

Semantic Web: The next frontier

Christian Dirschl

Chief Content Architect

Stuttgart, 11.11.2016 – Alaaf!

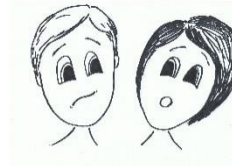
Decorative wavy lines in grey and orange colors, flowing from the left side of the slide towards the center, underlining the word "ALIGNED".

ALIGNED

Software and Data Engineering

Agenda

- Motivation



- Wolters Kluwer



- Semantic Web für Verlage

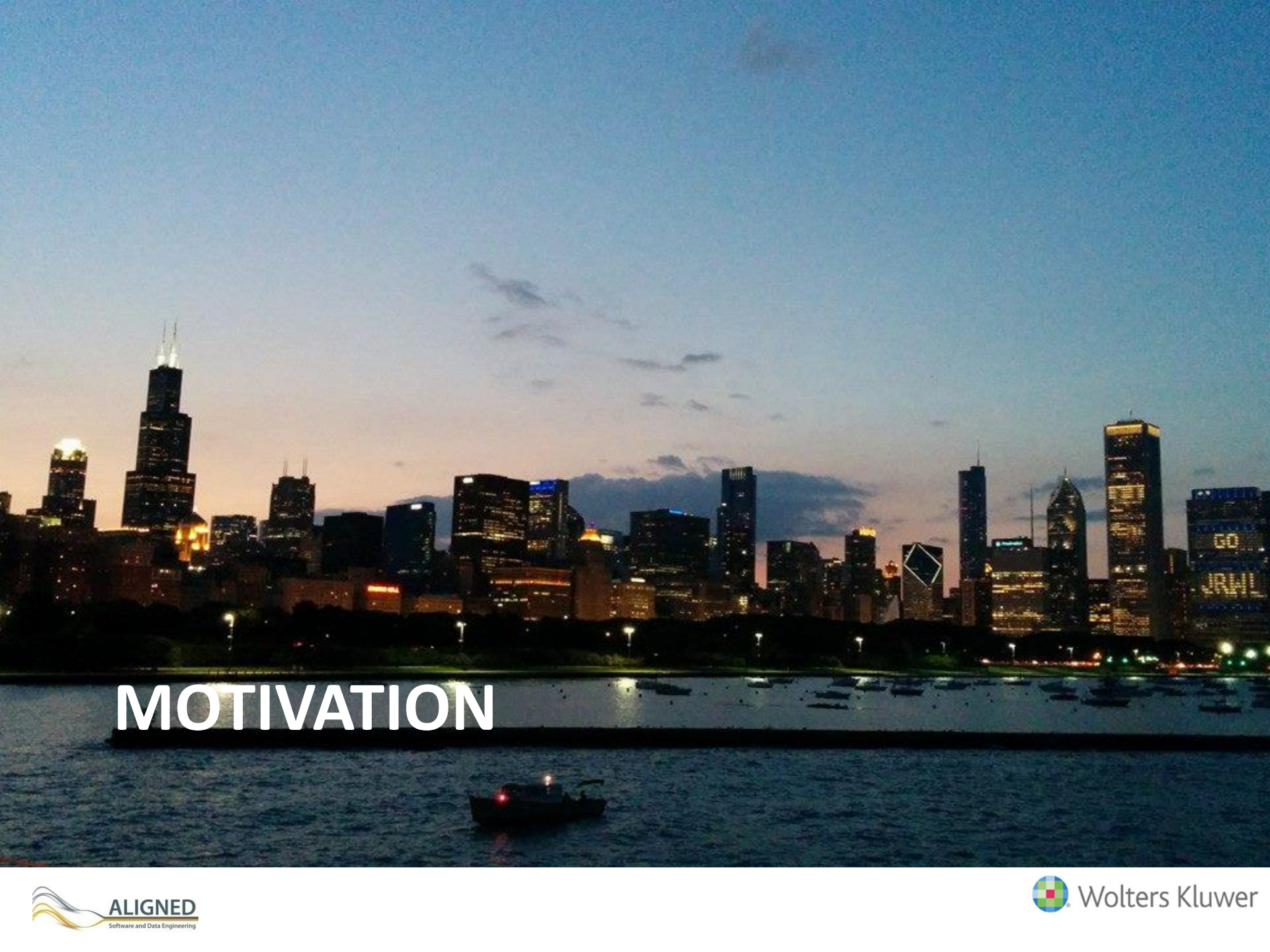


- Business Impact



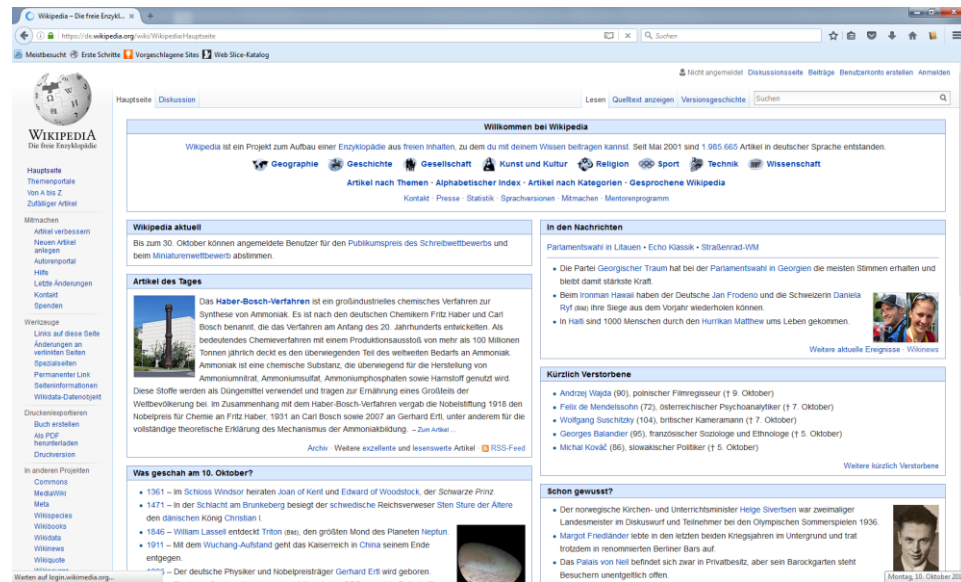
- Zusammenfassung



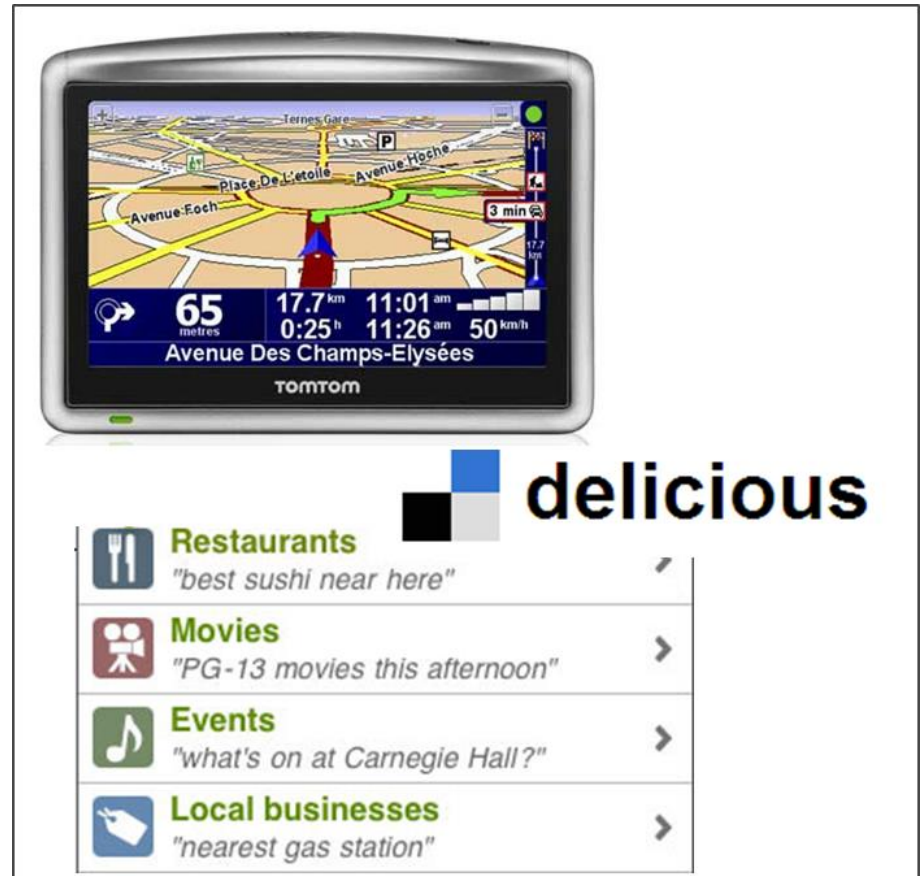
A wide-angle photograph of the Chicago skyline at dusk. The sky is a deep blue with some light clouds. The city lights are on, and the buildings are silhouetted against the dark sky. The water in the foreground is dark, with