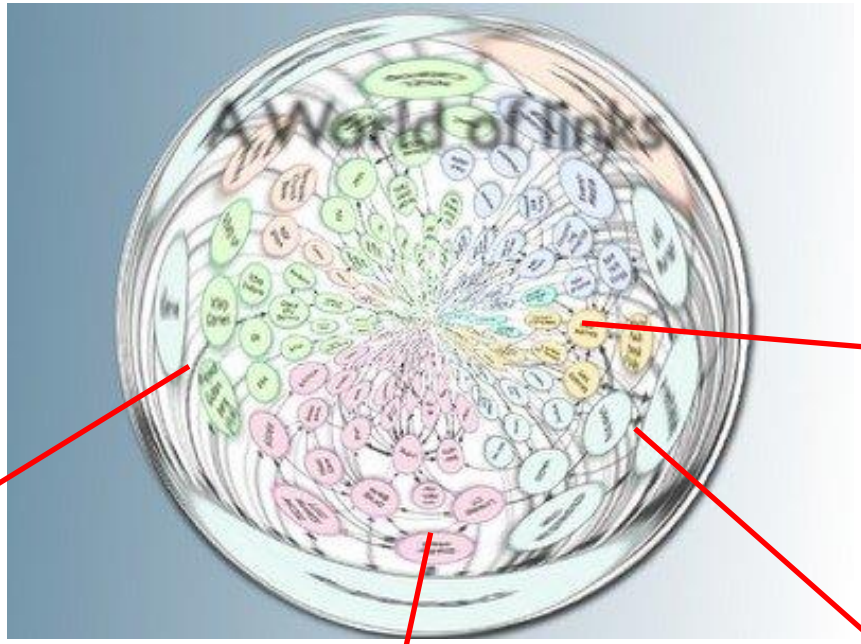
Linked Data @ NLB

Fiesole Retreat

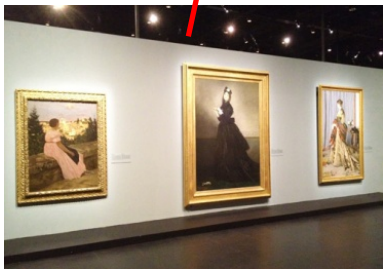
12 Aug 2013

A World of Linked Open Data:
enabling data integration on the web



Other..

National Library



Museums

National Archive

Un-linked closed data

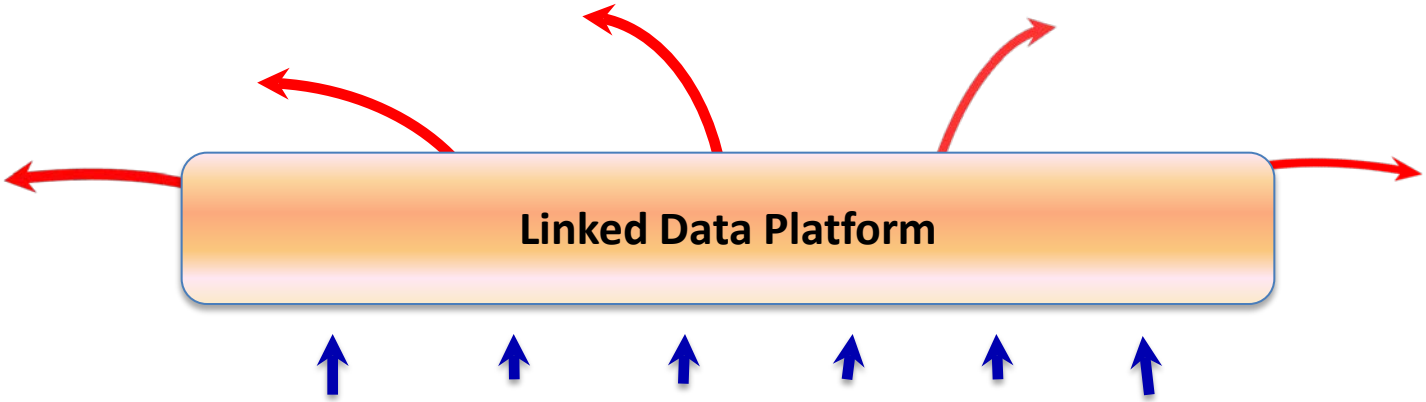
- Collections are underutilised because they are not visible enough on the web

- Methods used by libraries, archives, museums, etc. to organise collections are bound to their collections but not to the larger Web

Application-specific Origins

Tightly coupled, less re-usable data:

One-time Use
Deep Linking
Front-end Focus
Data Hardcoding



RDF Triple Store

Ontologies

URI Registry

Structured Data | **Unstructured Data** | **Other Linked Open Data**

Physical Collection
MARC21

Data.gov.sg

Web Archives

Authority records

National Archives
ISAD-G

Legal Deposit
Dublin Core

PictureSG
Dublin Core

Singapore Memory

Infopedia

Speeches & Press Releases

HTML Pages

Digitised Newspapers

data.gov

data.gov.uk

BBC

DBPedia

Europeana

1

Surreal objects : three dimensional works from D — 2011

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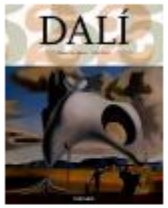
2 

Descharnes, Robert.
Salvador Dali : 1904-1989 — 2010

3

Dali, Salvador, 1904
Salvador Dali : the late work — 2010

Reviews

4

Klingsohr-Leroy, Cat
Surrealism — 2009

5

Porcu, Costantino.
Dali — 2009

Title Surreal objects : three dimensional works from Dalí to Man Ray / edited by Ingrid Pfeiffer and Max Hollein ; with contributions by Karoline Hille ... [et al.].

