

Operationalize Your Data

And Get the Most out of Your Smart Content!

Matt Turner CSO Media & Manufacturing

July 25th, 2019

@matt_turner_nyc

#MarkLogic

The Importance of Data



Shelly Palmer

February 19, 2015 · 🌐

👍 Like Page

Data rich or data poor, companies with the greatest ability to turn data into action are going to win.

**Industrialize
your data!**



Dr. Sven Fund
CEO FullStopp
2013

Learned Publishing, 26: 57-64
doi:10.1087/20130111

POINT OF VIEW

**We need
integrated
publishing**

Value in scholarly publishing

The notion of value creation by scholarly publishers has been a hotly debated issue over the past decade. During this time, not only have the proponents of open access doubted and questioned the value creation that publishers have contributed to the research process, but financial analysts have also found that investing in scientific publishing is relatively unprofitable: the majority of market leaders significantly underperformed against several alternative investments and even the market indexes. Most alarming is the fact that there are clear signs of disproportional deterioration in market performance after the 2008 collapse of the financial market.

One could easily argue that there are many

Sven FUND
De Gruyter, Berlin

ABSTRACT. *Scholarly publishing has seen a decade of rapid proliferation of business models and emerging technologies. Together with globalization of the publishing market and new challenges, this evolution has also led to rapid advancements in management tasks even within small publishing houses. The outcome of this change for the stakeholders, including researchers, authors, and shareholders, is unclear.*



Michel de Ru
MarkLogic, 2018

smart
content

sun



InterCo Los Angeles

Century City

November 5, 2014

presented by ■ MarkLogic®

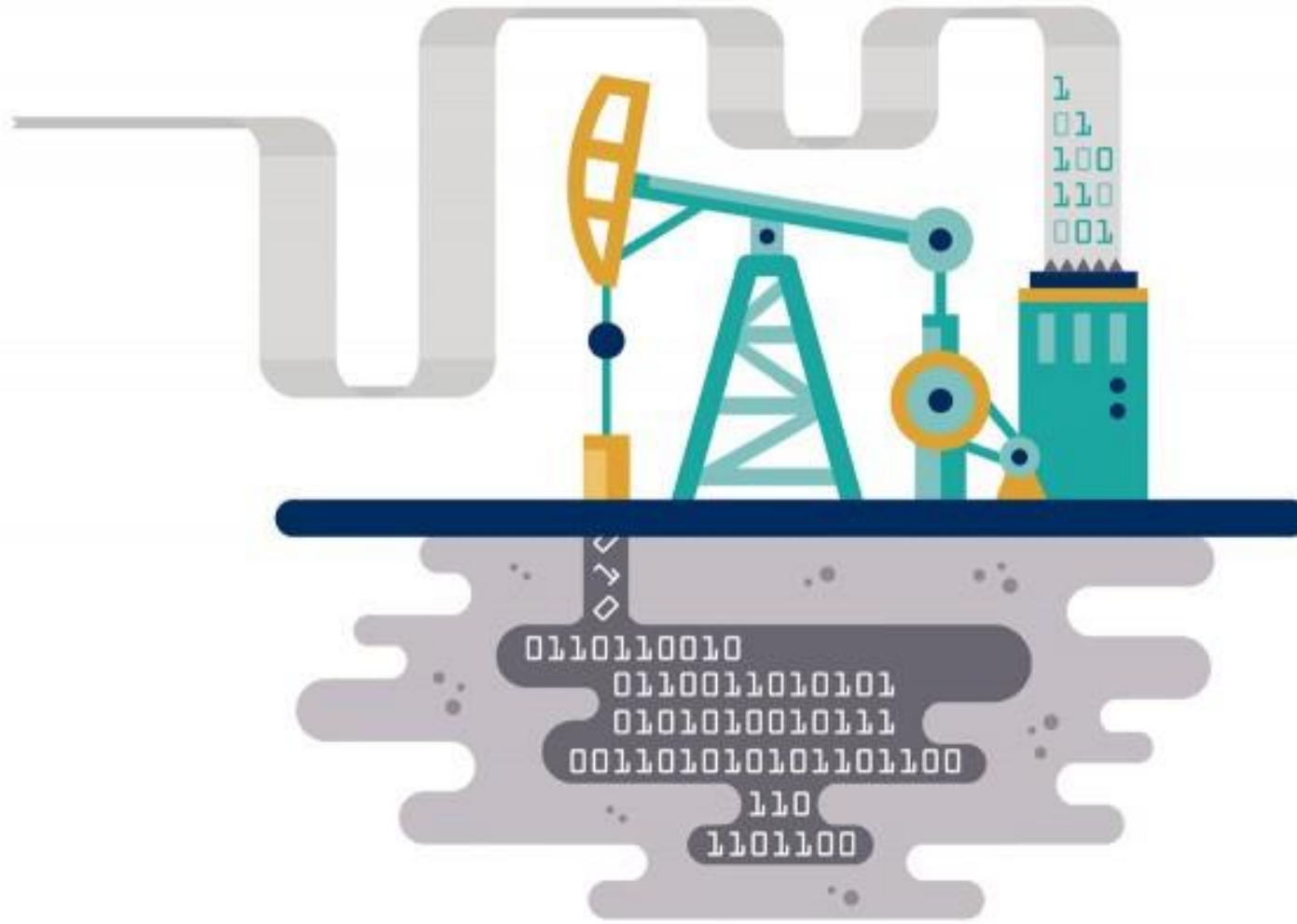
What is Smart Content?



2014

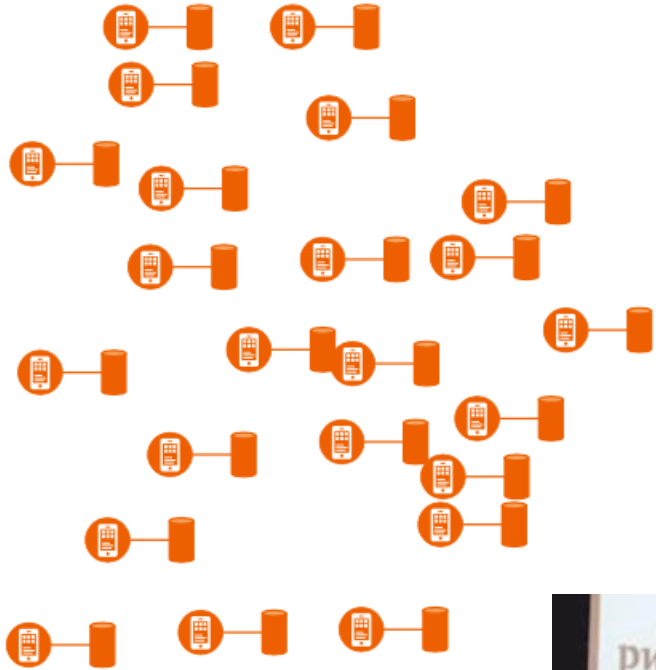
PARTNER CONTENT JORIS TOONDERS, YONEGO

DATA IS THE NEW OIL OF THE DIGITAL ECONOMY

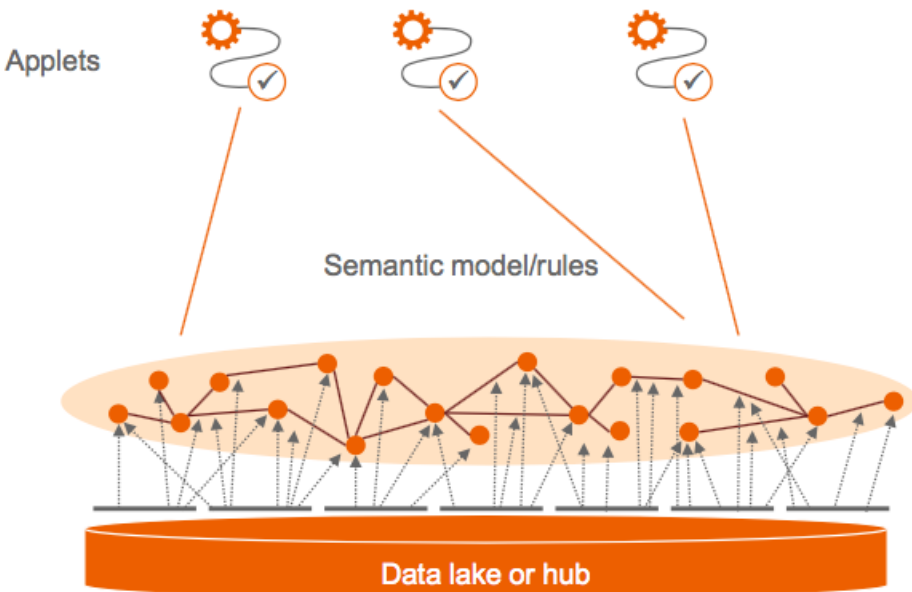


Type III: data-centric architecture reduces both application and database sprawl

App code trapped in Database orphans and models



Applications for execution only, models exposed with the data



Alan Morrison
Senior Research Fellow
PwC, 2018

Largest change in market cap by company (2009 to 31 March 2018)

	Company name	Location	Industry	Change in market cap 2009-2018 (\$bn)	Market cap 2018 (\$bn)
1	Apple	United States	Technology	757	851
2	Amazon.Com	United States	Consumer Services	670	701
3	Alphabet	United States	Technology	609	719
4	Microsoft Corp	United States	Technology	540	703
5	Tencent Holdings	China	Technology	483	496
6	Facebook	United States	Technology	383(1)	464
7	Berkshire Hathaway	United States	Financial	358	492
8	Alibaba	China	Consumer Services	302(1)	470
9	JPMorgan Chase				375
10	Bank of America				307