a few small boats visible. The word "MOTIVATION" is written in large, white, sans-serif capital letters across the middle of the image.

MOTIVATION

Geschichte des Wandels



Geschichte des Wandels



Telefonbücher

Herausforderungen

Social Media

AI

Big Data

Open Access
Open Source
Open Data

Lösungen

Social Media

AI

Big Data

Open Access
Open Source
Open Data

Lösungen

*Language Technology, Data Analytics,
Deep Learning, Artificial Intelligence,
Roboterjournalismus, BI*

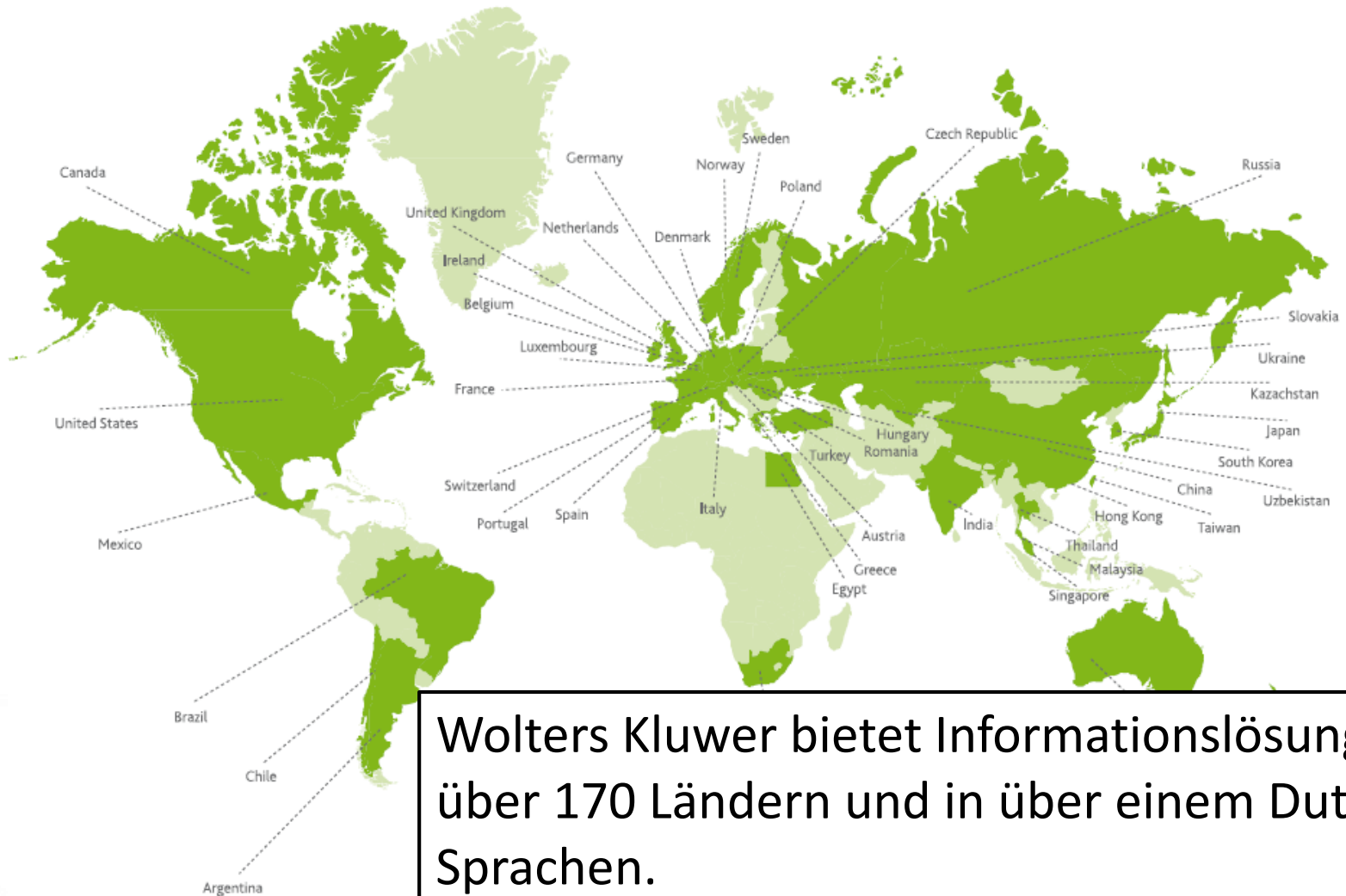
A wide-angle photograph of the Chicago skyline at dusk. The sky is a deep blue with some light clouds. The city's lights are on, and the water in the foreground is dark with some small boats. The text 'WOLTERS KLUWER' is overlaid in white, bold, sans-serif font.