Publisher Ostfildern, Germany : Hatje Cantz Verlag, c2011.

Physical Description 278 p. : ill. (some col.) ; 29 cm.

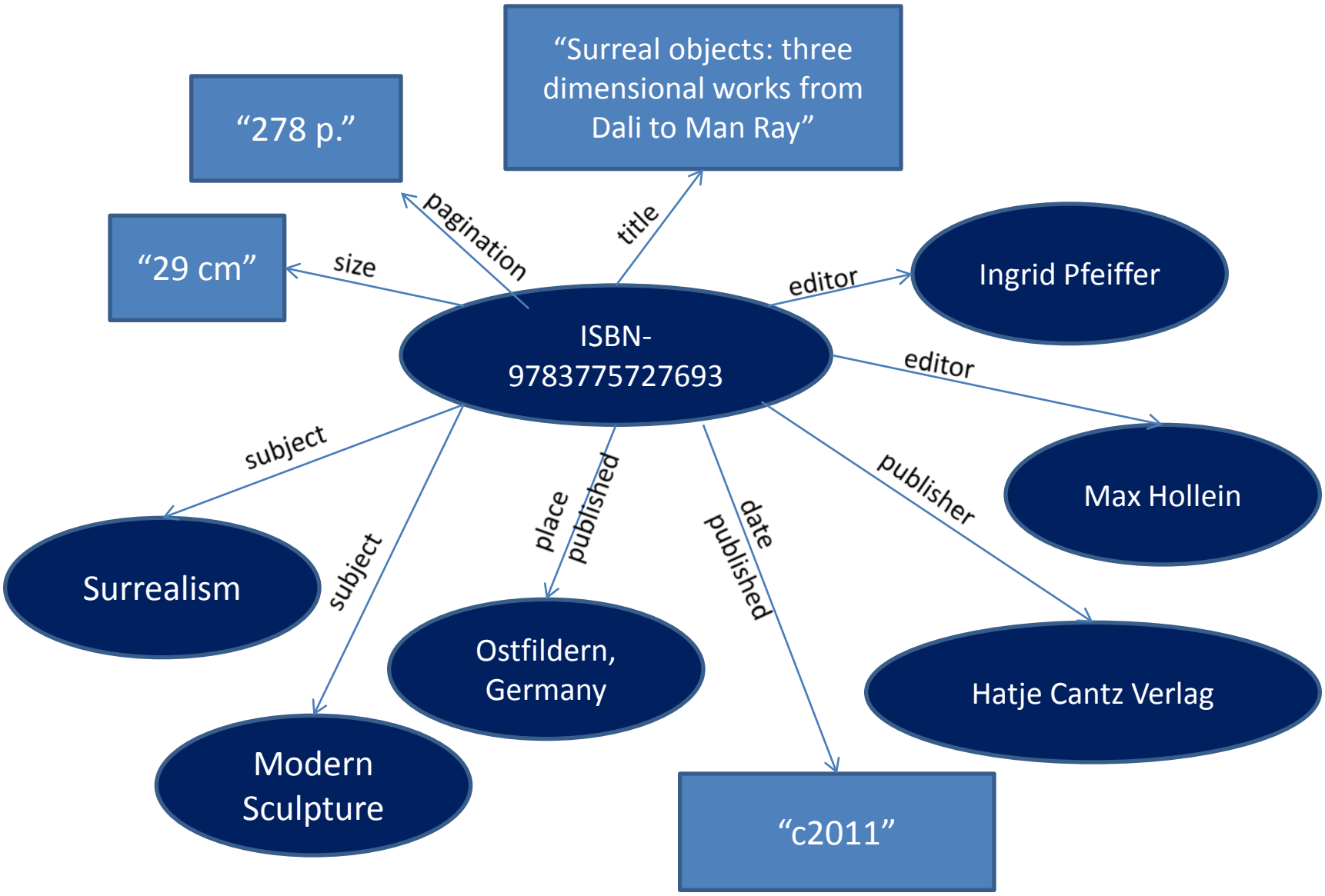
Notes Published in conjunction with an exhibition at Schirn Kunsthalle Frankfurt, Feb. 11-May 29, 2011.