Known knowledge graph builders

Operator of Taobao and KG builder

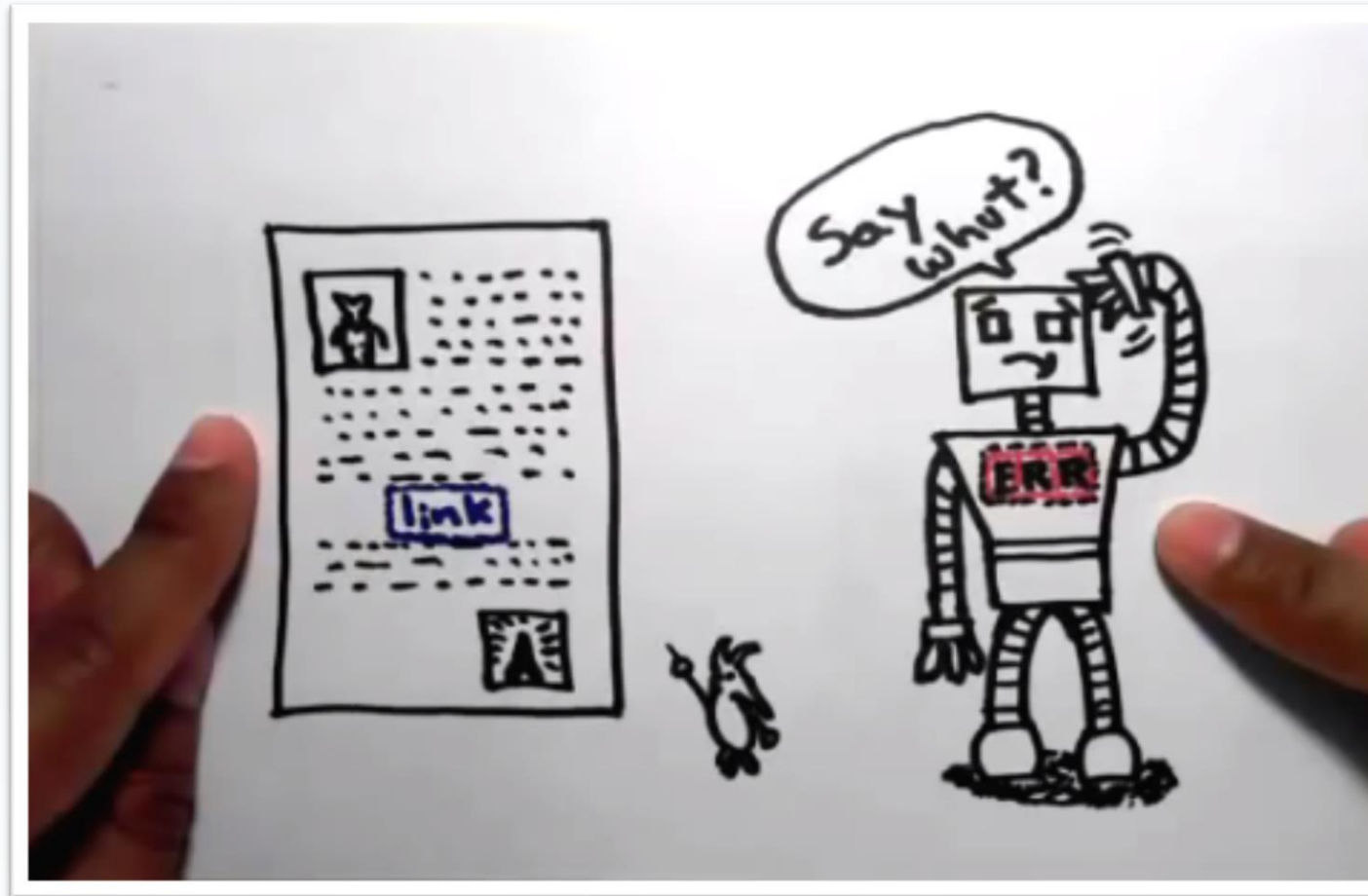
Known KG builders



Alan Morrison
Senior Research Fellow
PWC

What's Going On?

Machines Don't Get Context . . .

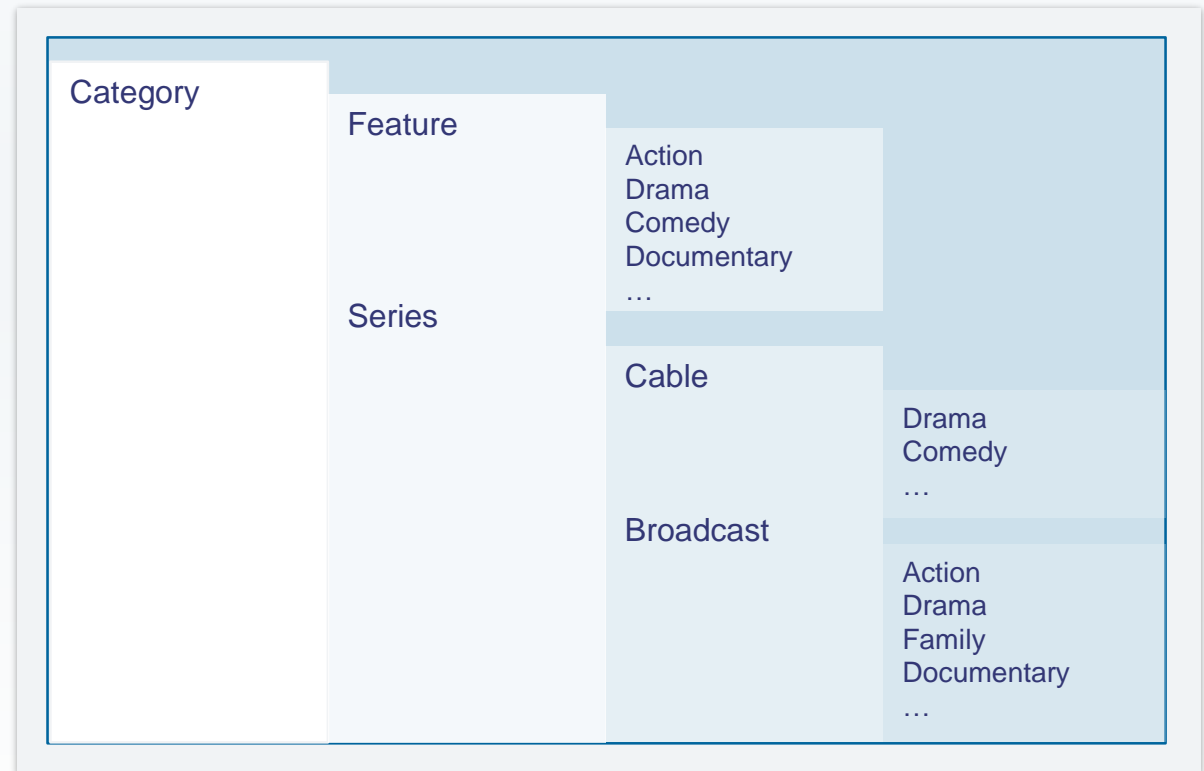


[Manu Sporny](http://www.cambridgesemantics.com/semantic-university/what-is-linked-data) Founder/CEO - Digital Bazaar, Inc.
<http://www.cambridgesemantics.com/semantic-university/what-is-linked-data>