WOLTERS KLUWER

Wolters Kluwer

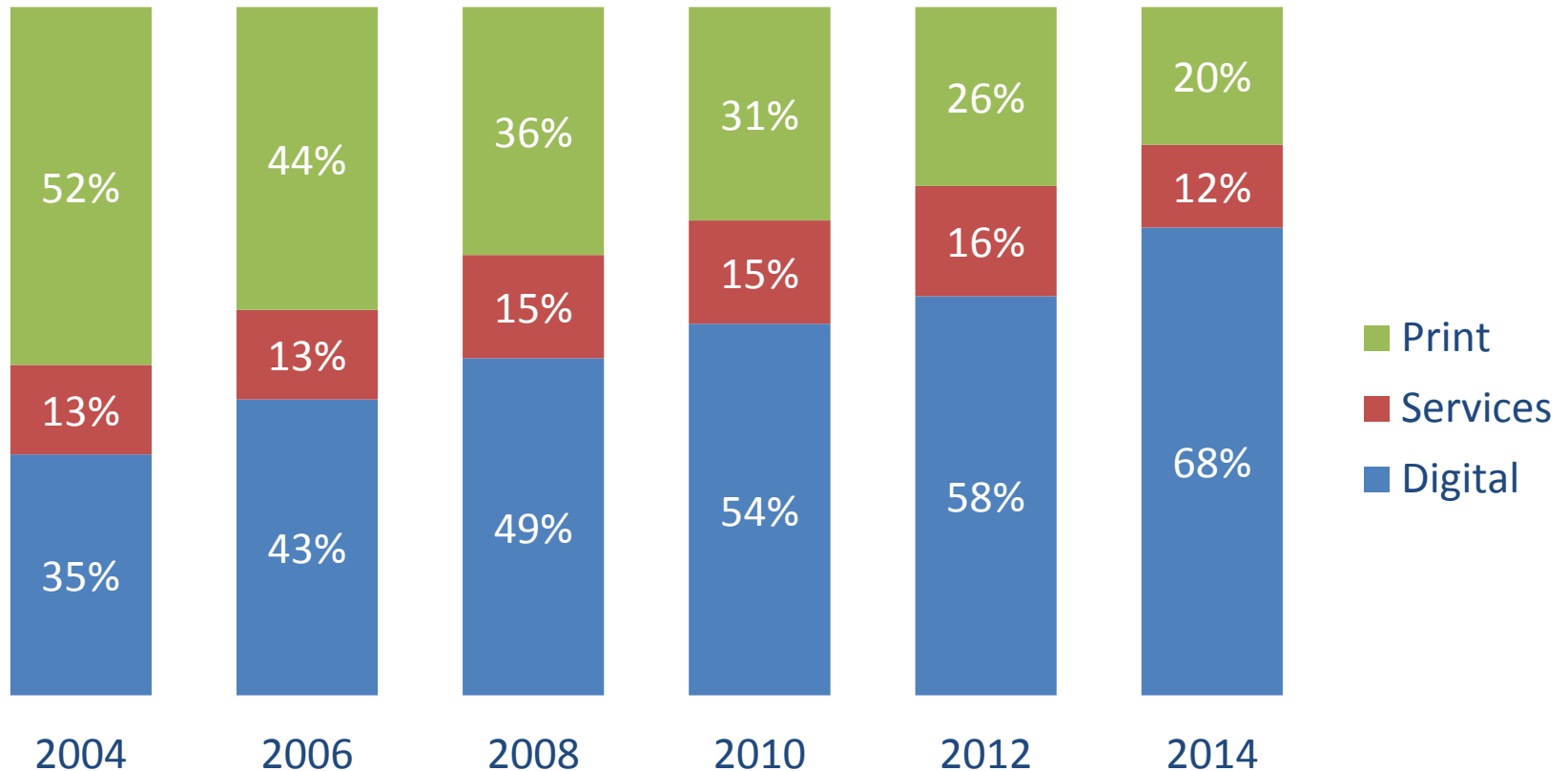


Wolters Kluwer

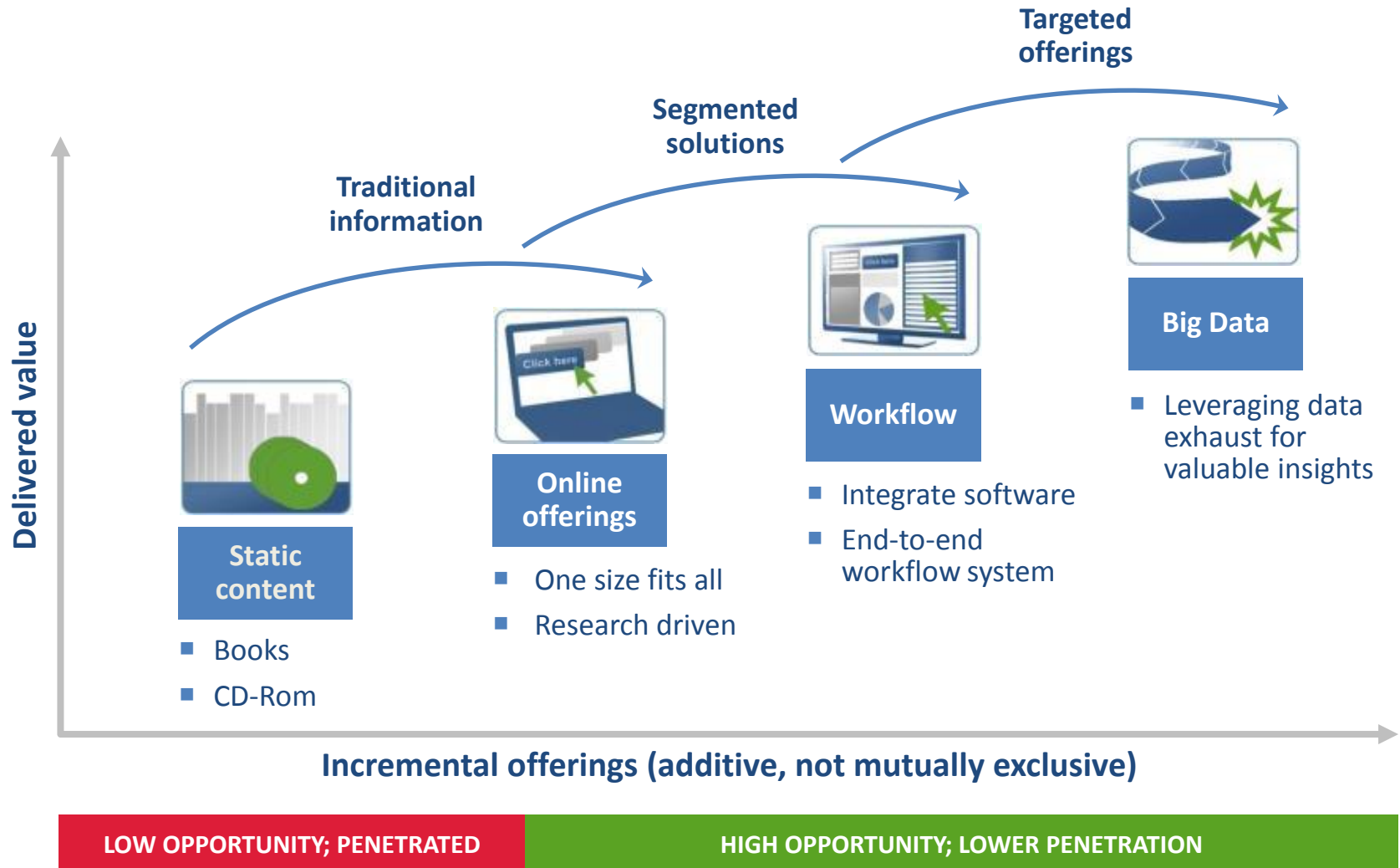


Wolters Kluwer bietet Informationslösungen in über 170 Ländern und in über einem Dutzend Sprachen.

