others in the community to respond and report what value Crossref offers as community-owned infrastructure, and how they'd like to see the organization evolve.

More than ever, we need to have this discussion with a broad and representative group. So turn the page, ready your pen, and share your ideas!

[1] https://scholarlykitchen.sspnet.org/2019/10/22/crossref-at-a-crossroads-all-roads-lead-to-crossref/

Our mission

Crossref makes research outputs easy to find, cite, link, assess, and reuse.

We're a not-for-profit membership organization that exists to make scholarly communications better. We rally the community; tag and share metadata; run an open infrastructure; play with technology; and make tools and services—all to help put scholarly content in context.

It's as simple—and as complicated—as that.

Rally

Getting the community working together to make scholarly communications better

Tag

Structuring, processing, and sharing metadata to reveal relationships between research outputs

Run

Operating a shared, open infrastructure that is community-governed and evolves with changing needs

Play

Engaging in debate and experimenting with technology to solve our members' problems

Make

Creating tools and services to enable connections and give context

"To promote the development and cooperative use of new and innovative technologies to speed and facilitate scientific and other scholarly research."

* Taken from Certificate of Incorporation, January 2000

Founding organizations

American Association for the Advancement of Science

American Institute of Physics

Association for Computing Machinery

Elsevier Science; Academic Press, Inc.

IEEE

Springer Verlag; Kluwer Academic Publishers; Nature Publishing Group

Oxford University Press

John Wiley & Sons, Inc.; Blackwell Science

Section 1— Our mission and community
Accelerating membership growth

New members joining each year

Membership growth by fee tier by year

Legend:
- $ Covered by Sponsor
- $275
- $550
- $1,650
- $3,900
- $8,300
- $14,000
- $22,000
- $33,000
- $50,000
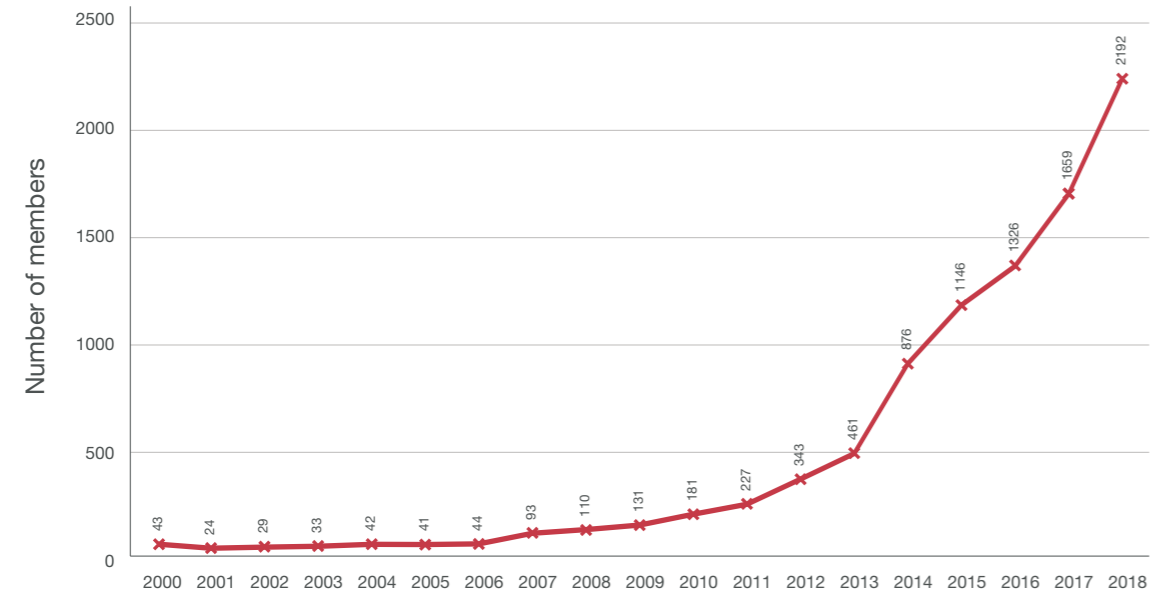
Members continue to join in greater and greater numbers each year, showing no sign of leveling off. In 2018 we saw an average of 182 members join each month.
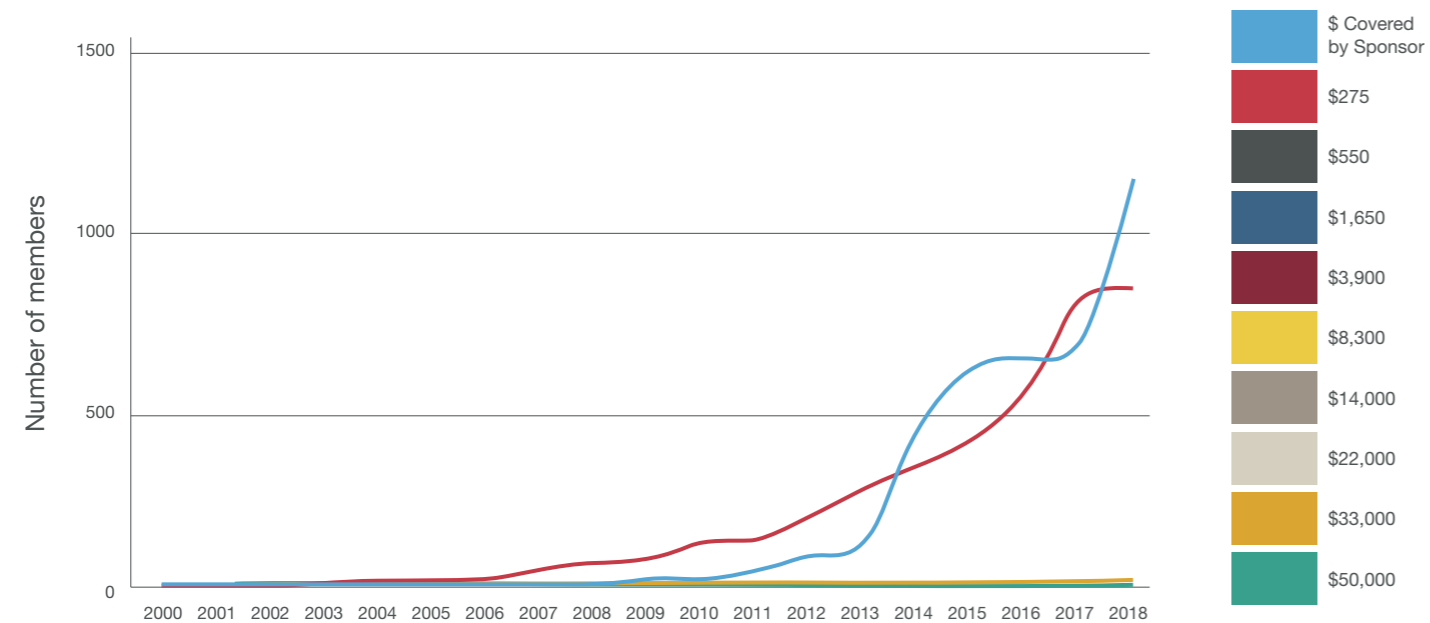
New members are joining overwhelmingly in the lowest fee tiers. In 2017, new sponsored members overtook new direct members in number, reflecting the success of the Sponsor program.

