

Xml User Group Stuttgart Thieme/EBCONT

Thieme RadBase 2.0

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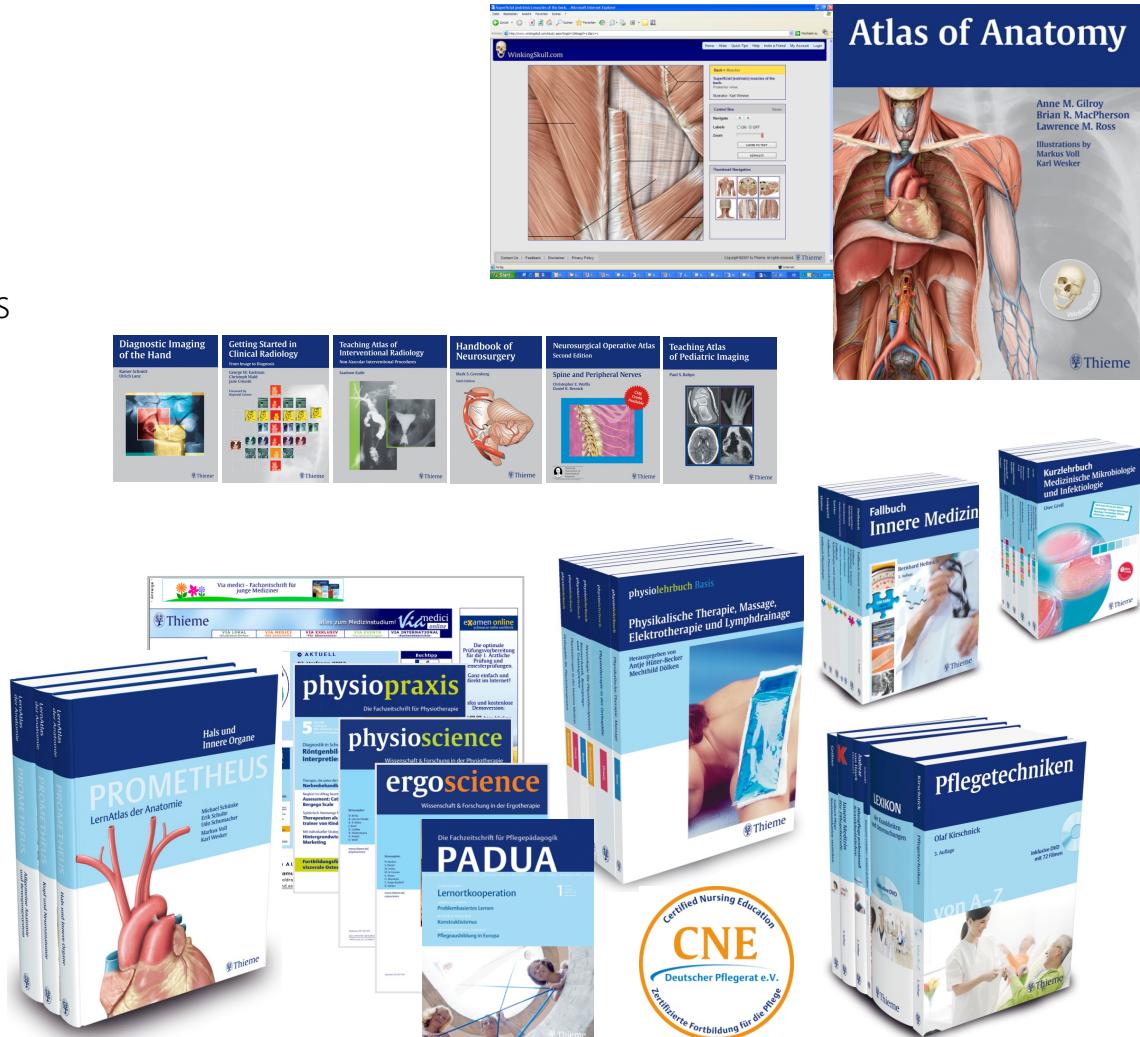
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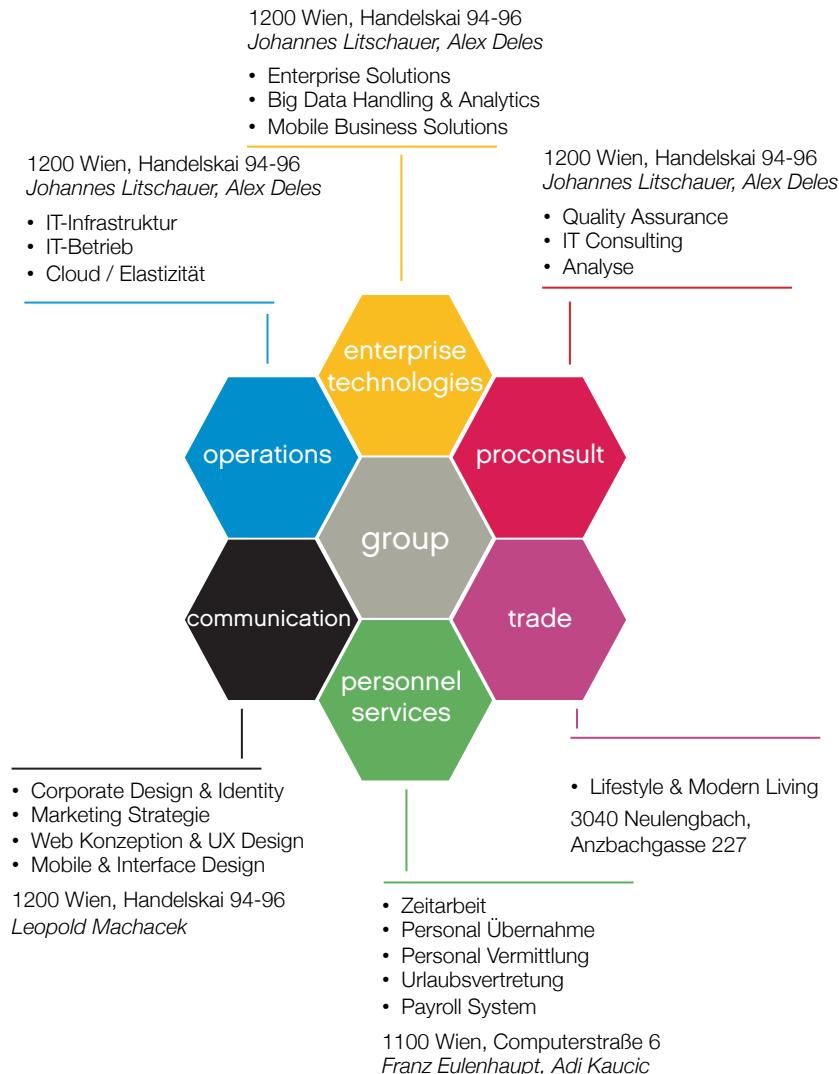
Introduction