Traditional Approach Strips Context

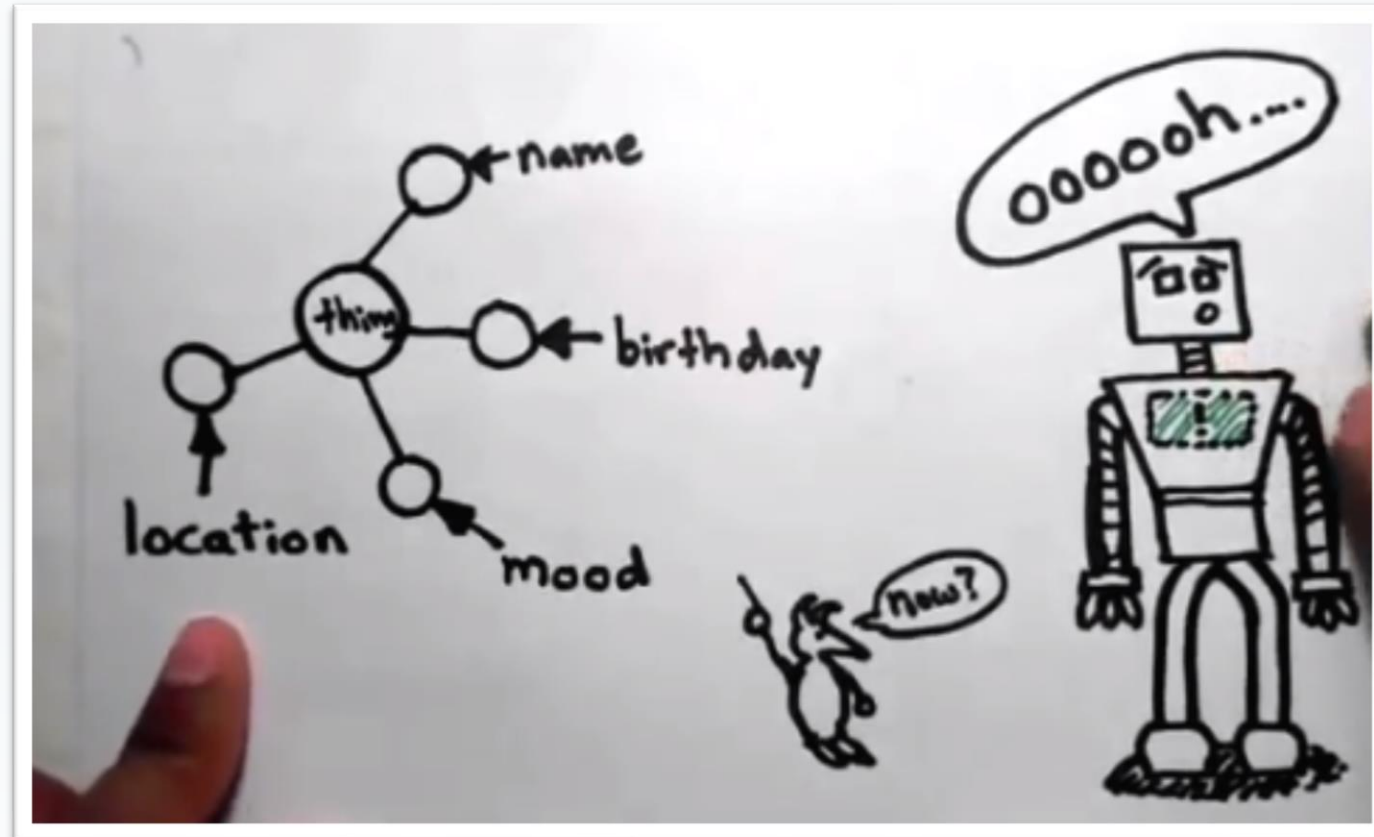
- Define everything in rows and columns
 - Narrows to specific purpose
- Fix categories into hierarchies
 - Strips general context
- **Result:** Data can't be used across all parts of the business

Title	ProductionDate	Category	AssetType	Length
Film1	3/1/14	Feature	HD Master	2:40
Show1	6/4/13	Series	HD720	0:40
Film2	6/4/05	Feature	Archive	1:55

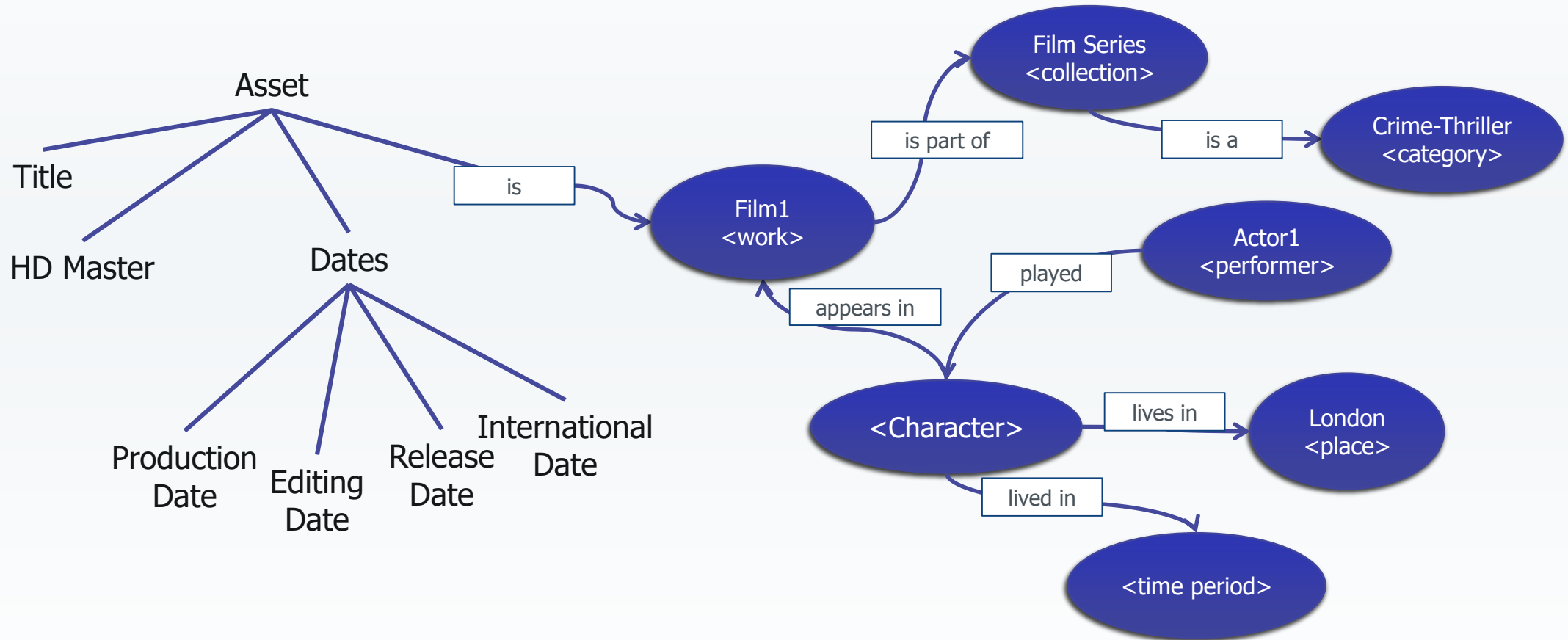


“Running on opinion not data”

Enter Linked Data!