Section 1— Our mission and community
A 'typical' Crossref member

Percentage of members by number of content items registered
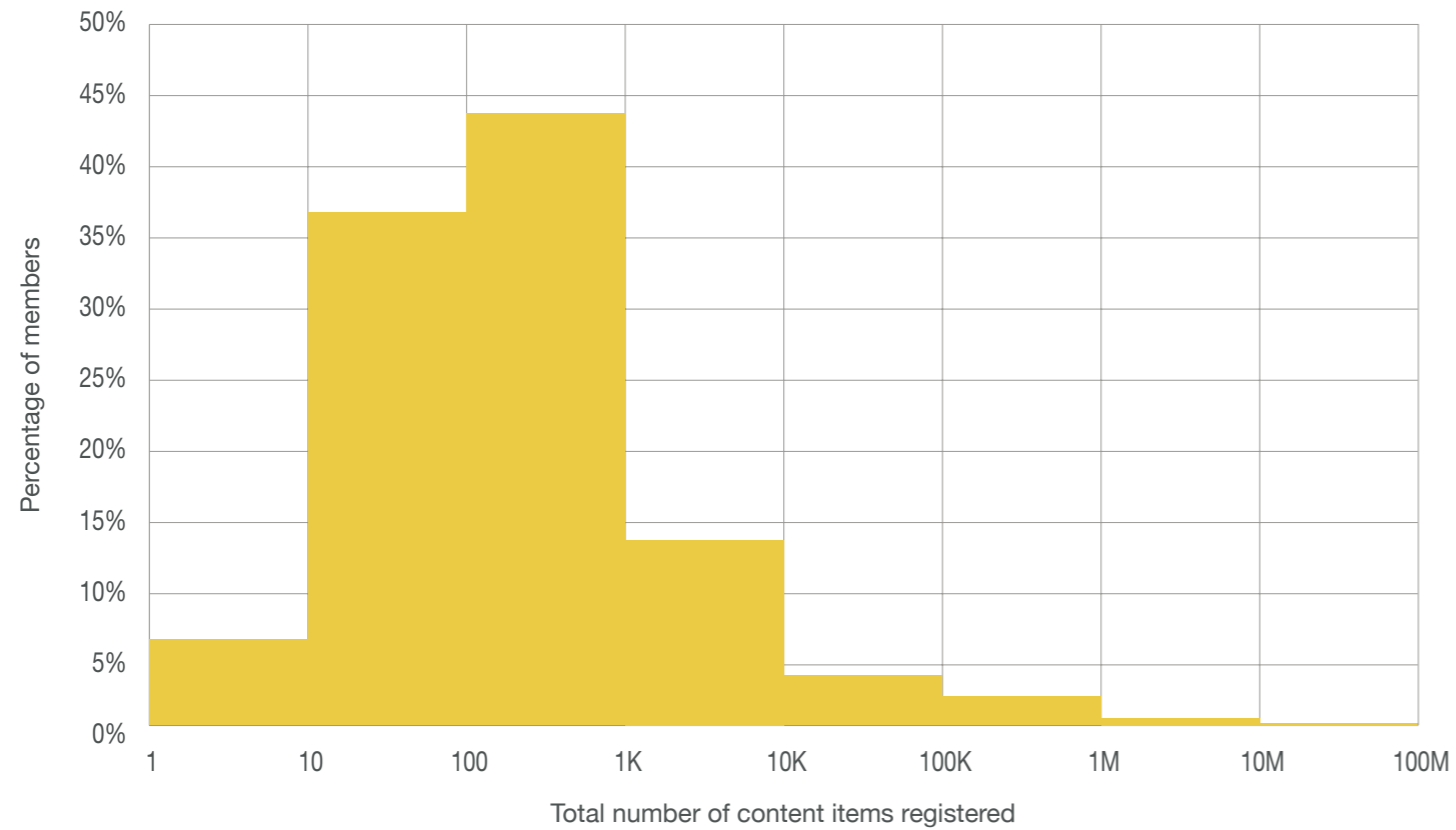
A typical Crossref member is likely to have just a few hundred content items in total, even after several years of membership. The definition of a "small publisher" is much smaller than previously thought.