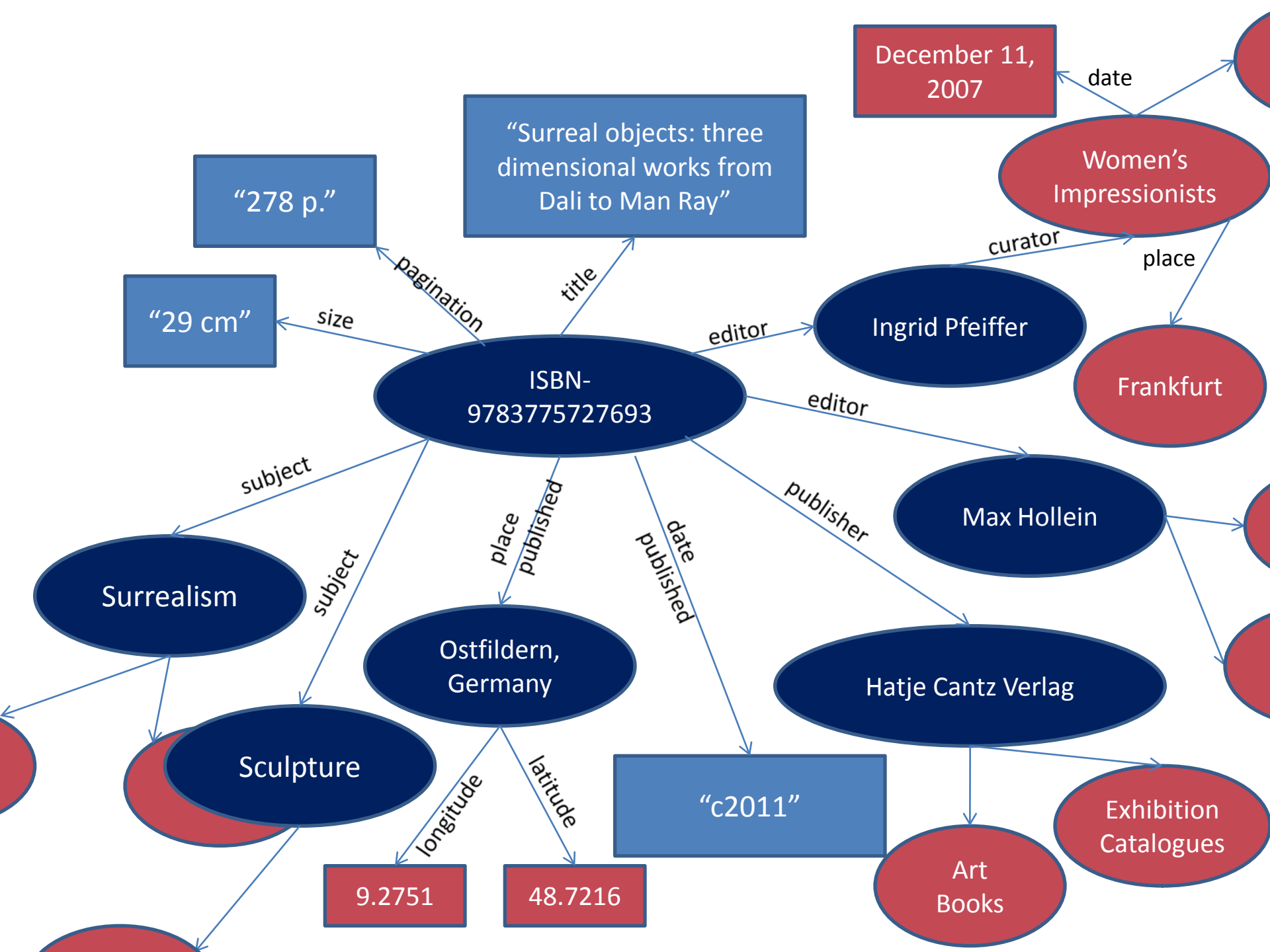
Other Contributors
Hollein, Max.
Pfeiffer, Ingrid.
Hille, Karoline.
Schirn Kunsthalle Frankfurt.

Search by Subjects
Sculpture, Modern 20th century Exhibitions.
Surrealism Exhibitions.
Dalí, Salvador, 1904-1989.
Man Ray, 1890-1976.