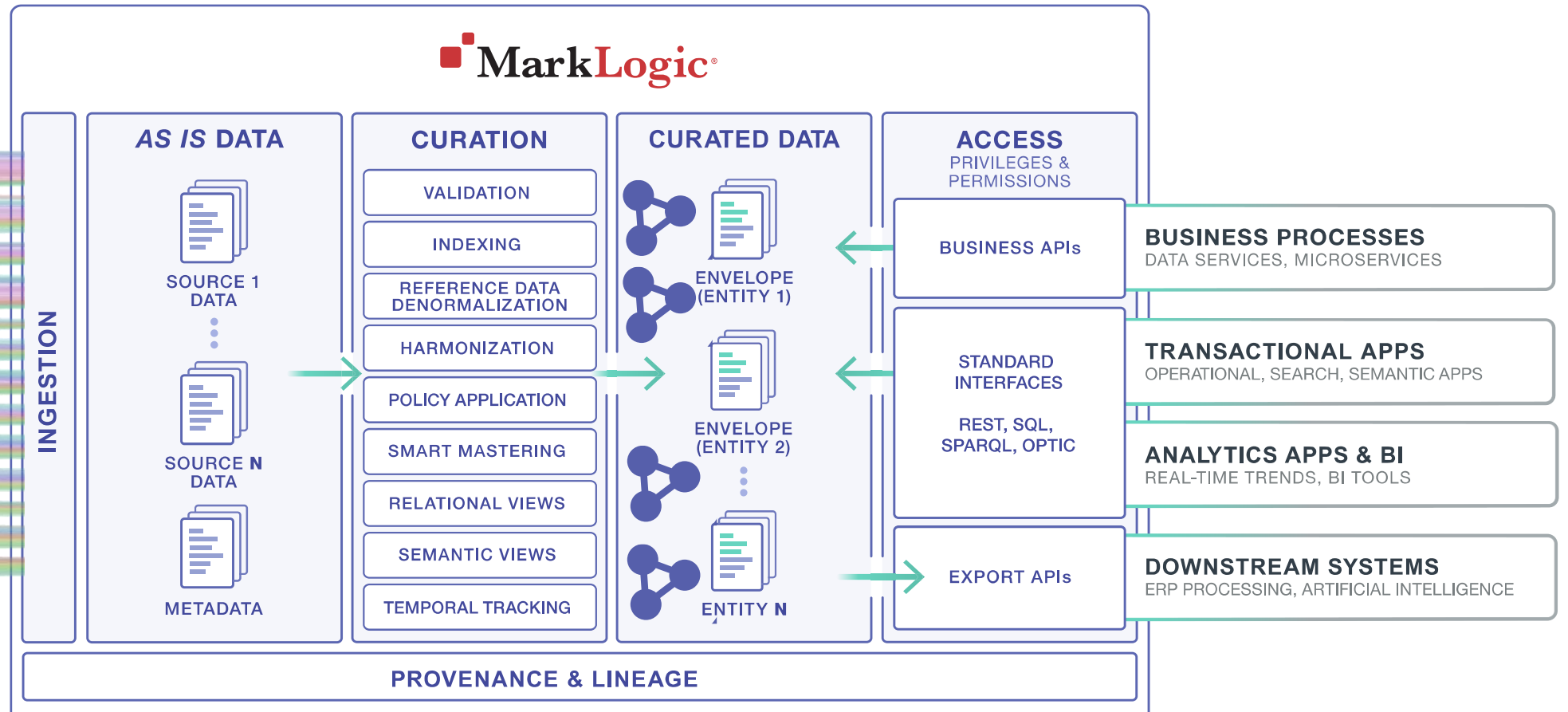


NoSQL and Semantics: Using CONTEXT to Create Data Layer



ENTERPRISE ARCHITECTURE PATTERN

MarkLogic Operational Data Hub



Smart Content in Action



Integrated Digital Delivery for Streamlined Auto Repair

MITCHELL1 PRODEMAND



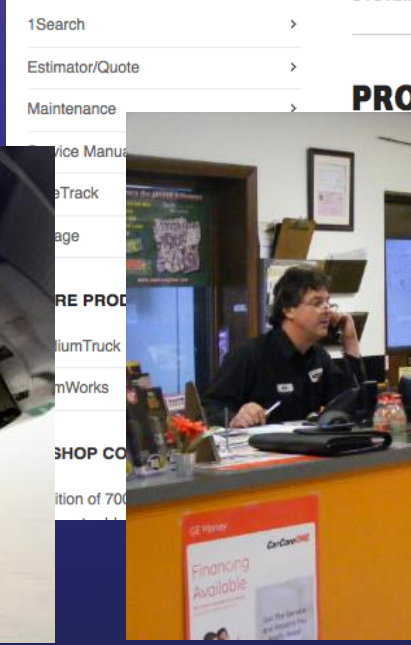
✓ REPAIR INFO

✓ EXPERT ADVICE

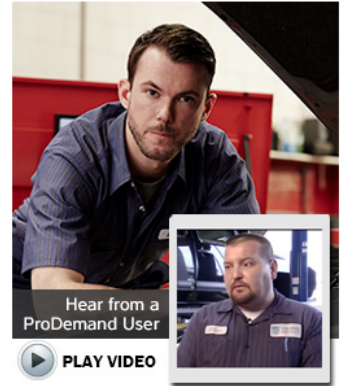
✓ REPAIR ORDERS

Challenges

- Structured, unstructured data
- Needed advanced search
- Needed scalability for growing data
- Multi-device delivery (desktop, tablet, Snap-On ProDemand device)



PRODEMAND: REPAIR



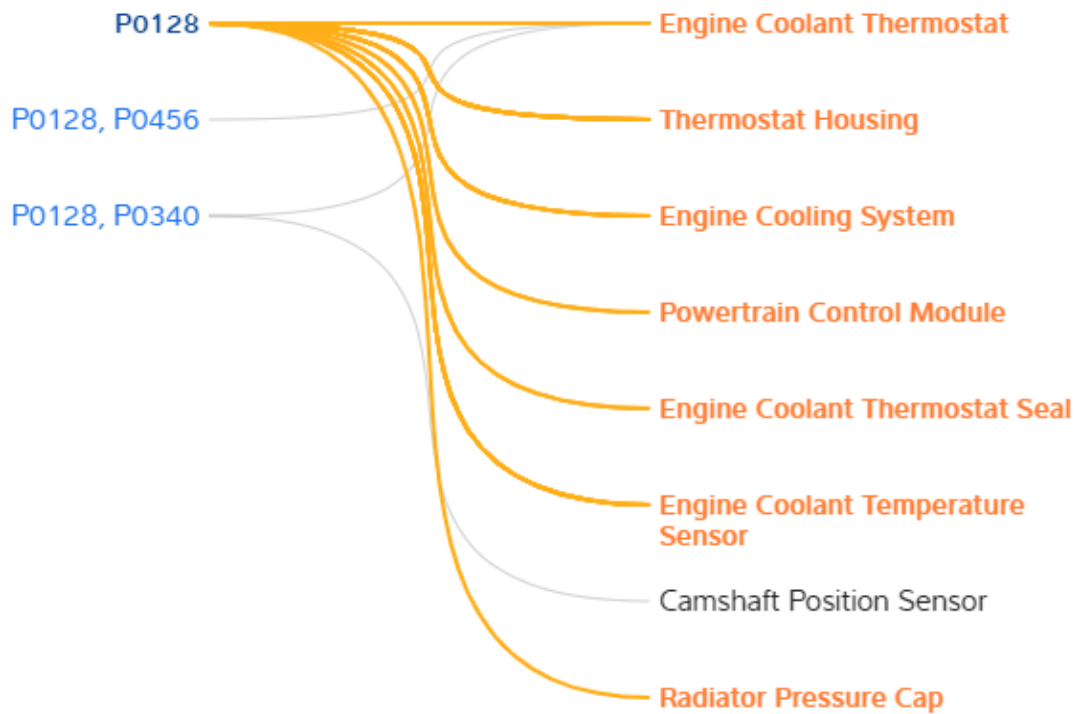
venient location. Now that's efficient.

Causes & Fixes



DTC SYMPTOM

Dtc To Component Matches



Number Of Repairs For P0128

Engine Coolant Thermostat	540
Thermostat Housing	193
Engine Cooling System	112
Powertrain Control Module	26
Engine Coolant Temperature Sen	23
Engine Coolant Thermostat Seal	11
Radiator Pressure Cap	3

ProDemand Automotive Repair x Stan

www2.prodemand.com/Main/Index#2011|Honda|Pilot|3.5L%20Eng%20VIN%204|Touring|Gas|Eng%20CD%20J35Z4|Utility|4WD|Automatic%20T%2FCase...

Apps MarkLogic Corporate Query Console - M... System Summary -... Demonstrations PoC's Other Bookmarks

PRODEMAND CHANGE VEHICLE 2011 Honda Pilot 3.5L Eng Touring RECALLS/CAMPAIGNS ? Contact Us Settings Logout

1SEARCH™ Search p0420 MARKLOGIC

Catalytic Converter [Learn More About SureTrack](#) No TSBs Print

Index Descriptions Locations Procedures Diagrams Specs SureTrack® ProView

< Probable Components Real Fixes

Common Repair Procedures

Component	Count
replaced catalytic converter	86
replaced exhaust gasket	17
replaced oxygen sensor	11
replaced exhaust manifold gasket	7
replaced disc brake pad	5
replaced spark plug	3

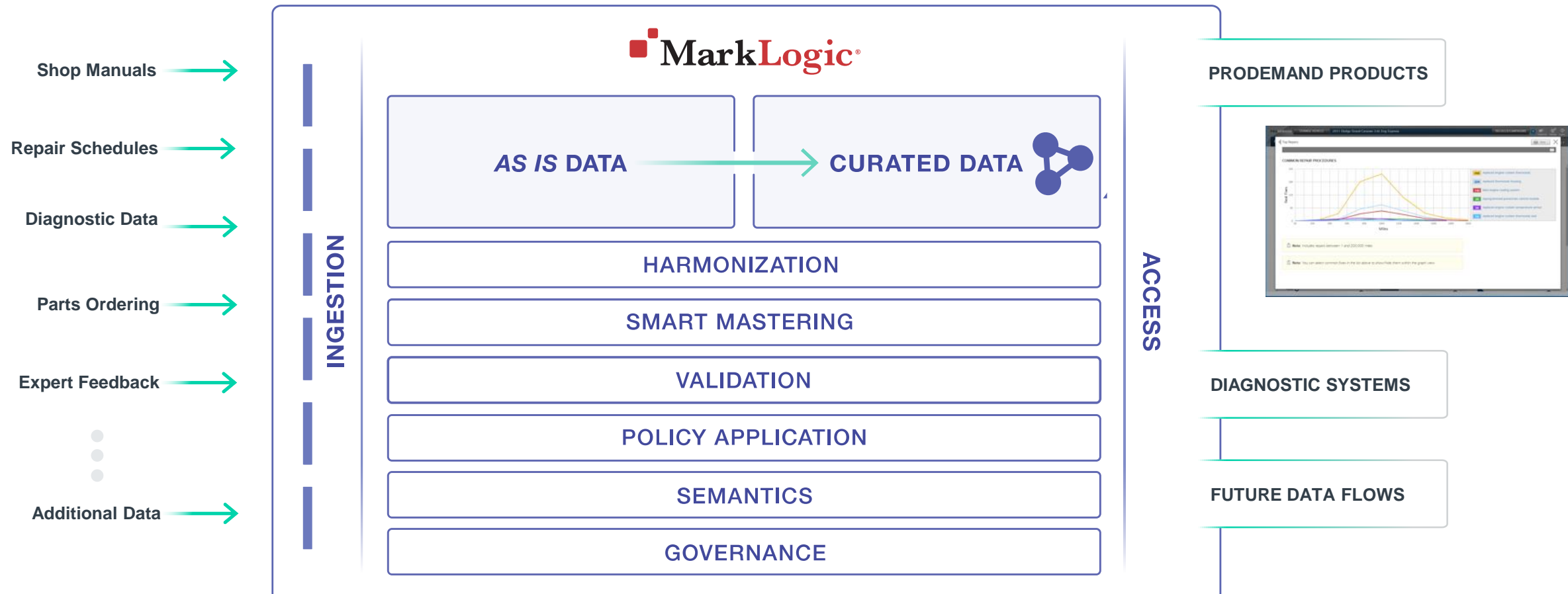
Real Fixes

Fix Description	Fixed It!
P0420, Replaced Catalytic Converter (B1) The customer states the check engine light is on. Connected a scan tool and found code P0420 -...	98 ✓
P0420, Replaced Catalytic Converter Manifold The customer states the check engine light is on. Connected a scan tool and found code P0420 -...	5 ✓
P0420, P0430, Replaced Catalytic Converter The customer states the check engine light is on. Connected a scan tool and found codes: P0420 -...	4 ✓
P0420, Replaced Catalytic Converter (B1), Oxygen Sensor (B1-S2) The customer states the check engine light is on. Connected a scan tool and found code P0420 -...	3 ✓
P0420, Replaced Catalytic Converter The customer states the check engine light is on. Connected a scan tool and found code P0420 -...	1 ✓
P0420, P0430, Replaced Catalytic Converter Manifold The customer states the check engine light is on. Connected a scan tool and found codes: P0420 -...	1 ✓
P0420, Engine Runs Rough, Replaced Catalytic Converter The customer states the engine runs rough. The customer also states the check engine light is on....	1 ✓
P0420, Replaced Catalytic Converter Manifold (B1)	1 ✓

Show

- TSB
- ...
- ...
- ...
- ...
- ...
- ...
- ...
- ...
- ...

