

# Catena

blockchain publishing

# What is Catena?

A real time search engine for government spending.

**<https://explorecatena.com>**

# Search Interface

## Spending Data Explorer

- Official Government of Canada theme
- Fully accessible
- Instant search

## NRC-IRAP - Blockchain publishing prototype

The National Research Council of Canada, through its Industrial Research Assistance Program (NRC-IRAP) is using the Ethereum blockchain to proactively publish grants and contribution data in real time, a measure that complements ongoing quarterly proactive disclosures available through the Open Government website.

On the simplest level, blockchains are public ledgers that record transactions shared among many users. Once data is entered on a blockchain it is secure and unalterable, providing a permanent public record. This technology offers unprecedented levels of transparency and trust allowing public records to be searched, verified and audited at a level the world hasn't seen before.

### Search published disclosures

▼ Filter Options

Use the options below to filter your search results

**Date**

- Any date
- 2016, Q1
- 2016, Q2
- 2016, Q3

**Region**

- Any region
- Alberta

Total disclosed value: \$524,115,963

Filter items  Showing 1 to 10 of 4,489 entries | Show  entries

Value <input type="text"/>	Recipient <input type="text"/>	City <input type="text"/>	Region <input type="text"/>	Date <input type="text"/>	
\$11,849,091	Ryerson University	Toronto	ON	2016-Q4	<a href="#">details</a>
\$9,886,212	Invest Ottawa	Ottawa	ON	2016-Q4	<a href="#">details</a>
\$6,257,162	The Governors of the University	Edmonton	AB	2016-Q4	<a href="#">details</a>
\$6,109,138	Mars Discovery District	Toronto	ON	2016-Q4	<a href="#">details</a>

Try it now! [nrc-cnrc.explorecatena.com](https://nrc-cnrc.explorecatena.com)



## Problem

Over \$300,000,000 of research grants are issued per year, and it is difficult to:

- Ensure contracts are signed for each grant
- Audit the total amount of grants issued to each company
- Make this data available to the public

# Metrics

1,065,387

*Requests served during launch week*

\$519,776,133

*Dollars of spending publicly disclosed*

172

*Countries with visitors*



# Blockchain in Canada

# Canadian Regulation Landscape

## AML Regulator



## Securities Regulators



ONTARIO  
SECURITIES  
COMMISSION



BRITISH COLUMBIA  
SECURITIES COMMISSION



AUTORITÉ  
DES MARCHÉS  
FINANCIERS

A|S|C  
Alberta Securities Commission



(13 Total)

Question: How does a foreign firm get a clear picture of their freedom to operate inside Canada?

Enforcement: How will regulations be applied to foreign firms?



Founded in Toronto (2014) 

ICO in Switzerland (2014) 

Foundation in Switzerland (2015) 


Lesson:

- Blockchain teams are nomadic
- Low barriers to move jurisdictions



Canadian Founder 

Binance Launch in China (2017) 

Worlds Largest Exchange (2018) 

Potential move to Malta (2018) 

Lesson:

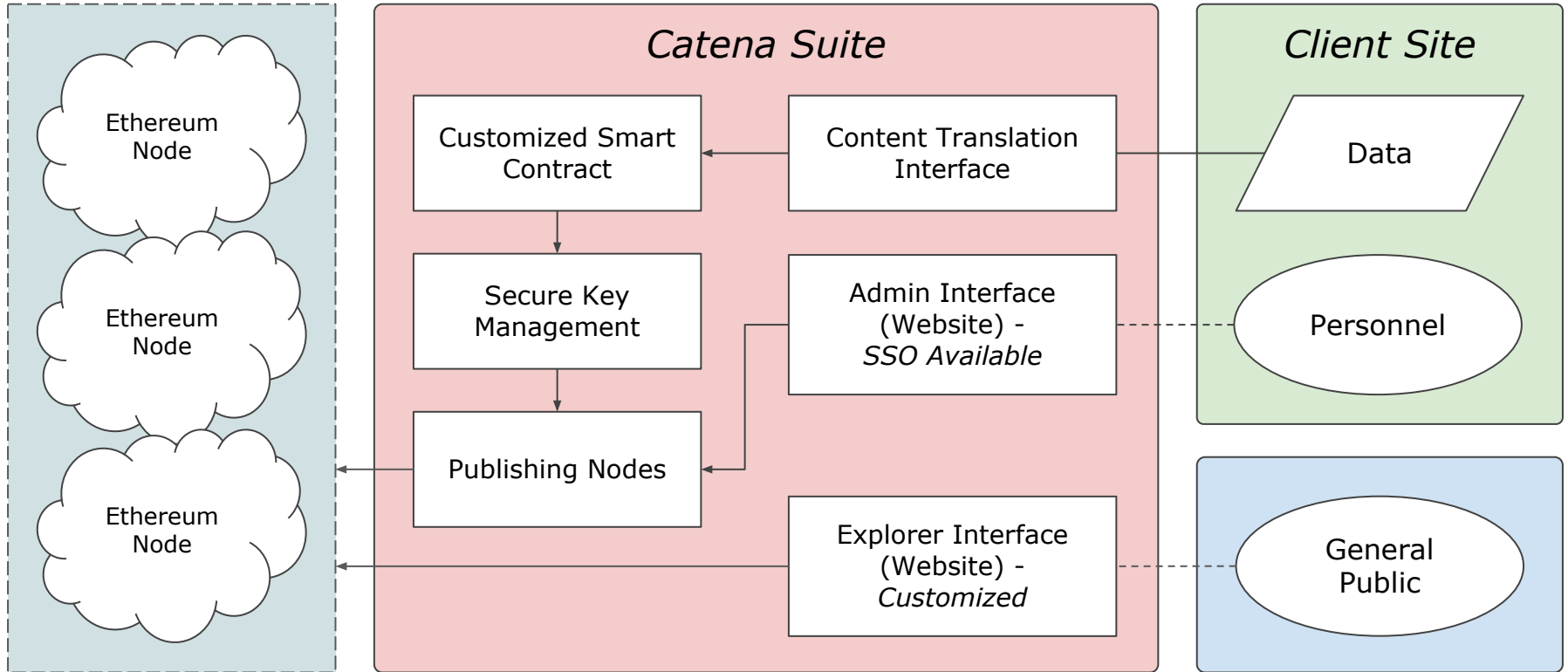
- Global Customer Base
- Domestic firms compete with lowest regulated jurisdiction



Thanks!

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# Infrastructure Outline



# Public Data API

Disclosures

- Disclosure Retrieve
- Disclosure List
- Disclosure List DataTables

History

Version 1.0:

<https://api.explorecatena.com>

## Disclosures

### DISCLOSURE RETRIEVE

GET

/api/v1/public/disclosures/{id}{?lng}

Disclosure Retrieve

Get a single disclosure by id.

#### Example URI

GET <https://api.explorecatena.com/api/v1/public/disclosures/kkzxVXzBbnFyBNkD3Zv6tbPjxO6wOL?lng=en>

#### URI Parameters

Hide

**id** `string` (required) Example: kkzxVXzBbnFyBNkD3Zv6tbPjxO6wOL  
The unique ID of a disclosure

**lng** `string` (optional) Example: en  
Language to localize results by. This will merge the data in `localized.{lng}` into the base disclosure object and remove the original `localized` field from the response.

Choices: `en` `fr`

Response `200`

Show

[api.explorecatena.com](https://api.explorecatena.com)