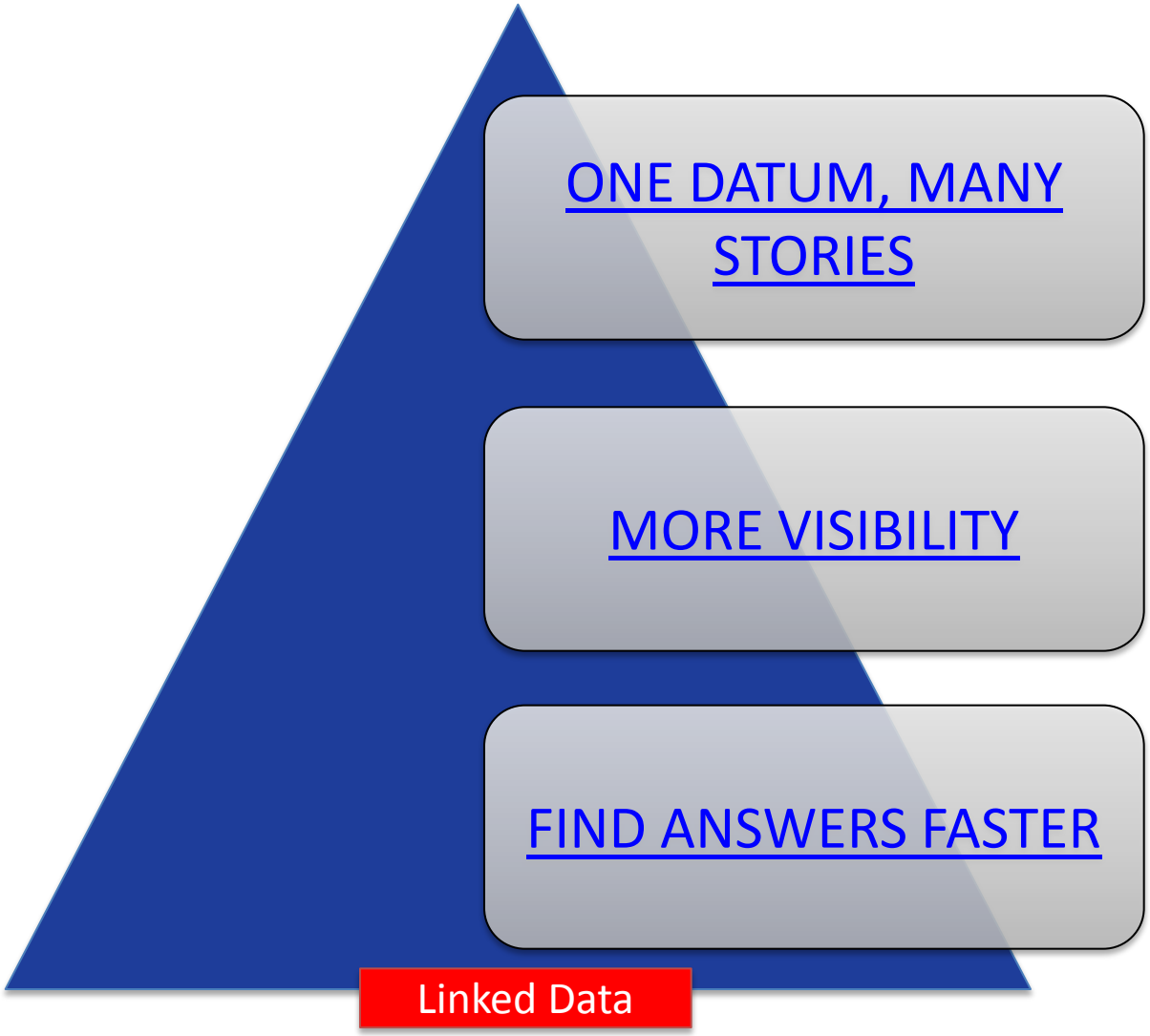
Where to find it

Branch	Location	Date	Call Number	Status
Lee Kong Chian Reference Library Lvl 8	RART	22-07-11	English 735.230463 SUR	For Reference Only


"Surreal objects: three dimensional works from Dali to Man Ray"
"278 p."
"29 cm"
pagination
title
size
editor
Ingrid Pfeiffer
ISBN-
9783775727693
editor
Max Hollein
subject
Surrealism
subject
Modern Sculpture
place published
Ostfildern, Germany
date published
"c2011"
publisher
Hatje Cantz Verlag


December 11, 2007
date
Women's Impressionists
"Surreal objects: three dimensional works from Dali to Man Ray"
"278 p."
pagination
title
curator
place
"29 cm"
size
editor
Ingrid Pfeiffer
Frankfurt
ISBN-9783775727693
editor
subject
publisher
Max Hollein
Surrealism
subject
place published
date published
Ostfildern, Germany
Hatje Cantz Verlag
Sculpture
longitude
latitude
"c2011"
Exhibition Catalogues
Art Books
9.2751
48.7216

Benefits


ONE DATUM, MANY STORIES
MORE VISIBILITY
FIND ANSWERS FASTER
Linked Data

Benefit 1 : Find Answers Faster

Researcher

I am doing research on Singapore Port, about how the Singapore Government helped in setting the targets, bringing stability to the port, enforced the policies that helped to direct the port towards its prosperity now. The years I am focusing are from 1960s to the early 1990s. The materials I want to consider are mainly newspaper articles and some books.

NLB

We would suggest search strategies for you but a comprehensive listing of resources would be beyond the scope of this service. To begin with, perhaps you can use the references in relevant books as a starting point to guide you to the right articles…..

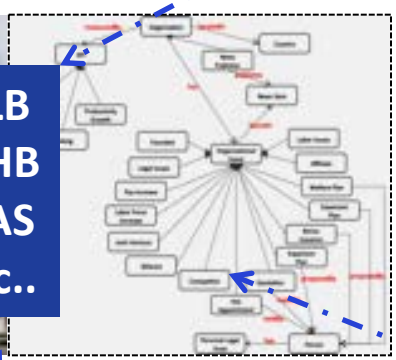
Benefit 2 : More Visibility

BookSG
PictureSG
NLB SearchPlus
musicSG
NORA
national online repository of the arts
i remember SG

YAHOO
bing
Google

Schema.org

NLB
NHB
NAS
etc..



External Apps

Library of Congress
Spanish National Library
British Library
Swedish National Library
German National Library
The Open Library
National Diet Library of Japan
etc

Data.gov
Data.gov.uk
DBPedia
CIA Fact Book
OpenCyc
BBC
NYTimes
etc

Back

Benefit 3 : One Datum, Many Stories

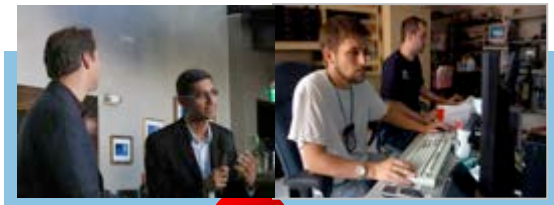
NLB Internal

idea idea idea

18 Months to 2 Years

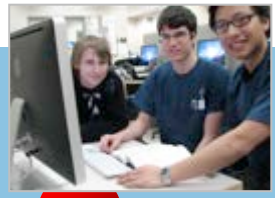
- Information silos
- Limited reuse

Developers Community



idea idea idea idea idea idea idea idea idea idea idea idea idea

NLB Internal



Weeks to Months

Increased Breadth

data.gov.uk Example

NYTimes Example

Target Audience

Researchers

General Library User

External Developers

Staff – Librarians/Archivists

THE 1960'S

Mr Lee Kuan Yew said in 1966 that if the Port had gone down with strikes and inefficiency, Singapore would today be a poorer place. Find out here how the then Government helped the port to become Number 1.