Mitchell1 Data Hub





SONY

Mainframe migration for “sales-to-finance” Data Hub

- Data made available to users in 3 months
- Faceted searches in seconds vs 40+ minutes
- Faster sales, increased revenue, and lowered costs

“Users really appreciate the sophistication... it’s head and shoulders above what they’ve had in the past. They are committing to increasing revenue because we’ve made their jobs easier.”

VP IT Worldwide Television
SONY PICTURES ENTERTAINMENT

How TV Shows are Sold and Managed



Deal Points



Exploitation Rights



Options



Fees



Material Requests



Availability

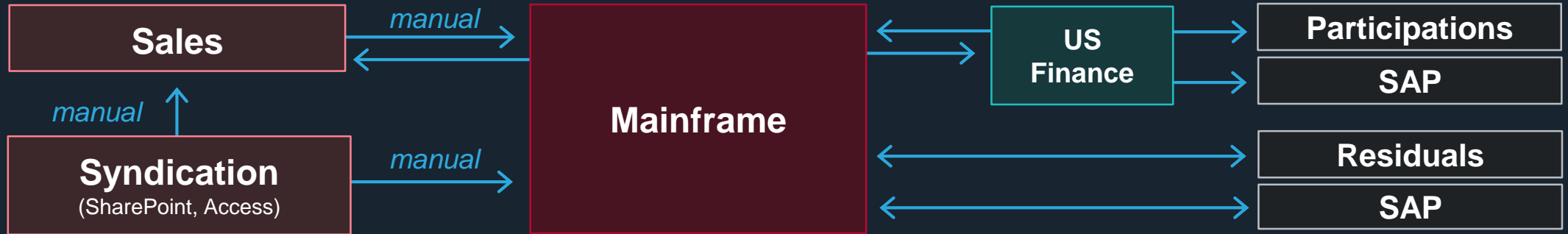


Documents

- Contract for IP is created
- Rights, Options, Fees, Deal Points are structured in system
- “Avails” system tracks consumption of rights
- Fees are translated to billing templates and payment terms
- Invoicing/Billing/Collections takes place
- Contract is executed and tracked over time, often over years

Legacy TV Program Distribution

United States



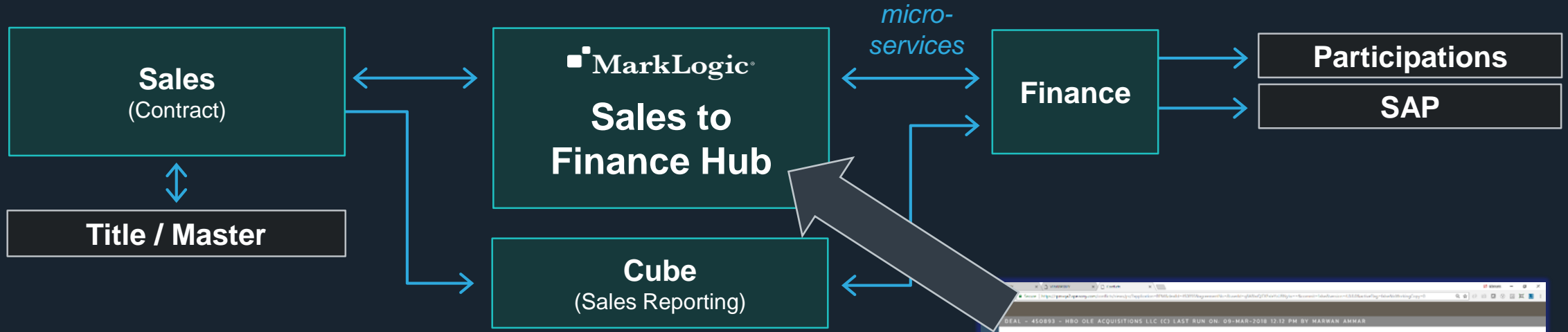
International



Outdated Technology
 Redundant System
 Proven Technology
 Non-TV Dist. System

Future TV Program Distribution

Global Integrated Workflow

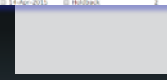
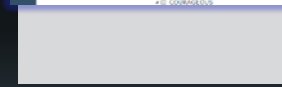
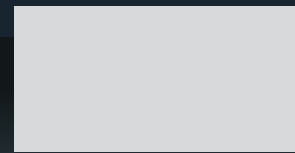
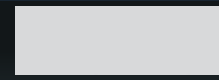


DEAL - 410893 - HBO OLE ACQUISITIONS LLC (C) LAST RUN ON: 09-MAR-2016 12:12 PM BY: MARWAN AMMAR

CONFLICTS PIVOT GRID

Product	Contracting Start Date	Contracting End Date	Right Type	Issues
ATM DIAL THE	31-Mar-2015	31-Mar-2015	Holdback	2
13 MONTHS (2012)	31-Mar-2015	31-Mar-2015	Holdback	6
13 GOING ON 30	15-Jun-2013	30-Apr-2014	Holdback	4
AMAZING SPIDER-MAN, THE	01-Aug-2014	27-Dec-2014	Business Holdback	3
	14-Aug-2014	27-Dec-2014	Business Holdback	1
	30-Apr-2018	Business Holdback	1	
	27-Mar-2015	Business Holdback	7	
	28-Dec-2014	31-Mar-2015	Business Holdback	1
	10-Mar-2015	Business Holdback	1	
	04-Feb-2015	04-Mar-2015	Business Holdback	3
	20-Mar-2015	Business Holdback	1	
	07-Mar-2015	30-Mar-2015	Business Holdback	4
	30-Mar-2015	Business Holdback	1	
	20-Apr-2015	Business Holdback	1	
	27-Jun-2015	Business Holdback	1	
	30-Jun-2016	Business Holdback	4	
	08-May-2015	27-Jun-2015	Business Holdback	3
	11-Mar-2014	30-Apr-2014	Front Risk	3
	22-Jun-2012	20-Apr-2014	Holdback	4
ATLAS FANL/CORR. PART II	11-Mar-2015	11-Mar-2015	Holdback	8
BAD BOYS (1995)	15-Jun-2015	11-Mar-2015	Holdback	8
CHARLIE'S ANGELS (2000)	15-Jun-2012	30-Apr-2014	Holdback	6
CLUBBER	08-Nov-2014	28-Feb-2015	Holdback	2
COOLHAHA	31-Mar-2015	31-Mar-2015	Holdback	3
COOLHAHA (2)	11-Mar-2015	11-Mar-2015	Holdback	3

EXAMPLES OF WHERE WE LICENSE CONT



Future TV Program Distribution

Global Integrated Workflow

rpm Avails S2F Customer Admin

31665 v1: 1585083 - ADS - Series Package (Posted)

RELEASE PACKAGE

PAYMENT TERMS

1585083 - ADS - TV Se...

BILL TYPE: License Fees

BILLING METHOD: Aggregate Deal Fee

AGGREGATE AMT: USD

S.O. AMOUNT ASSIGNED: USD

TBD: USD

PRODUCTS: 904

SOI'S: 16095

8 payments: USD

- USD Due on 14-FEB-17
- USD Due on 3 Months After Previous Installment Date
- USD Due on 3 Months After Previous Installment Date
- USD Due on 3 Months After Previous Installment Date
- 0 USD Due on 3 Months After Previous Installment Date
- USD Due on 3 Months After Previous Installment Date
- USD Due on 3 Months After Previous Installment Date

Group	sum(Amount)	Product Id	Product MPM No
1585083 - ADS	U...		
> Made-for-Digital Series (221)	USD		
> TV Series (15874)	U...		

Filter...

- Full Title
- Amount
- Product Title
- Product Id
- Product MPM No
- Release Package ID
- Release Package Version
- Release Package Name
- Payment Term Id
- Payment Term Version
- Payment Term Name
- Bill Type
- Billing Method
- Media
- Territory
- Language

Row Groups

- Payment Term Name
- Product Type

Values

- sum(Amount)