Wolters Kluwer Transformation



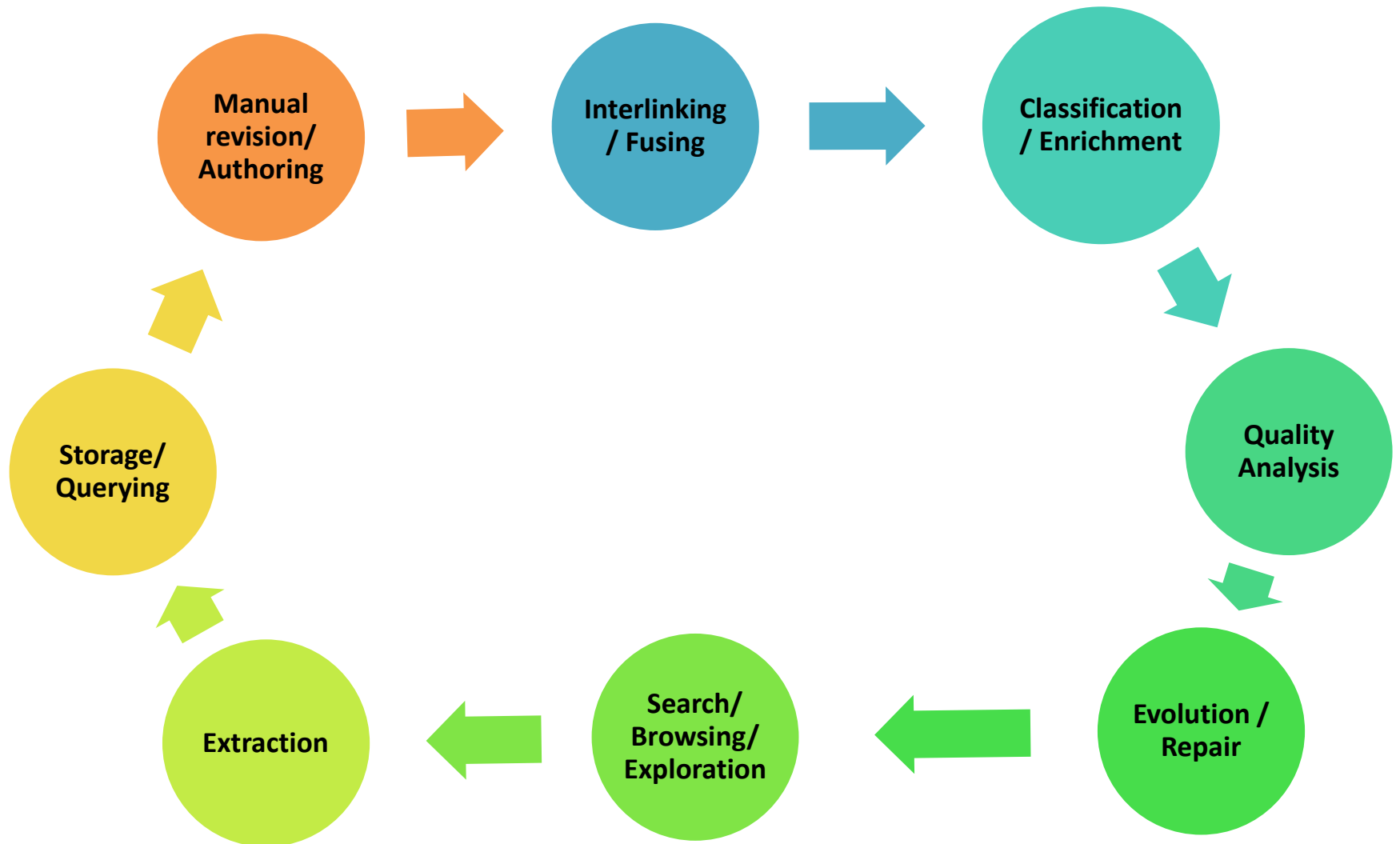
Wolters Kluwer Transformation



A wide-angle photograph of the Chicago skyline at dusk. The city's lights are on, and the sky is a deep blue. The water in the foreground is dark, with a small boat visible. The title 'SEMANTIC WEB FÜR VERLAGE' is overlaid in white text.

SEMANTIC WEB FÜR VERLAGE

Linked Data Lifecycle



LOD2 consortium



Creating Knowledge out of Interlinked Data



LOD2 Fact Sheet

Consortium – 15 Partners from 11 European Countries + 1 Associated Partner from Korea

Universität Leipzig (Coordinator), Germany	Centrum Wiskunde & Informatica, Netherlands	National University of Ireland in Galway, Ireland
Freie Universität Berlin/Universität Mannheim, Germany	OpenLink Software, United Kingdom	Semantic Web Company, Austria
TenForce, Belgium	Exalead, France	Wolters Kluwer Deutschland, Germany
Open Knowledge Foundation, United Kingdom	Vysoká Škola Ekonomická v Praze, Czech Republic	Zemanta d.o.o., Slovenia
Instytut Informatyki Gospodarczej, Poland	Instytut Mihajlo Pupin, Serbia	Korea Advanced Institute of Science and Technology, South Korea