Lee Kuan Yew

Toh Chin Chye

Goh Keng Swee

S Rajaratnam

Ong Pang Boon

Yong Nyuk Lin

Lim Kim San

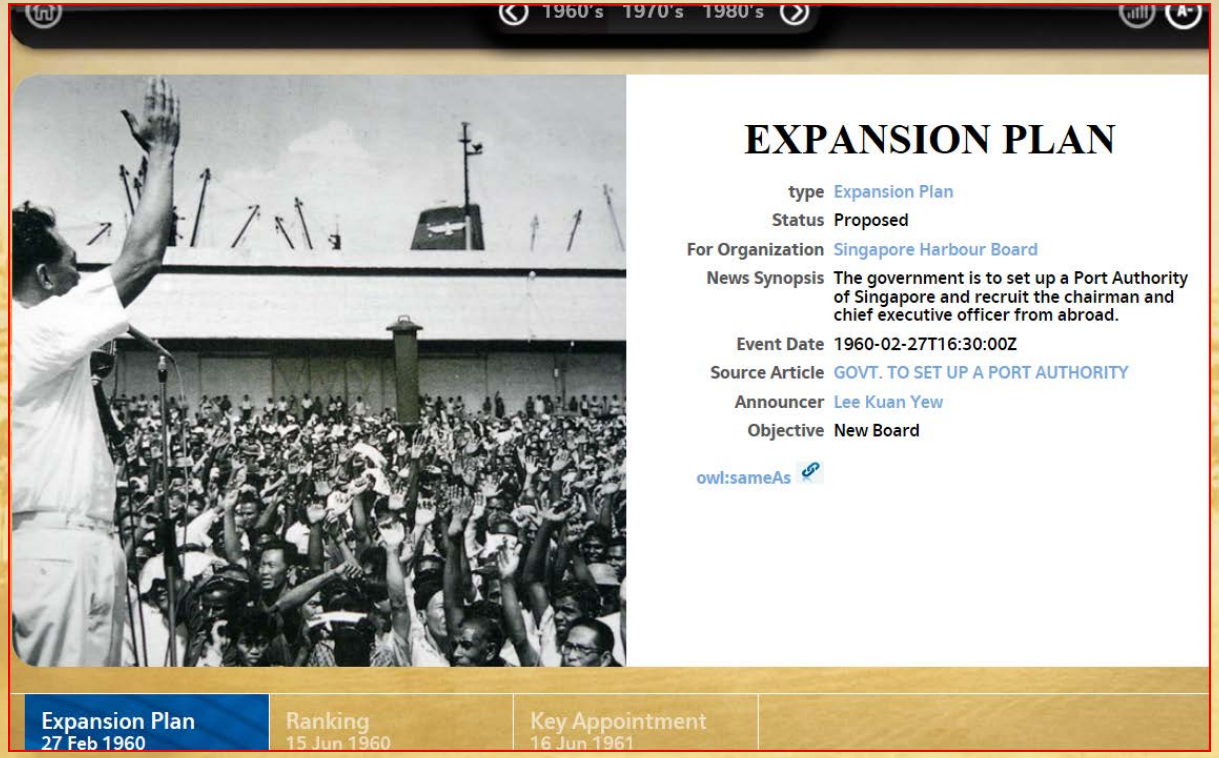
Jek Yeun Thong

Othman Wok

E W Barker

Lee Kuan Yew

Category	Property	Values
Attribute	type	Person
	Name	Lee Kuan Yew
	Nationality	Singapore
	Person Type	Politician
	Salutation	Mr
	Gender	Male
	Photo	http://www.biography.com/imported/images/Biography/Images/Profiles/K/Lee-Kuan-Yew-9377339-2-402.jpg
Resource	Audio Association	6
	Book Association	5
	Web Asset Association	5
	Video Association	3
Organization Related Event	Quotation	5
	Bonus Issuance	2
	Expansion Plan	2
	Labor Issues	2


1960's 1970's 1980's
EXPANSION PLAN
type Expansion Plan
Status Proposed
For Organization Singapore Harbour Board
News Synopsis The government is to set up a Port Authority of Singapore and recruit the chairman and chief executive officer from abroad.
Event Date 1960-02-27T16:30:00Z
Source Article GOVT. TO SET UP A PORT AUTHORITY
Announcer Lee Kuan Yew
Objective New Board
owl:sameAs
Expansion Plan 27 Feb 1960
Ranking 15 Jun 1960
Key Appointment 16 Jun 1961

THE ORIGINS

WELFARE PLAN

type	Welfare Plan
For Organization	Singapore Harbour Board
News Synopsis	The Singapore Government is to push through a plan for higher pay and better working conditions for 10,000 port workers
Event Date	1963-05-27T16:30:00Z
Source Article	Port pay plan to go through
Beneficiary	Port Workers
Plan	higher pay and better working conditions