Participations

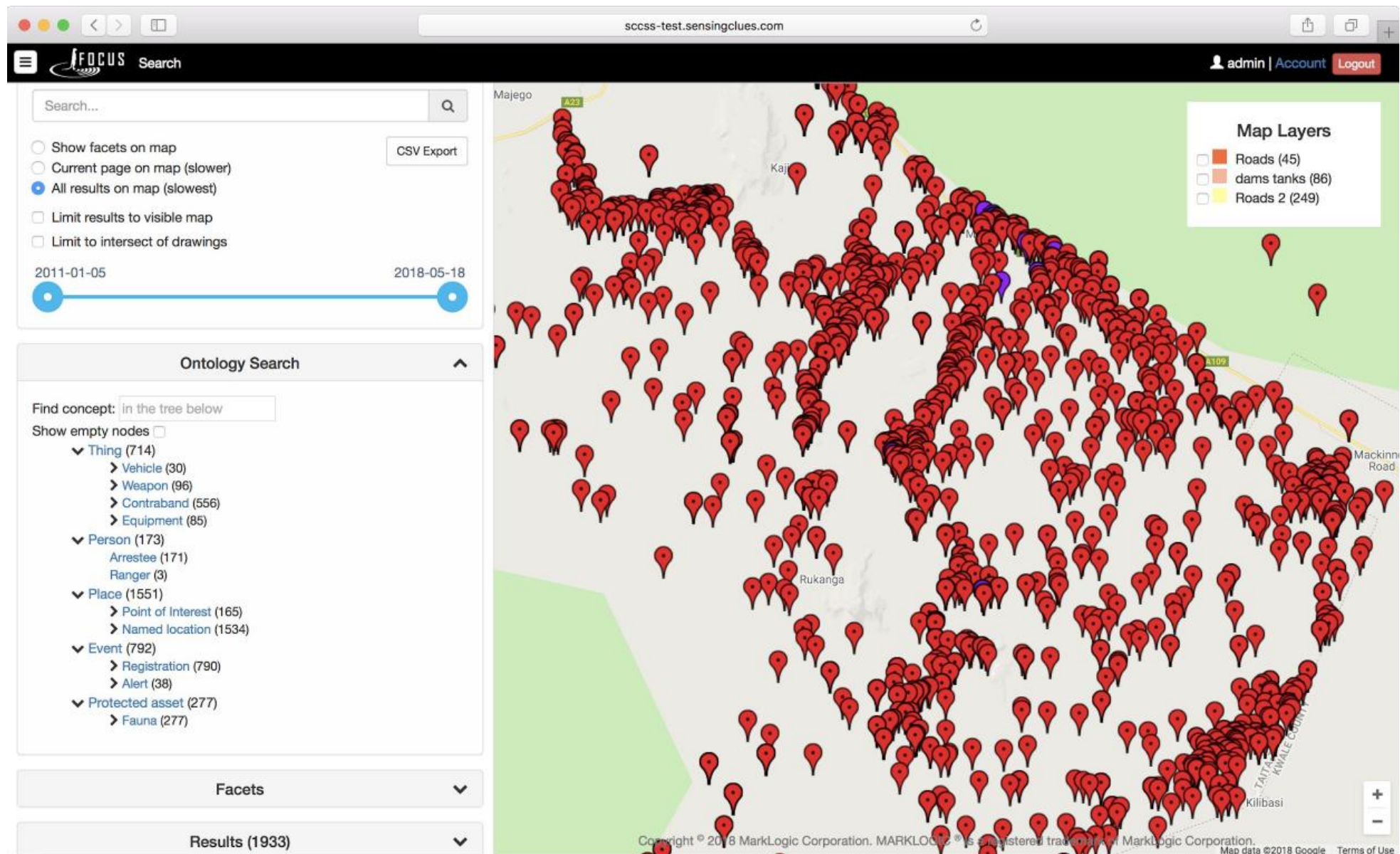
SAP



Our Mission

making available best-of-breed technologies
to conserve ecosystems and protect wildlife





The screenshot displays the 'FOCUS' web application interface. The browser address bar shows 'sccss-test.sensingclues.com'. The top navigation bar includes a search bar, a user profile 'admin', and 'Account' and 'Logout' links.

Search and Filter Panel:

- Search... (input field)
- CSV Export (button)
- Filter options:
 - Show facets on map
 - Current page on map (slower)
 - All results on map (slowest)
 - Limit results to visible map
 - Limit to intersect of drawings
- Date range: 2011-01-05 to 2018-05-18 (range selector)

Ontology Search Panel:

Find concept: in the tree below

Show empty nodes

- Thing (714)
 - Vehicle (30)
 - Weapon (96)
 - Contraband (556)
 - Equipment (85)
- Person (173)
 - Arrestee (171)
 - Ranger (3)
- Place (1551)
 - Point of Interest (165)
 - Named location (1534)
- Event (792)
 - Registration (790)
 - Alert (38)
- Protected asset (277)
 - Fauna (277)

Map Panel:

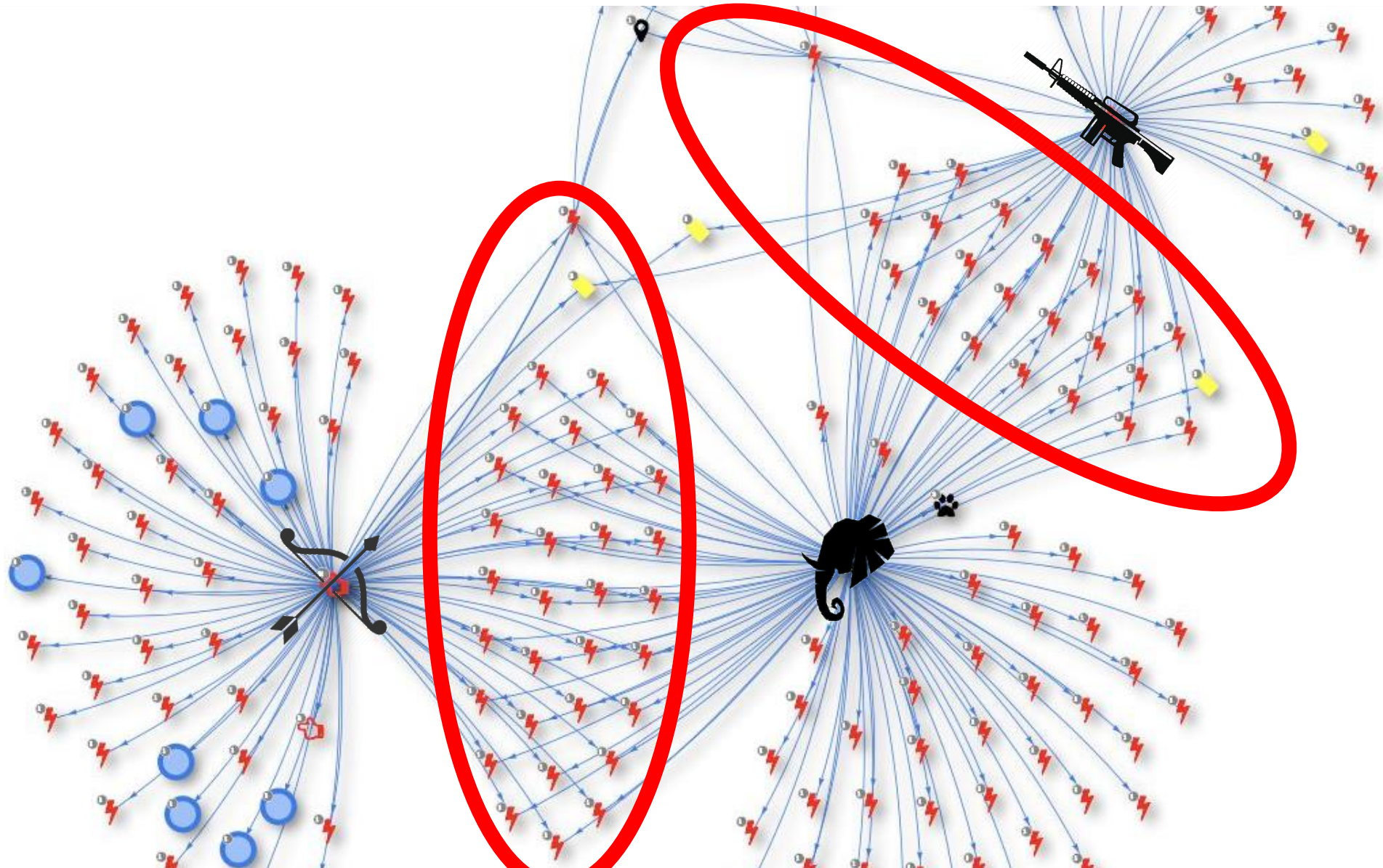
Map Layers:

- Roads (45)
- dams tanks (86)
- Roads 2 (249)