UNIVERSITÄT LEIPZIG

Zemanta



exalead
connect the dots

TenForce
Progressive Knowledge Management



SEMANTIC WEB COMPANY
school • consulting • projects • events • media

Freie Universität Berlin

MP
institute MIHAJLO PUPIN



OPENLINK
SOFTWARE

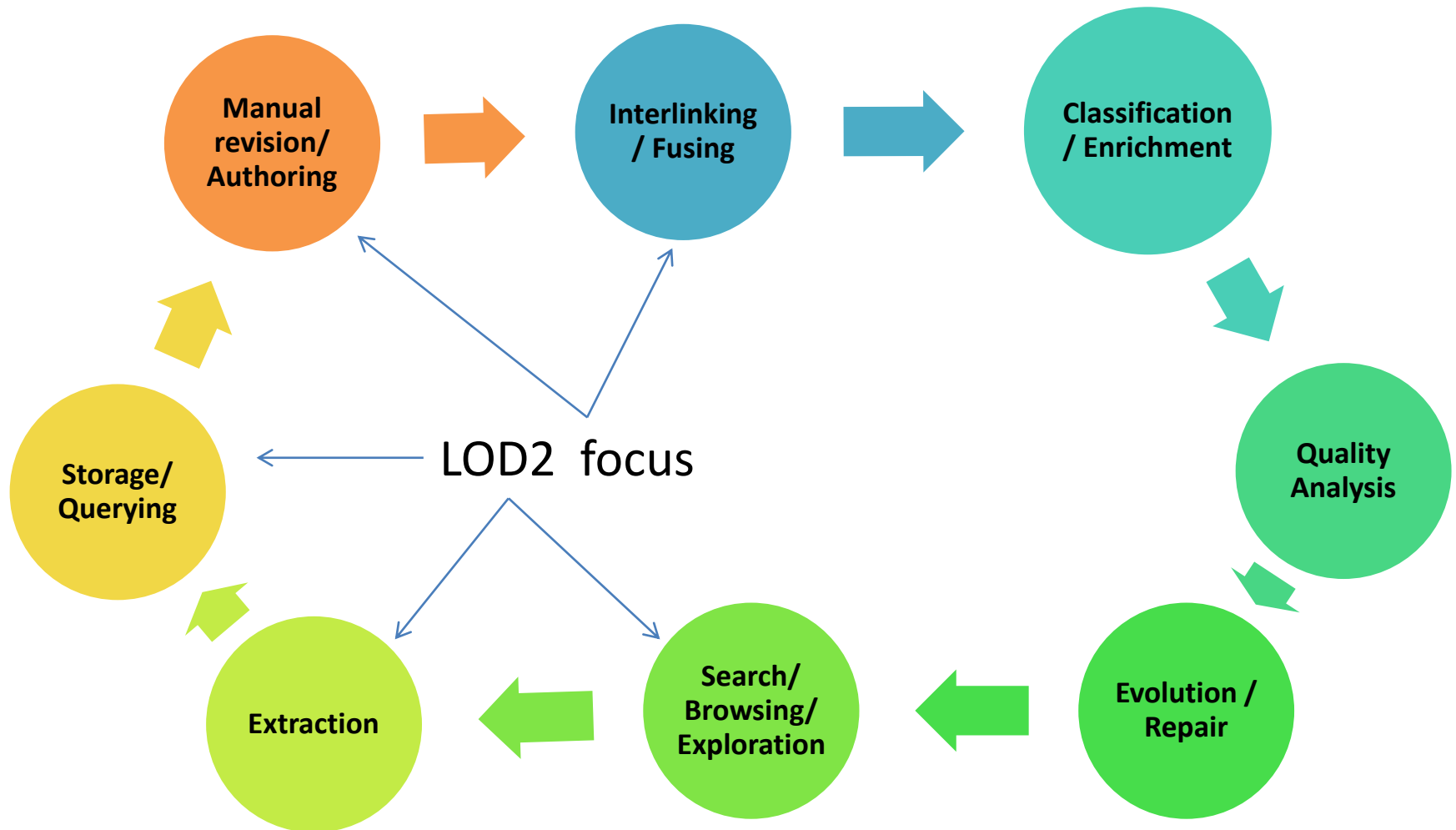
UNIVERSITÄT
MANNHEIM

Wolters Kluwer
Deutschland

KAIST

CWI

Linked Data Lifecycle



Thesaurus backbone

The screenshot displays the PoolParty Thesaurus Manager web application. The left sidebar shows a hierarchical tree of the 'WKD - Thesaurus' with categories like 'Arbeitsrecht' and 'Sozialrecht'. The main area shows the details for the concept 'Arbeitssicherheit & betriebliche Unfallverhütung'. The interface includes a top navigation bar with 'PROJECT', 'CORPORA', 'TOOLS', and 'OPTIONS' tabs, and a search bar. The concept details are organized into several sections:

- Details:** Includes tabs for 'Notes', 'Documents', 'Linked Data', 'Triples', 'Visualization', 'Quality Report', and 'History'.
- SKOS:** Includes tabs for 'SKOS-XL', 'wkd', 'Document', 'Project', 'Comment', and 'DCTERMS'.
- Relations:** A central section with three panels:
 - Broader Concepts:** Lists 'Arbeitsschutz' as a broader concept.
 - Narrower Concepts:** Lists 'betriebliche Unfallverhütung' and 'Arbeitssicherheit' as narrower concepts.
 - Related Concepts:** Lists related concepts.
- Preferred Label:** Shows the preferred label 'Arbeitssicherheit & betriebliche Unfallverhütung' in German (de) and English (en).
- Alternative Labels:** Lists alternative labels in German (de) and English (en), including 'Arbeitsunfallverhütung', 'Schutz vor arbeitsbedingten Gesundheitsgefährdungen', 'Schutz vor arbeitsbedingten Sicherheitsgefährdungen', 'Unfallverhütungsvorschrift', 'Arbeitsschutz', 'Maßnahme zur Verhütung von Arbeitsunfällen', and 'Arbeitnehmerschutz'.
- Hidden Labels:** Lists hidden labels in German (de) and English (en).
- Scope Notes:** Lists scope notes in German (de) and English (en).
- Definitions:** Lists definitions in German (de) and English (en).



Creating Knowledge out of Interlink

LOD2 Open

<http://link.springer.com/book/10.1007%2F978-3-319-09846-3>

State-of-the-Art
Survey

LNCS 8661

Sören Auer
Volha Bryl
Sebastian Tramp (Eds.)

Linked Open Data – Creating Knowledge Out of Interlinked Data

Results of the LOD2 Project



 Springer Open



ALIGNED

Software and Data Engineering



Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin



UNIVERSITÄT LEIPZIG

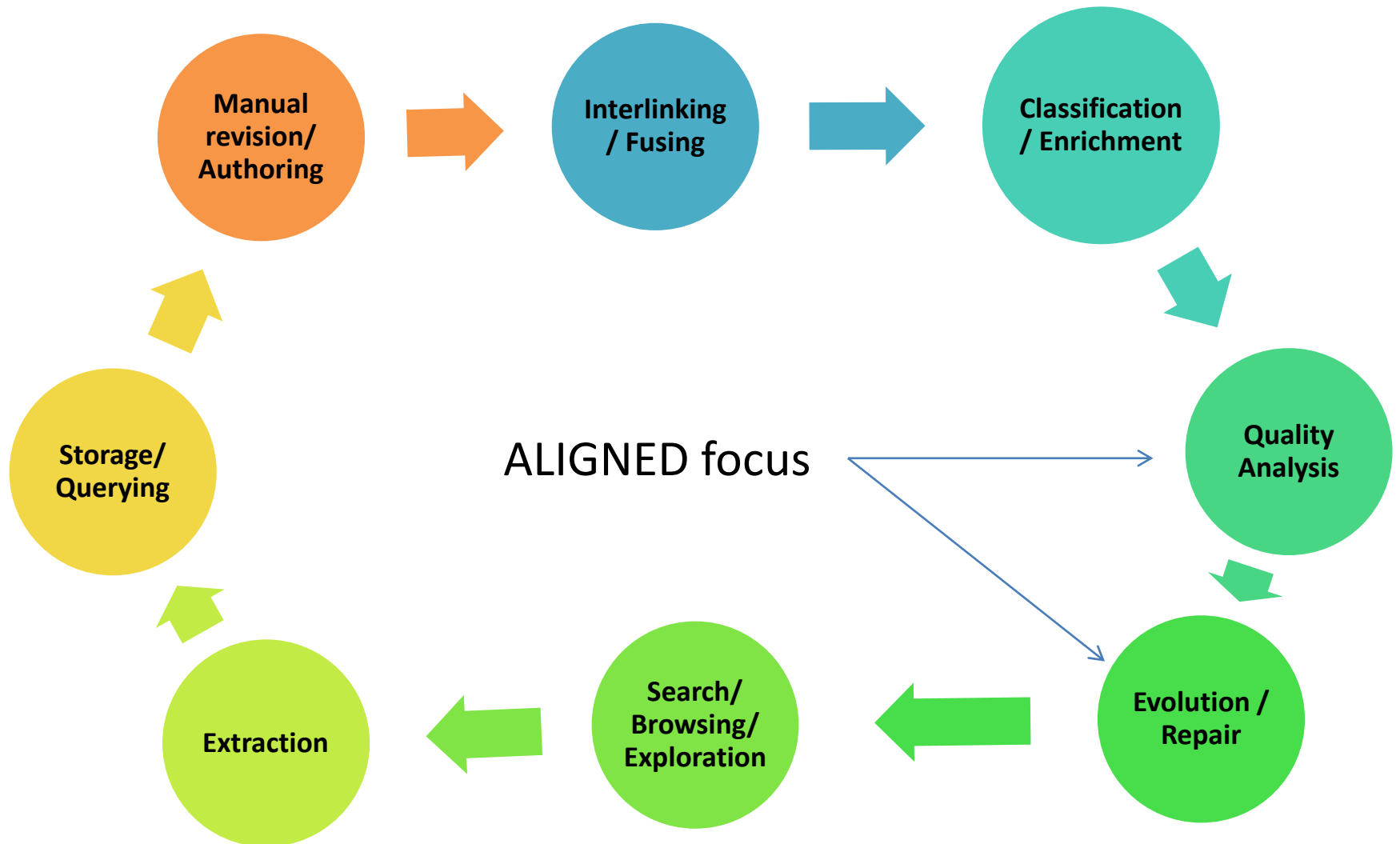


Wolters Kluwer



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 644055.
This communication reflects only the author's view and the Commission is not responsible for any use that may be made of the information it contains.