Are these now typical members involved in key decisions at Crossref?

Section 1—Our mission and community
Community engagement and support

Average time spent by constituency – summarized

Metadata users
9.6%

Collaborators
20.1%

Members
70.2%

Average time spent by constituency – detailed

Constituency	
Members' sponsors	
Committees/ initiatives/ DataCite/ ORCID	
Members' service providers	
Prospective sponsors	
Large publishers	
Small publishers	
Medium publishers	
Prospective members	
Societies	
Universities	
Research funders	
Libraries	
Scholar publishers	
Government agencies	
Companies	
Data repositories	
Metadata Plus users	
Metadata users - public/ polite	
Prospective metadata users	

Team's % time

Most Crossref outreach staff time is spent supporting large publisher needs. This mostly includes technical support and consultancy.

How should Crossref balance the needs of different constituencies?

Section 1— Our mission and community
Purchasing Power Parity

This table shows the relative expense of joining Crossref in our lowest membership fee tier of US$ 275 per year.

Country	$275 USD equivalent (PPP)*
Turkey	$339.03
Brazil	$556.60
Ukraine**	$2,227.50
India	$4,885.93
Russia	$6,630.52
Colombia	$351,460.73
Indonesia	$1,152,384.48

https://data.oecd.org/conversion/purchasing-power-parities-ppp.htm
**Ukraine data from https://data.worldbank.org/indicator/pa.nus.ppp?end=2017&start=2017&view=bar*

Purchasing Power Parity is a good way to understand the challenges for countries where Crossref has seen growth in membership. This table shows the relative expense of joining Crossref in our lowest membership fee tier of US$ 275 per year.

The Sponsor program now accounts for a majority of new member applications. The program launched in 2013 to help organizations join Crossref who would not otherwise be able to do so due to financial, administrative, technical, or other constraints.

Is Crossref accessible enough globally?

Section 2— How Crossref is sustained
Audited financials

Statements of financial position
Years Ended December 31, 2018 and 2017

Assets	2018	2017
Current Assets:		
Cash	$ 4,099,670	$ 3,914,533
Accounts receivable	1,754,257	1,746,744
Prepaid expenses	206,192	203,794
Prepaid registration and membership fees - related party	143,428	142,788
Total current assets	**6,203,547**	**6,007,859**
Property and Equipment:		
Computer software and equipment	3,081,387	3,061,786
Leasehold improvements	285,289	285,104
Furniture and fixtures	118,792	89,402
Development in progress	-	7,844
	3,485,468	3,444,136
Less accumulated depreciation	3,257,690	3,080,557
Property and equipment, net	**227,778**	**363,579**
Other Assets:		
Investments, at fair value	1,693,046	1,692,708
Security deposits	16,400	15,952
Accrued interest receivable - related party	45,375	37,125
Note receivable - related party	300,000	300,000
Total other assets	**2,054,821**	**2,045,785**
Total Assets	**$ 8,486,146**	**$ 8,417,223**
Liabilities and Net Assets		
Current Liabilities:		
Accounts payable and accrued expenses	555,353	458,019
Deferred revenue	151,801	306,348
Total current liabilities	**707,154**	**764,367**
Net Assets:		
Without donor restrictions:		
Undesignated	6,086,213	5,960,208
Board designated, long-term needs	1,692,779	1,692,648
Total net assets	**7,778,992**	**7,652,856**
Total Liabilities and Net Assets	**$ 8,486,146**	**$ 8,417,223**

Statements of activities
Years Ended December 31, 2018 and 2017

	2018	2017
Revenue and support:		
Content Registration fees	$ 5,121,556	$ 4,921,489
Member fees	2,928,177	2,770,596
Other program fees	195,813	166,213
Interest income	33,232	12,430
Investment return	132	41,105
Total revenue and support	**8,278,910**	**7,911,833**
Expenses:		
Program expenses	5,882,024	5,354,193
General and administrative expenses	2,208,670	2,110,674
Total expenses	**8,090,694**	**7,464,867**
Change in net assets from operations	**188,216**	**446,966**
Other income (expenses):		
Foreign currency exchange (gain) loss, net	(62,080)	19,886
Loss on disposal of property and equipment	-	(2,145)
Total other (income) expenses	**(62,080)**	**17,741**
Change in net assets without donor restrictions	**126,136**	**464,707**
Net assets without donor restrictions:		
Beginning of year	**$ 7,652,856**	**$ 7,188,149**
End of year	**$ 7,778,992**	**$ 7,652,856**