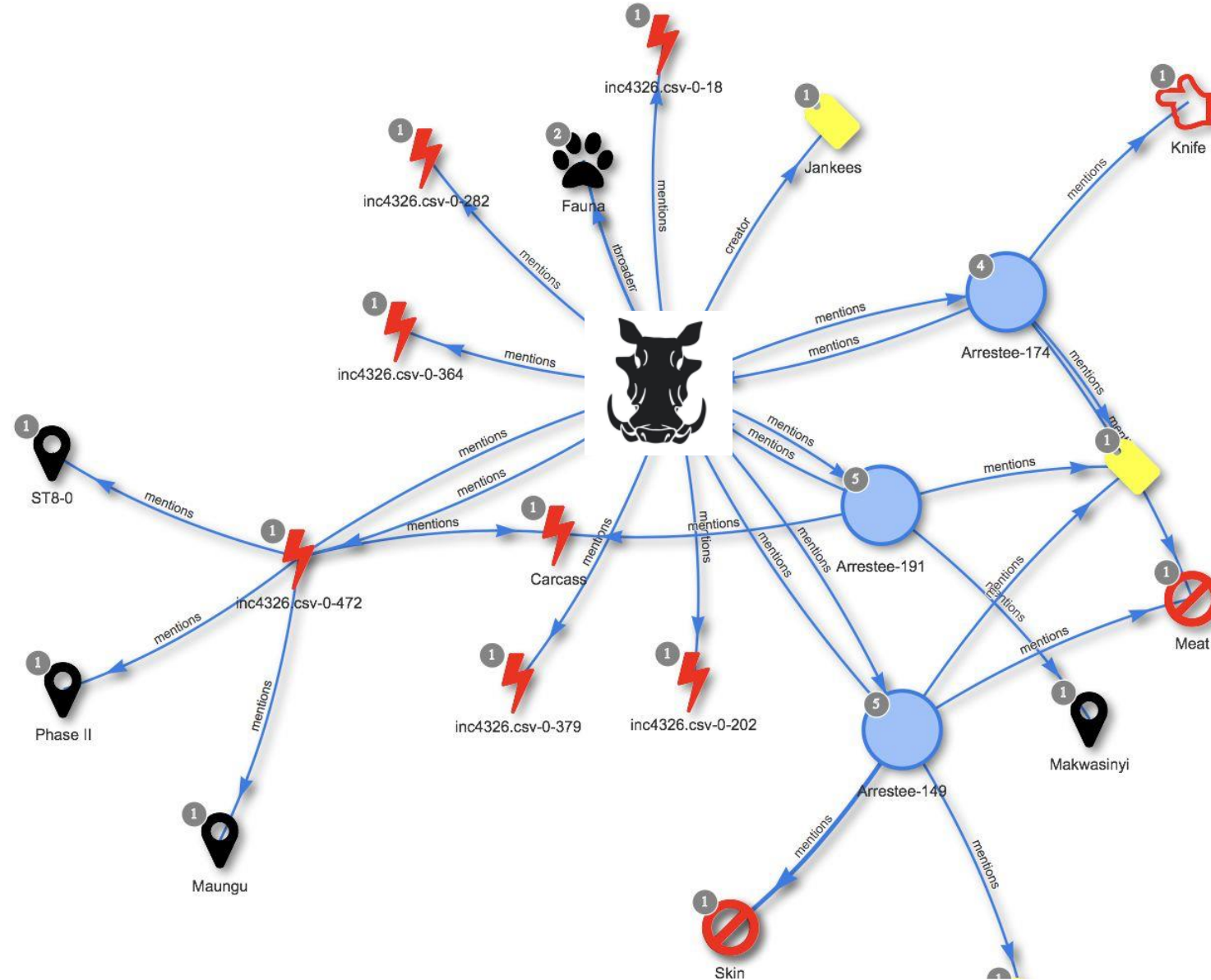
The map shows a geographical area with numerous red pins. Labels on the map include 'Majego', 'Kaji', 'Rukanga', 'Mackinn Road', 'Taita Kwale County', and 'Kilibasi'. A copyright notice at the bottom reads: 'Copyright © 2018 MarkLogic Corporation. MARKLOGIC is a registered trademark of MarkLogic Corporation. Map data © 2018 Google. Terms of Use.'

content impression

Elephants killed by arrow vs firearms



Warthog bycatch of charcoalers?

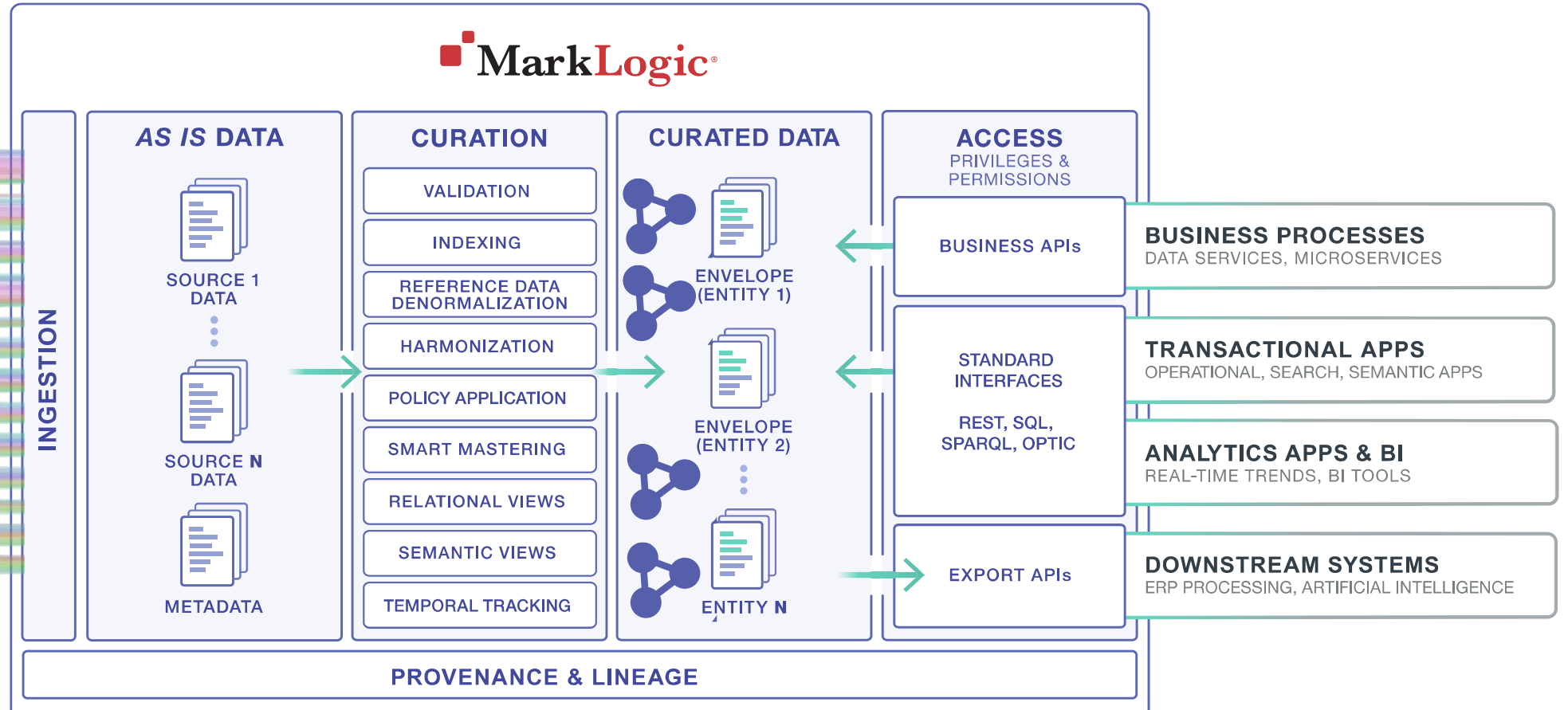


That's Smart Content!



ENTERPRISE ARCHITECTURE PATTERN

MarkLogic Operational Data Hub



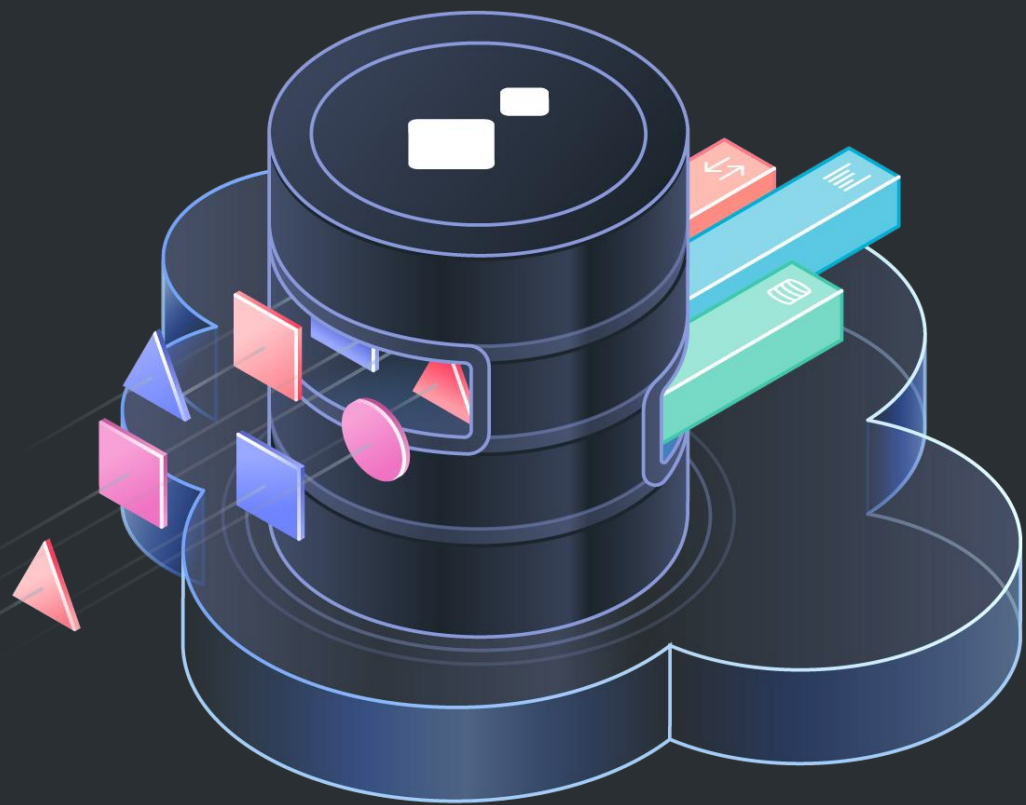


MarkLogic Media Solutions

Media Data Hub helps you:

- Create Great Experiences
- Lead the Digital Transformation

DATA FIRST • CLOUD READY • SECURE



Data Hub Service

Cloud service that deploys in
minutes with predictable, low cost



Join Our Community!