ALIGNED content lifecycle



ALIGNED Consultancy service



ALIGNED
Software and Data Engineering

[News](#) [About Us](#) [Publications](#) [Training](#) [Tools](#) [Data and Models](#) [Contact](#) [Consultancy](#)

Free Consultancy for Businesses

Find out more!



Latest News

SEMANTICS Conference Call for Papers

May 4, 2016

SEMANTICS 2016, which will take place from 12-15 September at Leipzig University in Germany, has issued five calls for papers. [Continue reading →](#)

ALIGNED at Tech Week Ireland

April 29, 2016

ALIGNED was at the Royal Dublin Society for the Tech Week Showcase on 28 April. [Continue reading →](#)

ALIGNED Expert Curation Tools Video

ALIGNED Consultancy Program – Opportunities

The ALIGNED consortium wants to work with your business to manage the complexity of large-scale, software and data engineering to build data intensive web systems. If your business works in or is entering the domain of Linked Data applications, then we invite you to apply for the ALIGNED Consultancy Program.

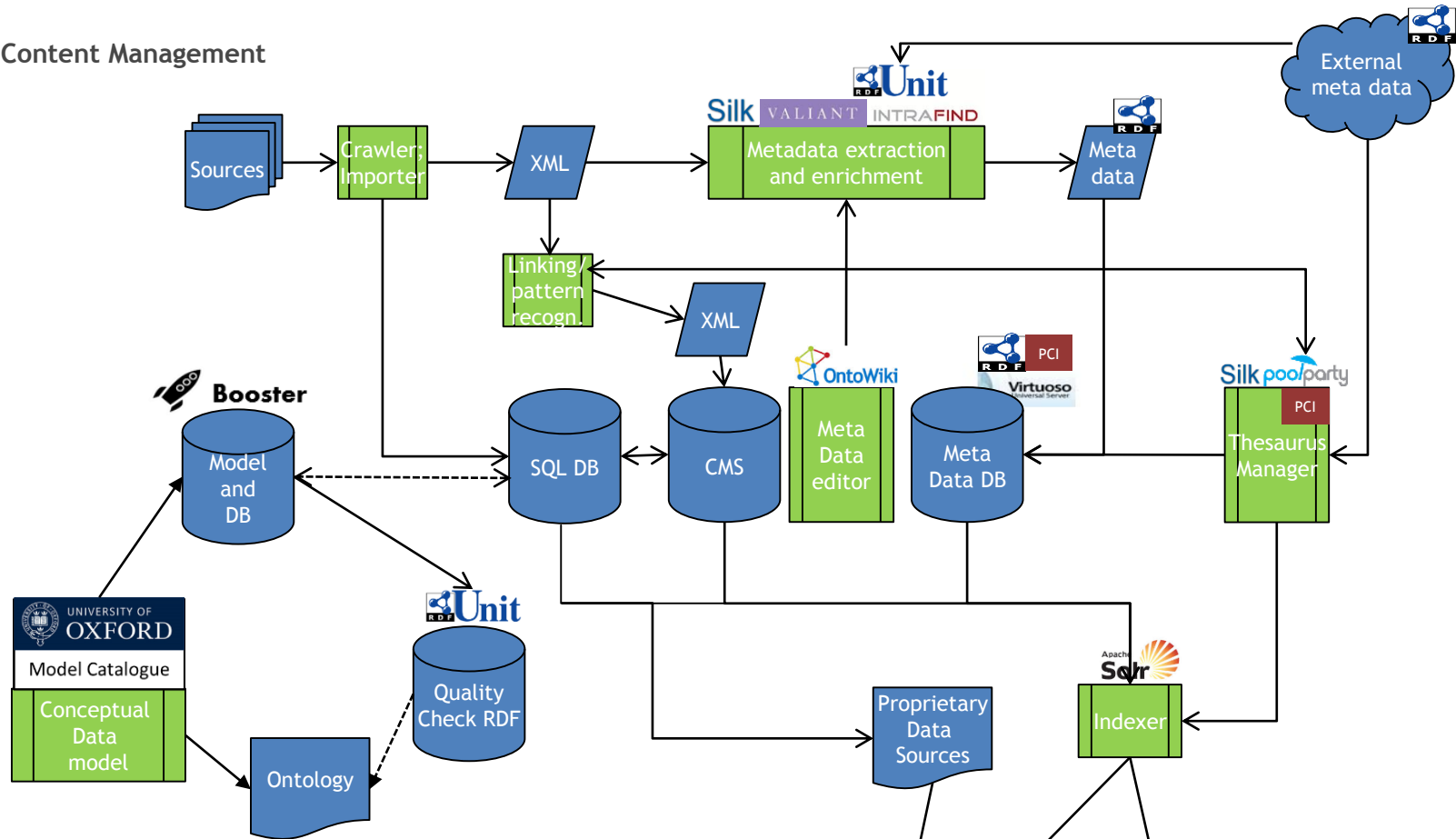
Who This Is For

- Do you need increased agility and productivity for building data-intensive applications?
- Do you want to reduce the effort to produce and maintain high quality data?
- Are you struggling with developing a system based on independent software and data engineering teams?
- Are you seeking new methods to integrate Linked Data into your applications?
- Do you have large datasets that need curation?

<http://aligned-project.eu/aligned-consultancy-program-opportunities/>

JURION Content Pipeline and semantic search

Content Management



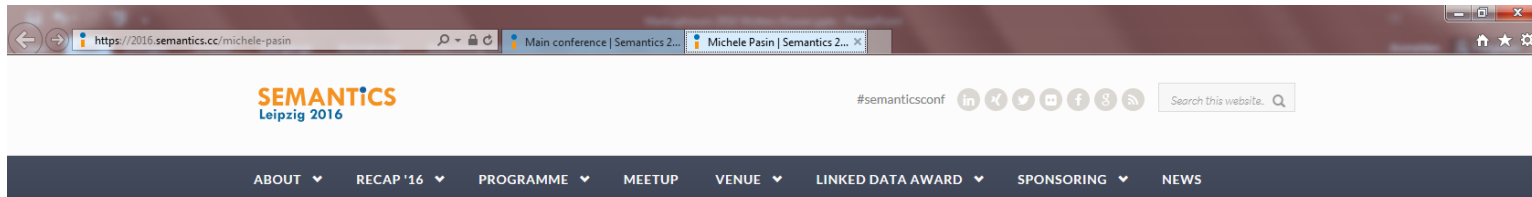
Retrieval/Search/Application



A wide-angle photograph of the Chicago skyline at dusk. The sky is a deep blue with some light clouds. The city's lights are on, and the buildings are silhouetted against the twilight. The water in the foreground is dark, with a few small boats visible. The text "WAS IST SONST NOCH LOS?" is overlaid in white, bold, sans-serif font across the middle of the image.

WAS IST SONST NOCH LOS?

Springer Nature



[Home](#) / [Michele Pasin](#)

Michele Pasin

Keynote

Linked data experience at Springer Nature

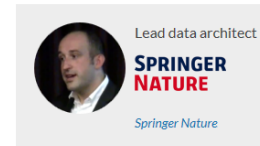
Building discovery services for scientific and scholarly content on top of a semantic data model

This talk provides a summary and reflection on how we think that Semantic Technologies are an effective way to do enterprise metadata management at web scale – essentially, being able to bring some order to the chaos resulting from multiple applications working on similar data domains.