As a part of good governance and being a US 501(c)6 nonprofit, we undergo a thorough annual audit by an external auditor.
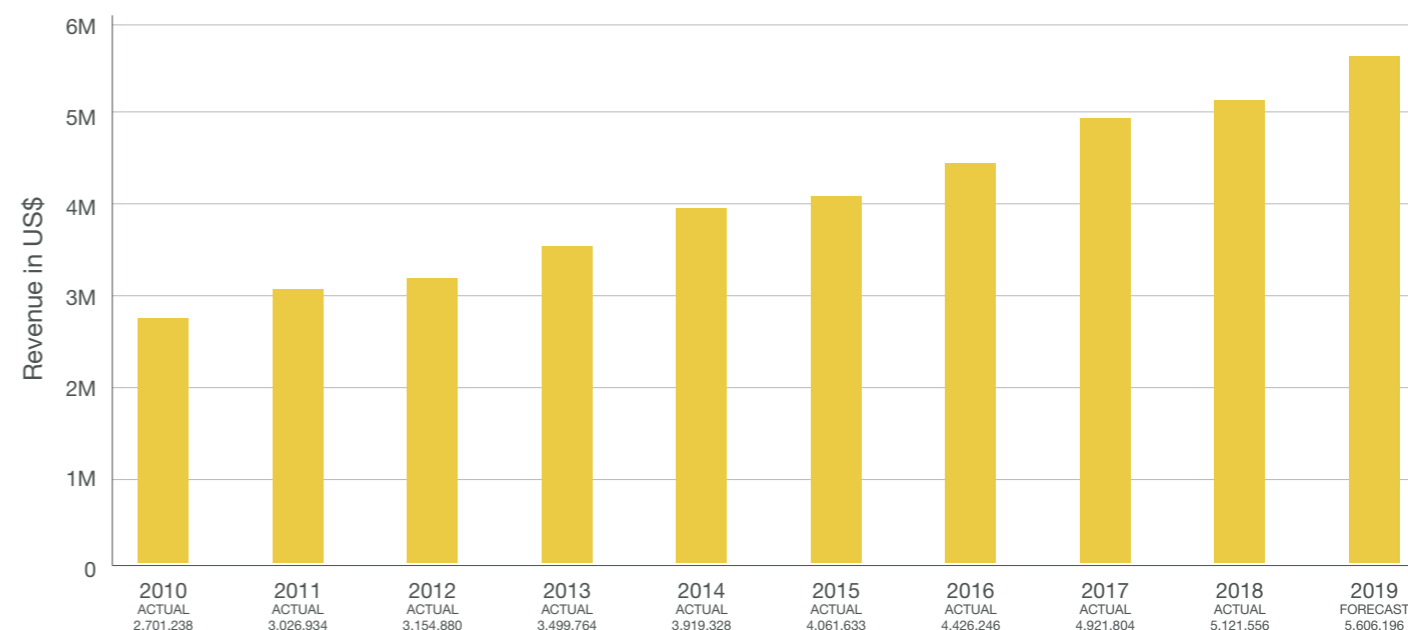
Section 2— How Crossref is sustained
Sustained revenue growth

Revenue 2018-2020

	Year End 2018 Actuals	Year End 2019 Approved Budget	Year End 2019 Forecast @09.30.19	Year End 2020 Proposed Budget
Earned revenue:				
Annual fees				
Membership	2,221,177	2,488,176	2,410,693	2,603,548
Subscriber services				
Basic CMS (sunset 12/31/2019)	101,000	101,000	61,001	-
Service providers	36,000	36,000	36,501	37,000
Query affiliate	93,000	95,000	91,708	92,000
Metadata Plus	477,000	500,000	615,000	738,000
Event Data Plus (tbd)	-	50,000	-	-
Total subscriber fees	707,000	782,000	804,209	867,000
Similarity Check	172,463	176,000	177,393	180,000
Total Annual fees	3,100,640	3,446,176	3,392,295	3,650,548
2019 variance to budget/year over year	-	-2%	9%	8%
Service fees				
Content Registration - Crossmark	344,275	365,000	392,030	-
Content Registration - all content types	4,874,644	5,100,240	5,312,966	5,630,000
Content Registration - waived	-30,300	-	-	-
Content Registration - donated	-67,063	-45,000	-98,800	-48,000
Net Content Registration	5,121,556	5,420,240	5,606,196	5,582,000
Similarity Check document checks (gross)	-	1,600,000	459,064	2,016,000
Similarity Check document checks (software cost)	-	-1,280,000	-367,252	-1,612,800
Net Similarity Check document checks	-	320,000	91,812	403,200
Total Service fees	5,121,556	5,740,240	5,698,008	5,985,200
2019 variance to budget/year over year	-	-1%	11%	5%
Total earned revenues	8,222,196	9,186,416	9,090,303	9,635,748
2019 variance to budget/year over year	-	-1%	11%	6%

- The largest source of revenue is Content Registration, which is currently 60% of total revenue.

- Together, Content Registration and membership fees make up 88% of revenue and continue to grow steadily, while the new Metadata Plus service grows more quickly and exceeds 2019 budget by 23%.

- We hope to remove the separate Crossmark fee in 2020 to remove a barrier to registering corrections and retractions.