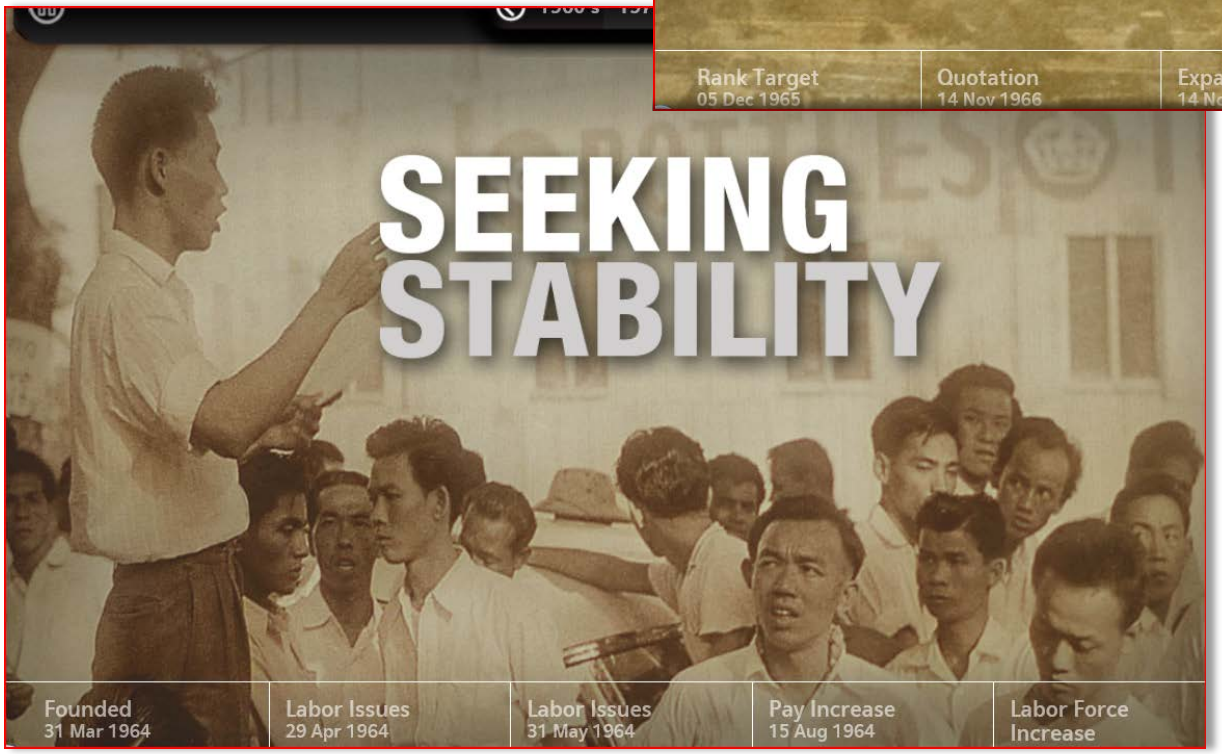
owl:sameAs

Welfare Plan 27 May 1963 | Quotation 18 Jul 1963 | Quotation 19 Jul 1963 | Labor Issues 20 Jul 1963 | Bonus Issuance 22 Jul 1963

1960's 1970's 1980's

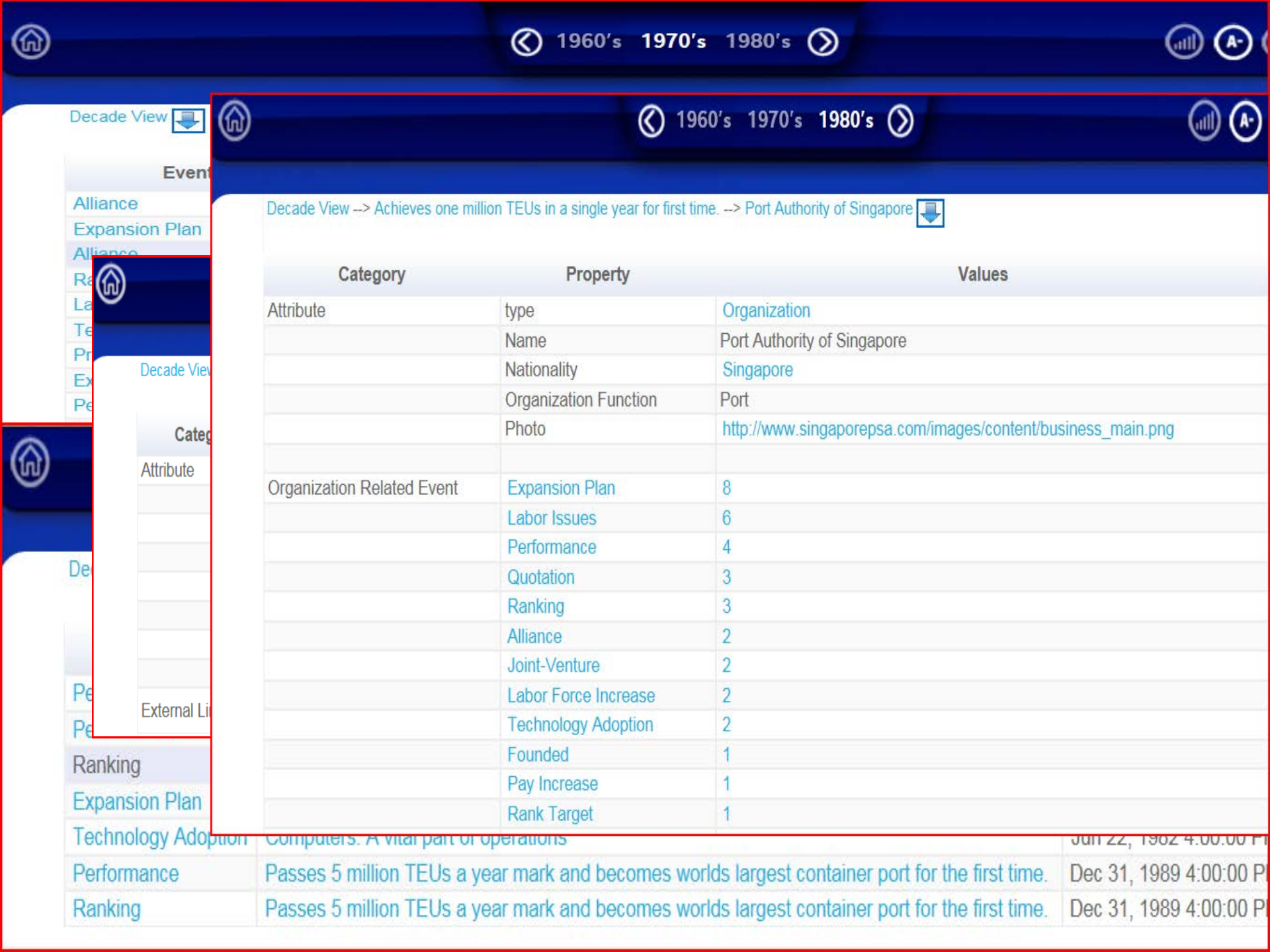
Welfare Plan 27 May 1963 | Quotation 18 Jul 1963 | Quotation 19 Jul 1963 | Labor Issues 20 Jul 1963 | Bonus Issuance 22 Jul 1963