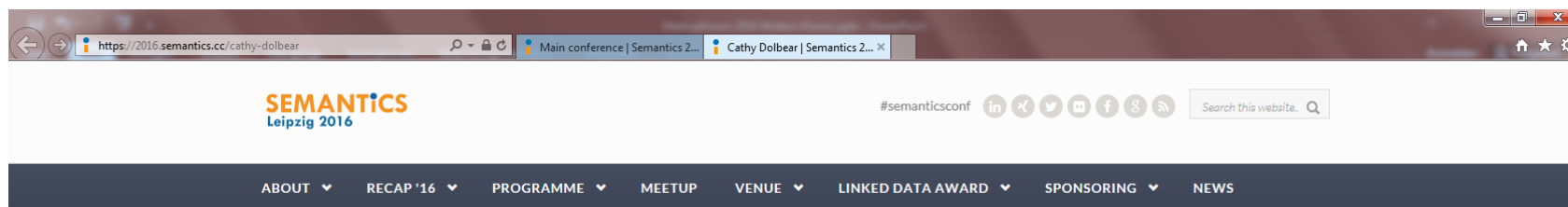
Springer Nature is a leading publisher the Science & Scholarly area, which includes flagship journals like Nature and Scientific American, several titles under the Nature and Nature Reviews brands, plus several other products such as the Springer Book collections, Springer Journals and Springer Corporate Databases. It's a very diversified scenario which includes more than 3000 journals plus of course many other publication types like books, blogs or podcasts.

As a result of the digital revolution and the internet, new products are being created at a much faster rate than it has ever happened before – which has led the company in the last years to recognize the need to develop an integration layer that can bring together data from any of the applications that power the specific products we have on offer. In particular, we need interoperability both at the level of naming conventions – so to facilitate communication within the enterprise when people talk about articles or subject areas – and at a more formal semantic level, via a shared metadata model implemented as a set of ontologies.

To this end, we have been using Semantic and Linked Data technologies since 2012, when we launched a prototype open platform called data.nature.com. Subsequently, we have been working on various other projects including the nature ontologies portal (<http://www.nature.com/ontologies>, 2015) and the springer conferences portal (<http://lod.springer.com>, 2015). More generally, our focus has increasingly shifted from external data publishing to our internal systems – in particular we aimed at creating an architecture where RDF is core to the publishing workflow as much as XML is. In this talk we would like to provide an overview of this exciting and interesting journey, which is now taking us to the creation of a new platform that combines content, science and people data from across Springer Nature and that will be launched in late 2016.



Oxford University Press



[Home](#) / [Cathy Dolbear](#)

Cathy Dolbear

[Keynote](#)

Enriching Content with User Data and Semantic Information

Oxford University Press, a department of the University of Oxford, has been developing semantic enrichment capabilities over a number of years, to improve the management and usage of our books, journals and dictionary content.

This talk is about how we're combining human-authored semantic information with semantic tags and taxonomy classifications automatically extracted from our content. I'll touch on the requirements we have as a user of text mining applications and cover our learning experiences of implementing schema.org markup on our sites.

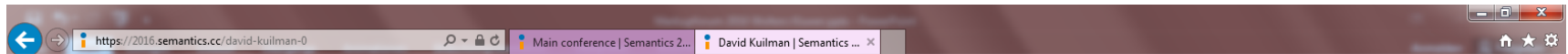
I'll also introduce the Oxford Global Languages project, which links lexical information from multiple global and also digitally under-represented languages such as isiZulu and Urdu in a triple store. The strong community involvement allows users who are native speakers of those languages to contribute to the dictionaries, building up a better interlinking of all languages which can then be accessed via an API, to be publicly launched this autumn.

CV

Cathy Dolbear is currently a Senior Link Architect at Oxford University Press, working on the semantic enrichment of journals and book content, for linking, search and SEO. She is interested in the intersection between semantic, content, product and user data and how linked data paradigms can support their management. She holds a DPhil in Information Engineering from the University of Oxford, is the author of the book "Linked Data: A geographic perspective", and holds several patents in personalisation and multimedia technologies. She previously worked as a research scientist investigating geospatial semantics and geographical linked data at Ordnance Survey, and has held roles in multimedia applications research at Motorola and Sharp Labs.



Elsevier



SEMANTICS
Leipzig 2016

#semanticsconf



Search this website.

[ABOUT](#) ▾

[RECAP '16](#) ▾

[PROGRAMME](#) ▾

[MEETUP](#)

[VENUE](#) ▾

[LINKED DATA AWARD](#) ▾

[SPONSORING](#) ▾

[NEWS](#)

[Home](#) / [David Kuilman](#)

David Kuilman

Industry

Creating a Semantic Enterprise Content model to support continuous content acquisition, coverage and utility

Elsevier – a global scientific publisher – is leading the way in advancing science, technology and health. Core to this strategy is the continuous priority to develop content that covers more domains, show increased quality, offer more features and integrates better with analytics and technology. The goal is to move from content based products and services to answer based services that help customers make better decisions, discoveries, experiments and treatments. To support this strategy, Elsevier has designed an enterprise content model in an evolutionary way that not only covers the existing base of scientific literature, but also allows the adoption of new content and data classes like patents, grants, research data and adaptive learning content.

CV

Experienced in content modeling and content-centric processes for many lines of business: b2b publishing, industry, education and governmental organisations. Active member of SGML/XML community since 1995. Member of XML Holland board in 2004-2008. Experience gained in content projects in the role of developer, consultant, project manager and business executive. Always interested in complex, content centric change management projects that require non-trivial technical solutions coupled to a no-nonsense focus on business execution.



BBC



Products Solutions Knowledge Hub Company Contact Blog

Ontotext > Company > Customers > BBC: Dynamic Semantic Publishing FIFA World Cup Web Site

BBC: Dynamic Semantic Publishing FIFA World Cup Web Site



YES, I WANT TO USE DYNAMIC SEMANTIC PUBLISHING

Key Performance Indicators

- ▶ 800+ Dynamic aggregations/pages (Player, Team, Group, etc.), generated through SPARQL queries
- ▶ Average unique page requests/day: 2 million
- ▶ Average SPARQL queries/day: 1 million
- ▶ 100s repository updates/inserts per minute with OWL 2 RL reasoning
- ▶ Multi data center fully resilient, clustered 6 node triplestore

Implementation

BBC used Ontotext technology to deliver a new approach to publish and manage their content. An approach described as revolutionary by their Chief Architect, John O'Donovan who has recently been appointed as CTO of the Financial Times. Initially, Ontotext technology was used to deliver dynamic content for their World Cup site, which already had more index pages the rest of the BBC Sports website. Since that initial success, different divisions of the organization have adopted this approach for their own content.

This has culminated with the development of the BBC's Linked Data Platform in January 2013. With Ontotext technology at its heart, the Linked Data Platform will spread dynamic semantic publishing across the organization.

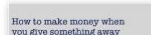
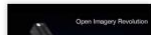
BBC's 2010 World Cup website was the first project running on its Dynamic Semantic Publishing architecture and was deemed a

Thomson Reuters

The screenshot shows a web browser window with the Scribd logo and navigation links (BROWSE, Search, UPLOAD, Sign In, Join). The address bar shows the URL: <https://de.scribd.com/document/288608104/Creating-the-Thomson-1>. The document viewer displays a presentation slide with a background image of cobblestones. The slide content includes:

- Search document: [input field]
- 1 of 27
- Image of cobblestones
- REUTERS/Thomas Peter
- CREATING THE THOMSON REUTERS KNOWLEDGE GRAPH AND OPEN PERMID**
- DR. DANIEL A. SMITH, SENIOR DEVELOPER, CORPORATE TECHNOLOGY
- @DrDanielASmith
- ODI SUMMIT
3 NOVEMBER 2015
- the answer company
THOMSON REUTERS

Documents similar to Creating the Thomson Reuters knowledge graph and open permID - ODI Summit 2015



A wide-angle photograph of the Chicago skyline at dusk. The sky is a deep blue with some light clouds. The city lights are on, and the Willis Tower is prominent on the left. The water in the foreground is dark, with a few small boats visible. The text "UND JETZT?" is overlaid in the center.