Content Registration revenue growth 2010-2019

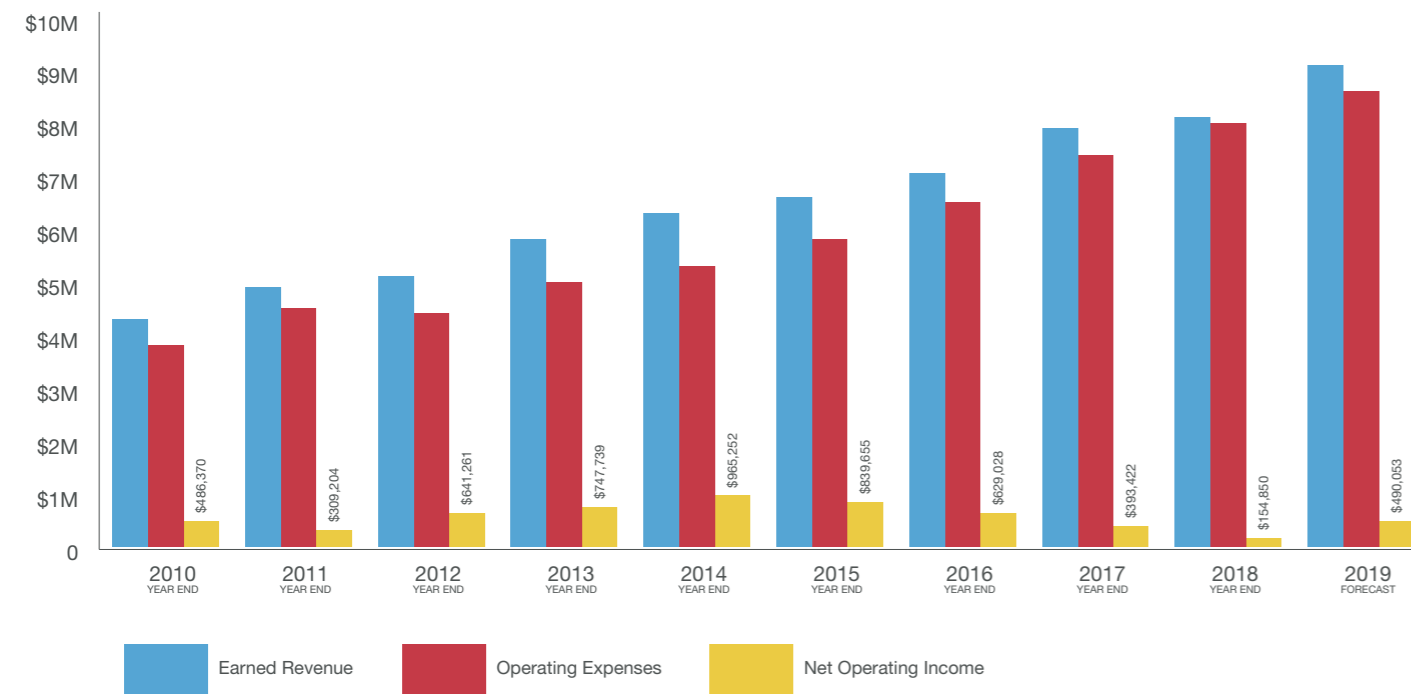| Year		Revenue in US$
2010	ACTUAL	2,701,238
2011	ACTUAL	3,026,934
2012	ACTUAL	3,154,880
2013	ACTUAL	3,499,764
2014	ACTUAL	3,919,328
2015	ACTUAL	4,061,633
2016	ACTUAL	4,426,246
2017	ACTUAL	4,921,804
2018	ACTUAL	5,121,556
2019	FORECAST	5,606,196

- Under the updated agreement with Turnitin for Similarity Check, from 2020 Crossref will retain 20% of document checking fees.

- Content Registration fees are waived (listed as donated) for some members from low income countries as part of our fee assistance program.

Section 2— How Crossref is sustained
Income and expenses

Because of its prudent financial management, Crossref consistently generates a surplus which contributes to its long term persistence. Surpluses were smaller in 2017 and 2018 as we increased resources to meet increased membership and Content Registration.
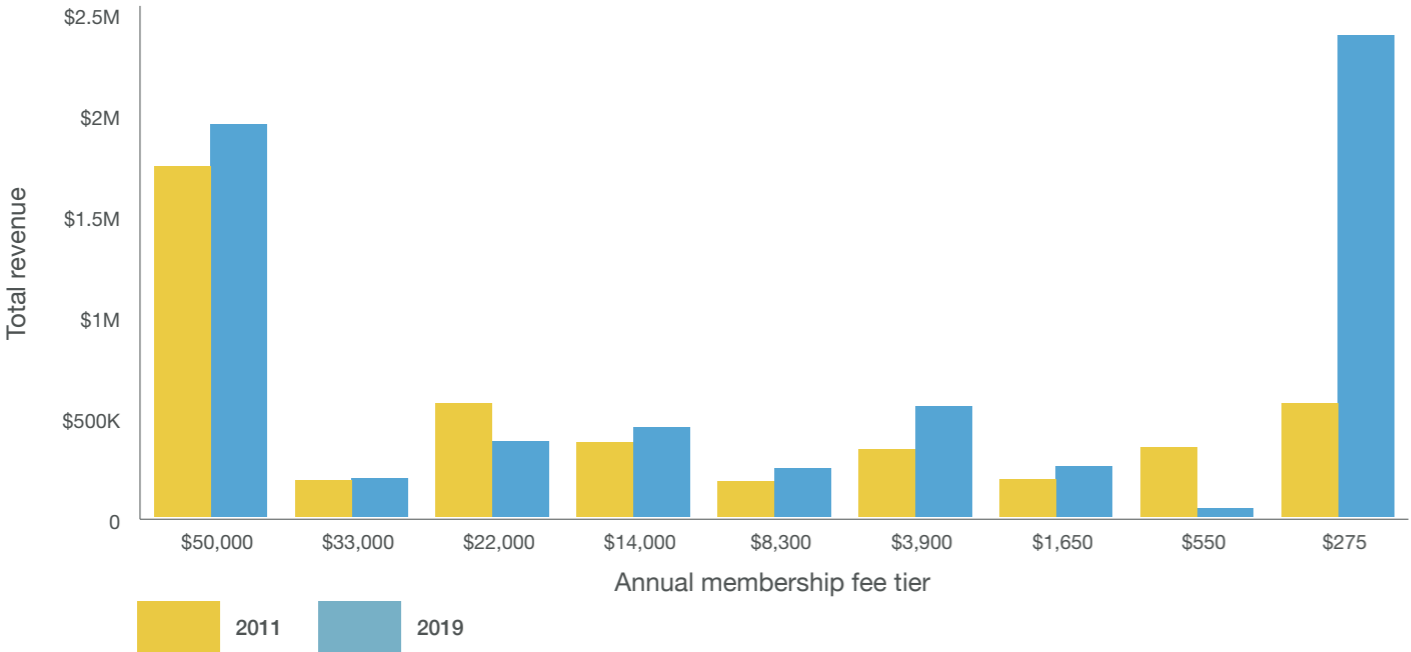
Income and expense history 2010-2019