Thieme Portfolio

- **4400+ deliverable books**
- **450 new releases per year**
- 140 journals
- Wide range of online products
 - Web
 - Mobile Apps
- 134 Mio. EUR turnover

- Branches in:
 - New York
 - Stuttgart
 - Dehli





Die EBCONT Unternehmensgruppe.

EBCONT ist ein führender österreichischer Anbieter in den Bereichen IT, Kommunikation und Personaldienstleistung. Von Rupert Weißenlehner im Jahr 2000 gegründet, ist das Unternehmen bis heute in privater Hand. Anfangs als reiner IT Dienstleister positioniert, entwickelte sich EBCONT in seinen ersten zehn Jahren zu einer Unternehmensgruppe mit kontinuierlichem Wachstum und guter Ertragslage.

Mitarbeiter **ca. 500**

Umsatz **47 Mio. Euro (2013, estimated)**

Gründer **Rupert Weißenlehner**

Fokus **IT, Kommunikation, Personaldienstleistung**

Stammkunden

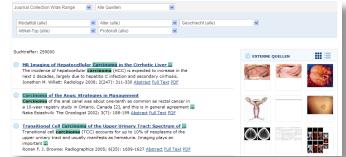
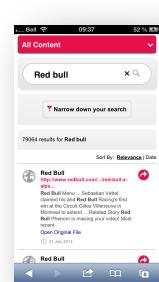

SIEMENS
FREQUENTIS

Partnerschaften



Kunden und Projekte.

Die Basis unseres Erfolges liegt in der professionellen Betreuung unserer Kundenprojekte. In den vergangenen Jahren haben wir es bei nahezu allen Kunden geschafft eine dauerhafte Beziehung aufzubauen, diese Kunden dürfen wir Bestandskunden nennen. Darüberhinaus ist es besonders erfreulich dass wir in den letzten Jahren jedes Jahr mindestens einen strategischen Neukunden gewinnen konnten (der in der Folge zu einem Bestandskunden wurde).



How did we get together?