UND JETZT?

Zusammenfassung

Do's

- Bauen Sie auf Standards
- Nutzen Sie vorhandene open source software
- Tun Sie sich mit einem Großen zusammen

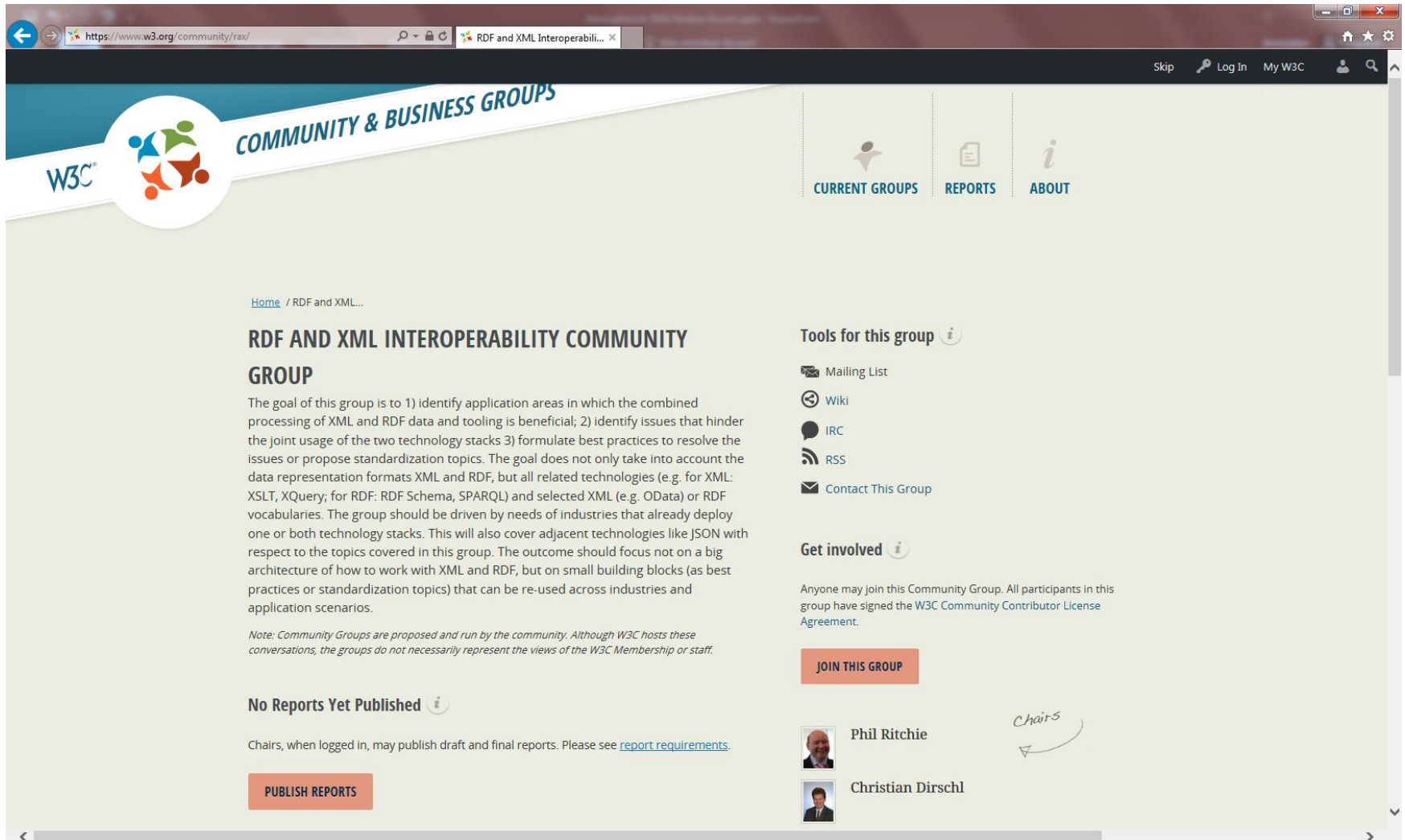
Don'ts

- Versuchen Sie nicht den großen Wurf
- Verharren Sie nicht in der Schockstarre
- Unterschätzen Sie nicht die Herausforderung

Community

- Nutzen Sie den ALIGNED Consultancy Service
- Nutzen Sie offene Daten und offene Standards
- Beteiligen Sie sich an Community efforts wie Semantic Web meetup München oder RAX

RAX Group



The screenshot shows the W3C RAX Group page. At the top, there's a navigation bar with the W3C logo and a banner for 'COMMUNITY & BUSINESS GROUPS'. Below this, there are three main sections: 'CURRENT GROUPS', 'REPORTS', and 'ABOUT'. The 'CURRENT GROUPS' section is active, showing the 'RDF AND XML INTEROPERABILITY COMMUNITY GROUP'. The page includes a detailed description of the group's goals, a list of tools for the group (Mailing List, Wiki, IRC, RSS, Contact This Group), and a 'Get involved' section. A 'JOIN THIS GROUP' button is prominently displayed. At the bottom, there's a section for 'No Reports Yet Published' with a 'PUBLISH REPORTS' button. The page also features a list of chairs, Phil Ritchie and Christian Dirschl, with a handwritten note 'Chairs' and an arrow pointing to them.

W3C[®] COMMUNITY & BUSINESS GROUPS

Home / RDF and XML...

RDF AND XML INTEROPERABILITY COMMUNITY GROUP

The goal of this group is to 1) identify application areas in which the combined processing of XML and RDF data and tooling is beneficial; 2) identify issues that hinder the joint usage of the two technology stacks 3) formulate best practices to resolve the issues or propose standardization topics. The goal does not only take into account the data representation formats XML and RDF, but all related technologies (e.g. for XML: XSLT, XQuery; for RDF: RDF Schema, SPARQL) and selected XML (e.g. OData) or RDF vocabularies. The group should be driven by needs of industries that already deploy one or both technology stacks. This will also cover adjacent technologies like JSON with respect to the topics covered in this group. The outcome should focus not on a big architecture of how to work with XML and RDF, but on small building blocks (as best practices or standardization topics) that can be re-used across industries and application scenarios.

Note: Community Groups are proposed and run by the community. Although W3C hosts these conversations, the groups do not necessarily represent the views of the W3C Membership or staff.

No Reports Yet Published

Chairs, when logged in, may publish draft and final reports. Please see [report requirements](#).

PUBLISH REPORTS

Tools for this group

- Mailing List
- Wiki
- IRC
- RSS
- Contact This Group

Get involved

Anyone may join this Community Group. All participants in this group have signed the W3C Community Contributor License Agreement.

JOIN THIS GROUP

Chairs

- Phil Ritchie
- Christian Dirschl



Christian Dirschl

Christian.dirschl@wolterskluwer.com

<http://solutions.wolterskluwer.com/blog/author/christian-dirschl/>



Jurion Plattform

<http://www.jurion.de>



ALIGNED Project

<http://aligned-project.eu>



BDVA Summit Valencia

<http://www.bdva.eu/?q=node/412>