Bar chart showing Earned Revenue, Operating Expenses, and Net Operating Income from 2010 to 2019. Net Operating Income values:
- 2010 YEAR END: $486,370
- 2011 YEAR END: $309,204
- 2012 YEAR END: $641,261
- 2013 YEAR END: $747,739
- 2014 YEAR END: $965,252
- 2015 YEAR END: $839,655
- 2016 YEAR END: $629,028
- 2017 YEAR END: $393,422
- 2018 YEAR END: $154,850
- 2019 FORECAST: $490,053

Legend: Earned Revenue · Operating Expenses · Net Operating Income

Should Crossref's revenue sources diversify? If so, how?

Section 2— How Crossref is sustained
Distribution of revenue by membership fee tier

Revenue distribution comparing 2011 to 2019

Percentage of revenue distribution comparing 2011 to 2019

2011					2019				
Fee Tier	Members	% of Members	Revenue	% Revenue	Fee Tier	Members	% of Members	Revenue	% Revenue
$ 50,000	6	0%	$1,731,561	39%	$ 50,000	6	0%	$1,941,983	28%
$ 33,000	2	0%	$ 180,798	4%	$ 33,000	2	0%	$ 191,208	3%
$ 22,000	4	0%	$ 562,225	13%	$ 22,000	3	0%	$ 373,265	5%
$ 14,000	8	1%	$ 366,453	8%	$ 14,000	10	0%	$ 441,018	6%
$ 8,300	11	1%	$ 174,200	4%	$ 8,300	16	0%	$ 239,861	4%
$ 3,900	38	3%	$ 335,137	8%	$ 3,900	47	1%	$ 544,397	8%
$ 1,650	49	4%	$ 183,388	4%	$ 1,650	58	1%	$ 250,283	4%
$ 550	153	12%	$ 342,683	8%	$ 550	211	4%	$ 444,477	7%
$ 275	1,255	78%	$ 559,180	13%	$ 275	11,179	94%	$ 2,377,585	35%

The lowest three fee tiers now account for 46% of revenue – up from 25% in 2011.

Section 2— How Crossref is sustained
Distribution of Content Registration revenue, by membership fee tier

Total registered content distribution by annual membership fee tier – all time

■	$275
■	$550
■	$1,650
■	$3,900
■	$8,300
■	$14,000
■	$22,000
■	$33,000
■	$50,000
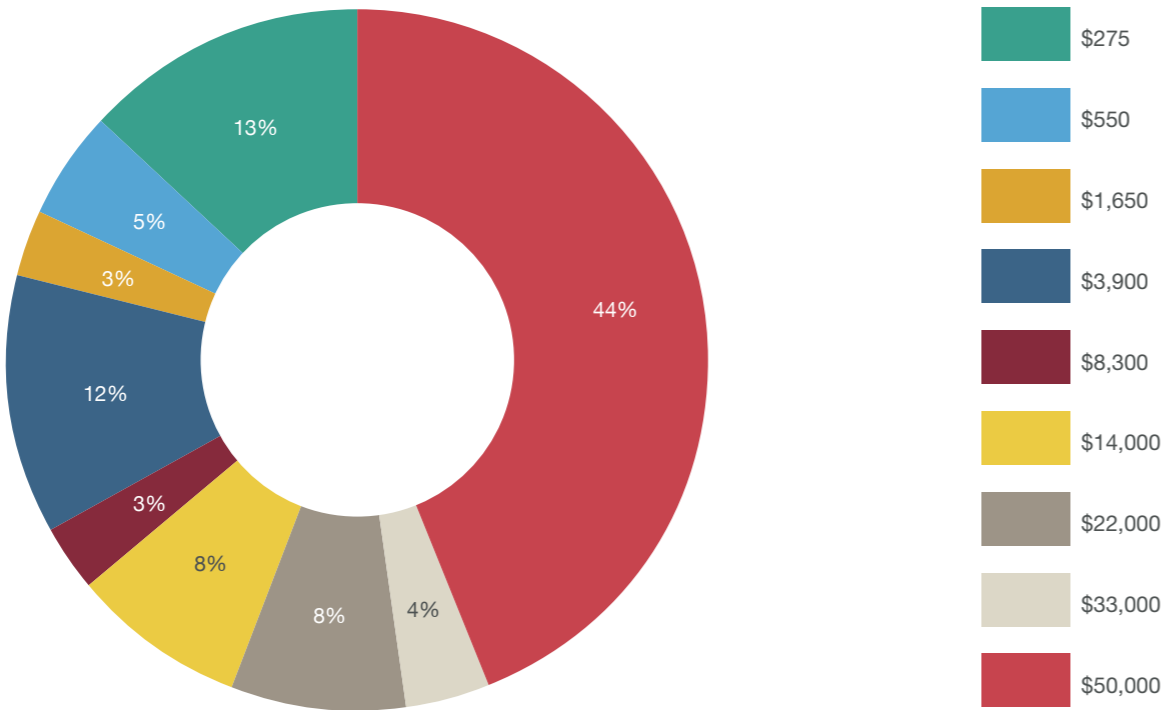
For total records (all years), the highest three fee tiers have registered 44% of the total records in Crossref, and account for 47% of 2019's Content Registration revenue.
And the lowest three tiers have registered 21% of the total records (all years) in Crossref, and account for 36% of 2019's Content Registration revenue.