1960's 1970's 1980's
THE FUTURE
Rank Target
05 Dec 1965
Quotation
14 Nov 1966
Expansion Plan
14 Nov 1966
Joint-Venture
17 Nov 1966
Expansion Plan
21 Apr 1967

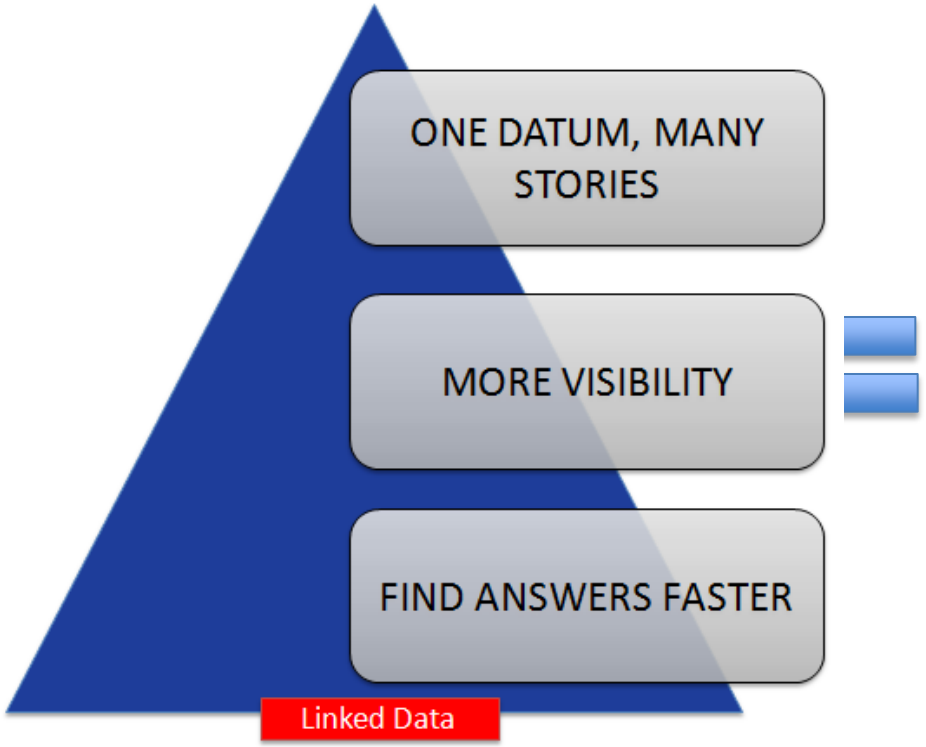

SEEKING
STABILITY
Founded
31 Mar 1964
Labor Issues
29 Apr 1964
Labor Issues
31 May 1964
Pay Increase
15 Aug 1964
Labor Force
Increase

Decade View

Event	Detail	Eventdate
Expansion Plan	GOVT. TO SET UP A PORT AUTHORITY	Feb 27, 1960 4:30:00 PM
Ranking	TRADE IS FLOURISHING-BUT NOW THE ACCENT IS ON INDUSTRY	Jun 15, 1960 4:30:00 PM
Key Appointment	YONG NAMED CHAIRMAN OF SHB	Jun 16, 1961 4:30:00 PM
Welfare Plan	Port pay plan to go through	May 27, 1963 4:30:00 PM
Quotation	Lee: I don't want any trouble before M-Day	Jul 18, 1963 4:30:00 PM
Quotation	TRIUMPH FOR LEE. Thunderous cheers by Harbour Board men	Jul 19, 1963 4:30:00 PM
Labor Issues	Port men to vote on strike	Jul 20, 1963 4:30:00 PM
Bonus Issuance	Malaysia Bonus	Jul 22, 1963 4:30:00 PM
Organization Legal Issue	Premier Lee announces the cancellation of harbour staff union	Jul 22, 1963 4:30:00 PM
Bonus Issuance	$500,000 'BONUS' SURPRISE FOR SHB WORKERS	Dec 13, 1963 4:30:00 PM
Organization Legal Issue	SHB Union now to ban all politicians	Jan 13, 1964 4:30:00 PM