MEDIA COMMUNITY

www.marklogic.com/solutions/industry/media/community/

MEDIA SOLUTIONS

www.marklogic.com/solutions/industry/media/

TruFan Preview

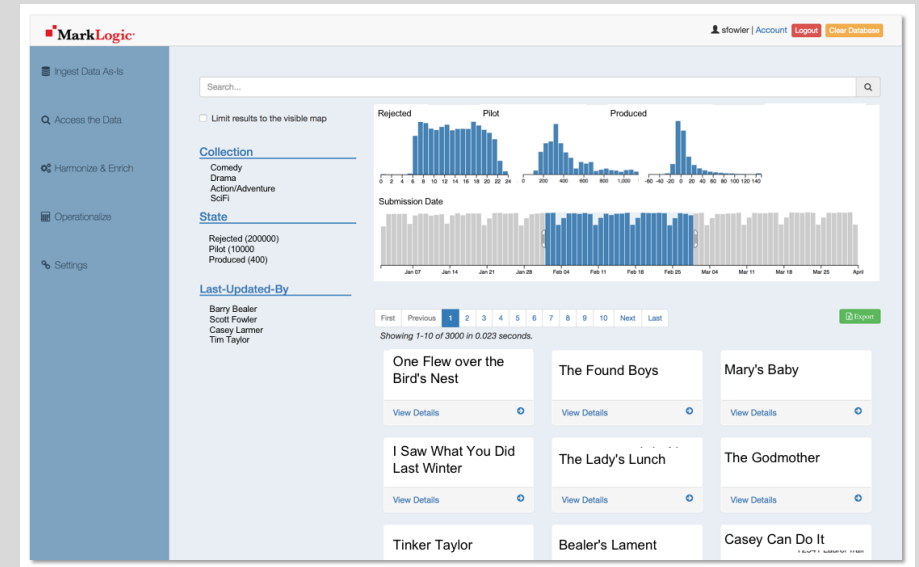
Enterprise Audience Insights

Better know your content and fans

From Birlasoft, powered by MarkLogic

TruFan

Enterprise Audience Insights



birlasoft
CK BIRLA GROUP

MarkLogic™

DESCRIPTIVE INDEXING Time-based Metadata

Describing content at a granular level



Webinar: Sony Pictures: Driving Value with Descriptive Metadata

Jason Lambert and the MarkLogic Crew!

July 31st 11am PDT

<https://www.marklogic.com/events/sony-pictures-driving-value-with-descriptive-metadata/>

Sony Pictures Entertainment

The Village Well Search admin Logout

Studio Label: "I love you" Catalog Search Search Clear

Columbia Pictures (15)

Release Year: 2010s (4), 2000s (10), 1990s (1)

Genre: Drama (9), Comedy (4), Action (2), ... More

Director: Marc Lawrence (2), Marc Webb (2), Nora Ephron (2), Paul Weiland (2), Peter Segal (2), ... More

Theme: Dating (231), Love (212), Friendship (206), Family (174), Search...

Tone: Funny (1100), Dramatic (918), Tense (602), Exciting (264), Search...

Actors: Adam Sandler (825), Will Smith (739), Milla Jovovich (599), Julia Roberts (580), Search...

Talent Category: A, B, C

Character Types: Friends (131), Doctors (77), Police Officers (75), Fathers (68), Search...

Actions: Explaining (464), Questioning (349), Laughing (336), Smiling (261), Search...

Objects: Cars (209), City Streets (159), Windows (135), Tables (126), Search...

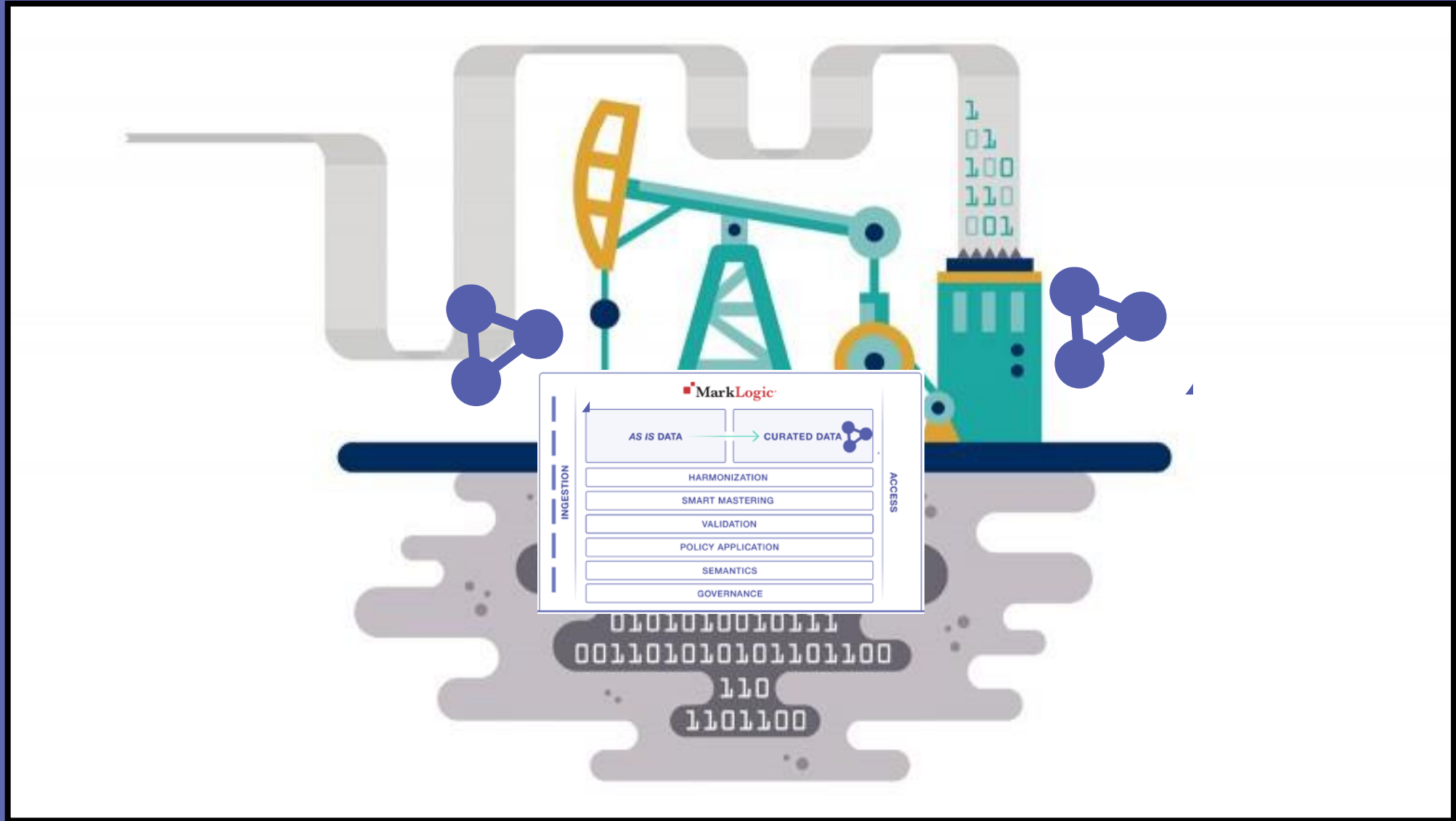
Emotions: Confused (403), Happy (323), Upset (315), Worried (272), Search...

Places: Offices (139), Houses (113), Bedrooms (92), Restaurants (75), Search...

Settings: New York City (275), San Francisco (128), Los Angeles (84), Chicago (81), Search...

Ad/Pub: Cleared (360960), Not Cleared (8301), Search...

Campaign IDs: 346678, 368890, 396753, 402233, Search...



Thank You!

Matt Turner, MarkLogic CTO Media & Manufacturing

@matt_turner_nyc

#MarkLogic

Resources

- Importance of Data
 - Integrated Publishing, Sven Fund: <https://onlinelibrary.wiley.com/doi/abs/10.1087/20130111>
 - Rich Data, Poor Data, Shelly Palmer: <https://www.shellypalmer.com/2016/05/rich-data-poor-data-data-rich-data-poor-data-middle-class-not/>
 - Industrialize your Data:, Michel de Ru: <https://www.slideshare.net/MicheldeRu/industrializing-data>
- Semantic Data Layer
 - **Alan Morrison Keynote -** https://www.slideshare.net/AlanMorrison/collapsing-the-it-stack-clearing-a-path-for-ai-adoption?from_action=save
 - Plus recording of the talk (+18min) -> <https://www.facebook.com/fhstp/videos/308669336596727/>
 - Why Ontology – Kurt Kagel - <https://www.forbes.com/sites/cognitiveworld/2018/07/20/why-ontology-will-be-a-big-word-in-your-companys-future/>
 - AI + Graph: <https://www.zdnet.com/article/google-ponders-the-shortcomings-of-machine-learning/>
 - Pre-print article: <https://arxiv.org/abs/1806.01261>
- Semantics Primer: <http://www.cambridgesemantics.com/semantic-university/what-is-linked-data>
- Sensing Clues: <https://sensingclues.com/>
- ABM Amro + Sensing Clues at MarkLogic 360: <https://www.youtube.com/watch?v=RzJymikvrKs>
- Mitchell1 Webinar: <https://www.marklogic.com/resources/mitchell1s-celebrates-century-success-connecting-customers-data/>
- Dogs and Chimps
 - Pointing Study: https://doglab.shh.mpg.de/pdf/Scheider_et_al_2013_interpret_pointing_as_a_command.pdf
 - Who's Smarter, Matt Turner: <https://www.marklogic.com/blog/dog-chimp/>