Total Content Registration revenue by annual membership fee tier – 2019

Fee Tier	Members	Total Revenue	% Total Revenue	Content Reg rev	% Content Reg rev
$ 50,000	6	$1,941,983	28%	$1,585,682	38%
$ 33,000	2	$ 191,208	3%	$99,221	2%
$ 22,000	3	$ 373,265	5%	$303,314	7%
$ 14,000	10	$ 441,018	6%	$280,085	7%
$ 8,300	16	$ 239,861	4%	$93,195	2%
$ 3,900	47	$ 544,397	8%	$346,887	8%
$ 1,650	58	$ 250,283	4%	$150,821	4%
$ 550	211	$ 444,477	7%	$333,108	8%
$ 275	11,179	$ 2,377,585	35%	$1,033,122	24%

Section 3— Participation, roadmap, and priorities
Participation statistics

Table 1

Content	As of Oct 2018	As of Oct 2019	% change
Total content items registered	100,774,749	109,440,179	9%
Number of journals	62,226	72,149	16%
Number of journal articles	73,957,459	79,777,806	8%
Number of books	1,285,818	1,380,292	7%
Number of book-related records	14,288,511	16,154,932	13%
Number of conference proceedings	62,190	68,280	10%
Number of conference papers	5,477,054	6,048,716	10%
Number of preprints	79,084	209,304	165%
Number of preprint-to-article links	17,883	28,729	61%
Number of reports	586,195	601,902	3%
Number of peer reviews	13,456	14,448	7%
Number of standards	257,470	302,891	18%
Number of components	3,454,155	3,862,214	12%
Number of databases	21,806	28,265	30%
Number of database-related records	1,704,946	1,866,629	9%
Number of dissertations	240,407	286,162	19%

Table 2

Connections	As of Oct 2018	As of Oct 2019	% change
Number of unique records with Funder IDs	2,431,939	3,238,513	33%
Records with one or more authors with ORCID iDs	1,950,216	3,089,447	58%
Total unique ORCID iDs	1,293,649	1,949,455	51%
Total works auto-pushed to ORCID	1,363,337	2,579,468	89%
Records with references	41,516,410	47,962,070	16%
Records with abstracts	2,707,893	5,093,507	88%
Crossmark content items	7,747,598	10,070,787	30%
Crossmark status updates	93,223	117,266	26%
Number of Cited-by matches	758,372,968	964,841,857	27%

Table 3

Metadata Retrieval	As of Oct 2018	As of Oct 2019	% change
Total Metadata Queries (av per month)	607,108,656	642,803,749	6%

Table 4

Similarity Check	As of Oct 2018	As of Oct 2019	% change
Members participating in Similarity Check	1,265	1,532	21%
Similarity Check – manuscripts checked	5,573,961	7,245,884	30%
Similarity Check – indexed content items	58,293,058	72,700,000	25%

Table 1. The number of items registered has grown steadily between 9-10% every year since day one.
Preprints are the fastest-growing content type.

Table 2. ORCID auto-update continues to be a major success.
Members are increasingly registering content that includes abstracts.

Table 3. Metadata retrieval continues to grow steadily and especially through the REST API (both Public and Plus environments have increased in usage).

Table 4. Similarity Check is seen as one of the highest valued services by Crossref members as "*essential to everything we do*" (survey respondent).

Section 3— Participation, roadmap, and priorities
☆ Strategic theme: Simplify and enrich existing services

✓ Recently completed
- Similarity Check service transition
- Metadata Manager for journal articles
- Reference-matching improvements (phase 1)
- Transition from GitHub and Jira to GitLab

▷ In focus
- Pending publication (in Beta)
- Event Data
- Incident response process refinements
- Automated monitoring & status updates
- Support documentation re-write and migration to website
- API ElasticSearch migration
- Enhanced JATS support
- DevOps automation
- Research Organizations Registry (ROR)

▣ Scheduled
2020
- REST API improvements
- Similarity Check v2
- Address technical debt

Pending
- Metadata Plus sync
- Cloud migration for Content Registration infrastructure
- Crossmark reports
- Consolidated Member Center
- Self-repairing DOIs
- Joint DataCite & Crossref Search (with FREYA)
- Standard Crossref DOI display/status widget

💡 R&D
- Image manipulation detection
- Auto-classification of journal types
- Citation classification

Retrieved October 2019 from crossref.org/strategy, which also includes narrative context.

Much of the simplification of services work involves behind-the-scenes improvements to Content Registration. The overall goal is to gain efficiencies for the Crossref system as well as for members, allowing for scaling up the operations and potentially saving costs in the future. Key activities are around addressing technical debt, enhancing support on the metadata input side for example by including ROR and aligning more closely with JATS, improving reference matching accuracy, and new efficiencies in internal processes such as monitoring, triaging issues, and upgrading documentation.