1960's 1970's 1980's
Decade View
Event
Alliance
Expansion Plan
Ranking
Expansion Plan
Technology Adoption
Performance
Ranking
Passes 5 million TEUs a year mark and becomes worlds largest container port for the first time.
Dec 31, 1989 4:00:00 P
1960's 1970's 1980's
Decade View --> Achieves one million TEUs in a single year for first time. --> Port Authority of Singapore
Category
Property
Values
Attribute
type
Organization
Name
Port Authority of Singapore
Nationality
Singapore
Organization Function
Port
Photo
http://www.singaporepsa.com/images/content/business_main.png
Organization Related Event
Expansion Plan
8
Labor Issues
6
Performance
4
Quotation
3
Ranking
3
Alliance
2
Joint-Venture
2
Labor Force Increase
2
Technology Adoption
2
Founded
1
Pay Increase
1
Rank Target
1

Linked Open Data



Through our libraries, we make **knowledge come alive, spark imagination** and **create possibilities**

Benefits

NLB's Mission

The Power of One

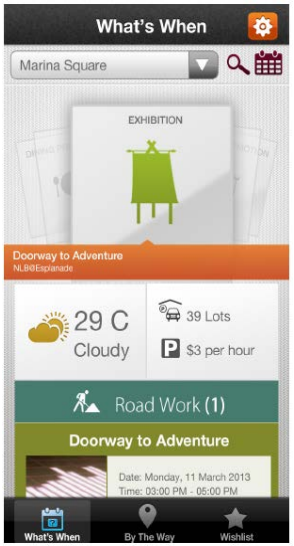
- Bridging the Cultural Divide:

- Connecting Singapore Content to the World seamlessly

Current Projects:

data.gov.sg Pilot

- Mobile App



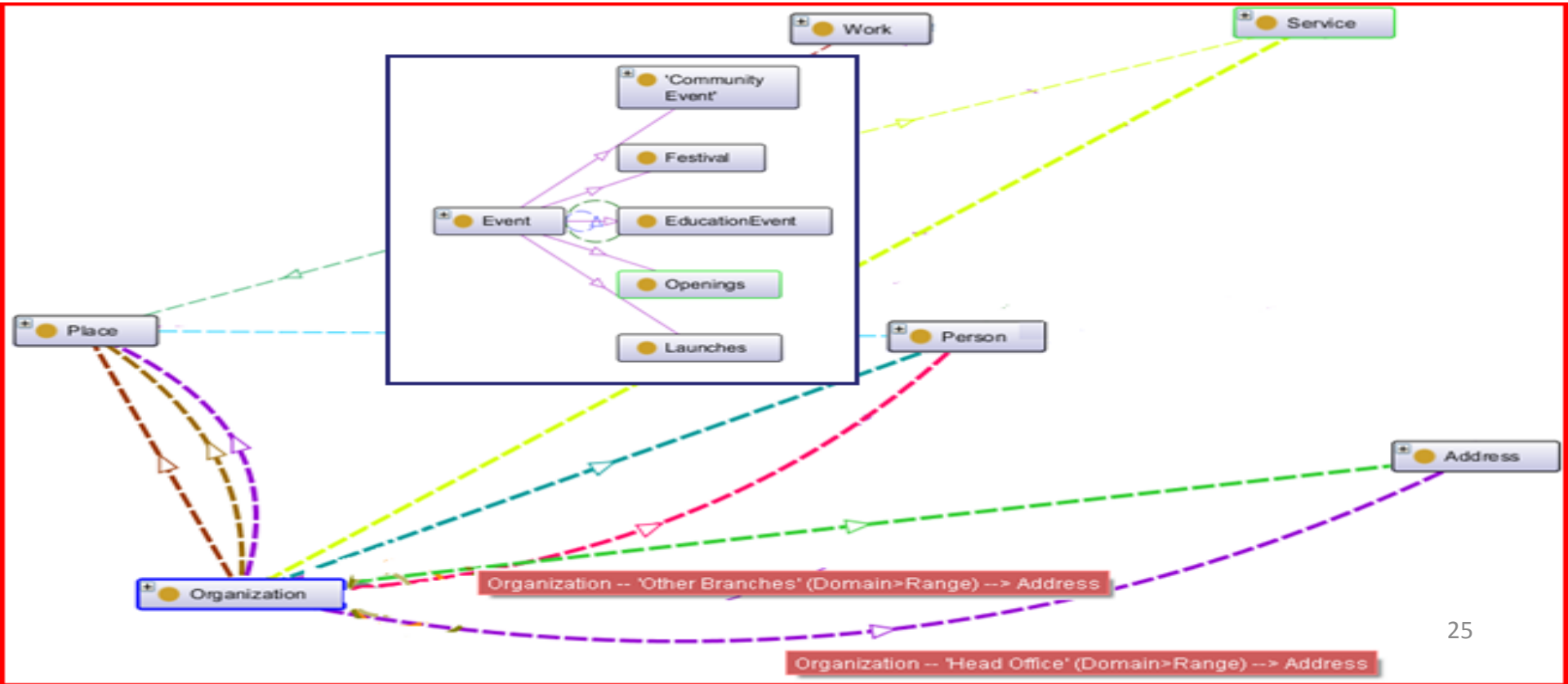
- Web App

Using 23 govt and 23 non-govt datasets

Current Projects:

FamilyHistory Database

- data transformation (Dublin Core)
- named entity recognition (1,800 articles)
- ontology : 340 classes/sub-classes & 320 relationships



haliza@nlb.gov.sg

3 Search

4 Load

2 Indexing

NLB Public Web Site

1 Schema.org microformat

[Back](#)