Out of all strategic themes, this was the area that was most important to survey respondents and was felt to be the area where Crossref was the most successful. Suggestions for improvements include better usability and streamlining the logins needed for the different interfaces.

Section 3— Participation, roadmap, and priorities
</> **Strategic theme:** Improve our metadata

✓ **Recently completed**
- Metadata Manager for journal articles
- Reference-matching improvements (phase 1)
- Improvements to OJS integration (with PKP)
- Research grants deposit

▶ **In focus**
- Metadata 'health checks'
- Support documentation re-write and migration to website
- Research Organizations Registry (ROR) support
- Data citations
- Improving JATS support
- Research grants retrieval
- Conference IDs
- Metadata Practitioners Interest Group

📅 **Scheduled**
2020
- Metadata schema enhancements
- Multiple resolution improvements (& decommission co-access)

Pending
- Metadata Principles and Best Practices
- New Service Providers program
- Emerging Publisher Education Coalition
- Crossmark reports
- Revised relations taxonomy
- Improvement for bulk updates of metadata
- Standard Crossref DOI display/status widget

💡 **R&D**
- Participation reports (phase 2)
- Automating metadata extraction, preflight checking
- Metadata profiling
- Public feedback channel for metadata quality issues

Retrieved October 2019 from crossref.org/strategy, which also includes narrative context.

Echoing the focus of the service simplification theme, improving our metadata means adding support for new content types or identifiers that our members ask for, such as Grant IDs, ROR IDs, and Conference IDs. This is combined with developing an end-to-end approach to metadata, with ongoing improvements to metadata retrieval services. This year, we launched the new Metadata Practitioners Interest Group to help define priorities. Members continue to appreciate the one-to-one metadata health checks offered alongside Participation Reports.

Users of metadata (including members) report dissatisfaction with the metadata quality with one publisher summing up that "*because there's no curation, there's a high risk of junk data getting into the system, and that is a bit of a problem for its accuracy*".

Whilst tensions exist with some content owners over Crossref's open metadata provision, a majority of members of all sizes described in recent value research how "*linking and the availability of metadata had been tremendously helpful to scholarly communications over the years, accelerating the pace of innovation*".

Section 3— Participation, roadmap, and priorities
⋈ Strategic theme: Adapt to expanding constituencies

The expansion we are seeing is twofold: geographical; and in the type of organizations engaging with Crossref and joining as members. Geographically, our goals are to help Sponsors support our members, simplify technical documentation, and work with Ambassadors to better understand our new constituencies. Key activities include multi-language webinars, LIVE educational events, and community. crossref.org for open member-to-member support.

✓ Recently completed

▶ In focus
- Sponsors program
- LIVE local educational events
- Research managers outreach
- Forum introduction (community.crossref.org)
- Ambassador program
- Multi-language webinars

In recent value research, members from emerging countries placed a high importance on this strategic theme.

📅 Scheduled
2020
- Funder outreach
- Emerging Publisher Education Coalition
- Law journals

Pending
- Non-English language documentation
- Non-English language interfaces
- DOI linking in mainstream media

💡 R&D

New types of organizations engaging with Crossref include research funders who are beginning to join as members to register grants.

Retrieved October 2019 from crossref.org/strategy, which also includes narrative context.

Section 3— Participation, roadmap, and priorities
ᨂᨂ Strategic theme: Collaborate and partner

Recently completed
- ROR Registry launch

In focus
- Value proposition for DOI Foundation
- Persistent identifier infrastructure through FREYA project
- Advocacy for richer metadata through Metadata 2020
- Use of persistent identifiers in references with Wikimedia
- Research Organizations Registry (ROR) with Digital Science, CDL, and DataCite
- Distributed usage logging (DUL) with COUNTER
- Data citation with Scholix, RDA, STM Association, DataCite, and Make Data Count
- OJS development with Public Knowledge Project
- Open Funder Registry with Elsevier
- Similarity Check with Turnitin
- Joint value proposition with DataCite
- Foundational infrastructure with ORCID and DataCite
- PIDapalooza festival of open persistent identifiers

Scheduled
Pending
- Emerging Publisher Education Coalition with DOAJ, COPE, and INASP
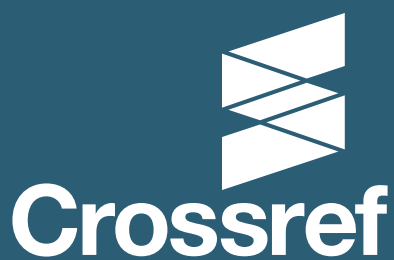- Joint search with DataCite

R&D
- DOIs for static website generators
- Reference implementation for open platforms

Retrieved October 2019 from crossref.org/strategy, which also includes narrative context.

Most of the initiatives Crossref is involved with are collaborations with other open not-for-profits. In some cases, we help incubate and provide technical infrastructure for a new service that will be run by others (such as distributed usage logging for COUNTER). In other cases, we supplement others' efforts with outreach and consultancy (such as data citation with DataCite).

The strategic area around collaboration was considered fairly important and respondents to our recent value research felt Crossref was fairly successful here. Work which directly supported academic collaboration was also seen to be consistent with supporting open research, for example, integration with ORCID.

A US publisher described the collaborative nature of Crossref: *"I love what Crossref does for the academic community. As far as making things a little bit easier for authors as well as just creating a community where people know that other journals are supporting their work."*

Crossref