- Thieme was an existing customer
- Consulting
- Successful projects beside MarkLogic
- MarkLogic came up as a new topic
- Both new to MarkLogic
- Some proof-of-concepts
- Starting point for EBCONT's MarkLogic Partnership
- Developed strategy together (how to use MarkLogic)

About a Product: Thieme RadBase 2.0

- The product
- Search problems
- Project challenges

The Product: Thieme RadBase

- Web-based radiologist workflow tool
- Mission critical and agile platform
- Integrated search within Thieme's reference works
- Instant access to high quality medical content to confirm experience-based findings:
 - verified diagnosis
 - images
 - e-books
 - e-journals, etc.
- Facets: anatomy, pathology and modality
- Content is intelligently linked via automated text mining tool



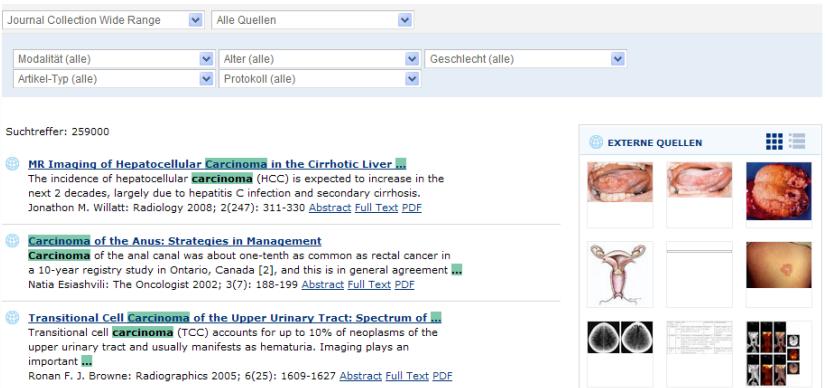
Das Radiologieportal

Thieme RadBase 2.0

Wenn es um Unterstützung am Befundungsarbeitsplatz, Informationsrecherche oder Fort- und Weiterbildung in der Radiologie geht, dann ist die Thieme RadBase 2.0 die neue Lösung für Klinik und Praxis.

JETZT KOSTENLOS TESTEN

Sie wollen die Thieme RadBase in Ihrem Institut, Ihrer Abteilung oder Ihrer Praxis an mehreren Arbeitsplätzen nutzen? » [Angebotsanfrage](#)



Journal Collection Wide Range Alle Quellen

Modalität (alle) Alter (alle) Geschlecht (alle)

Artikel-Typ (alle) Protokoll (alle)

Suchtreffer: 259000

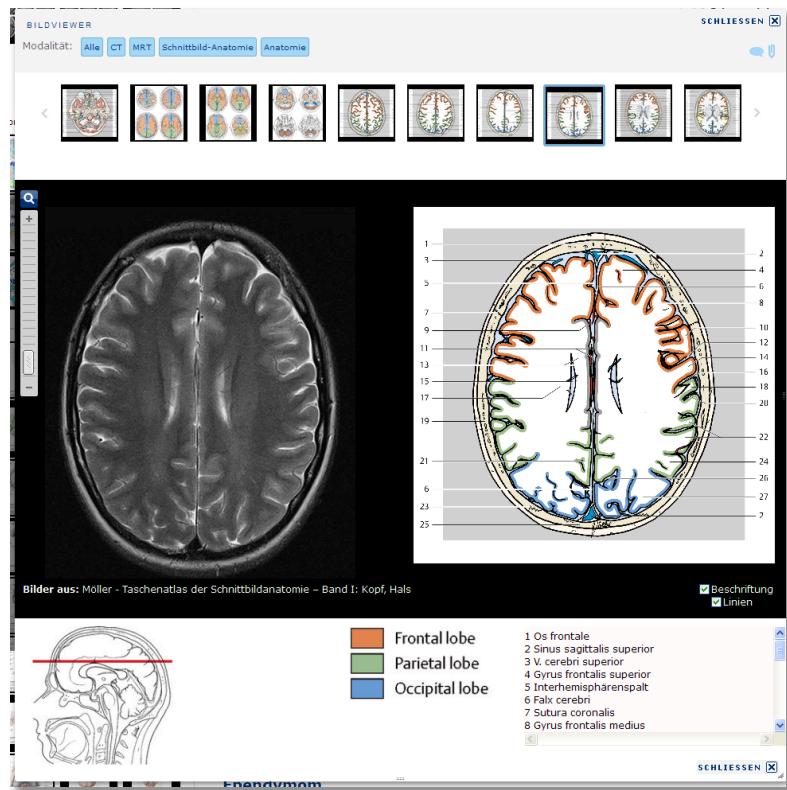
MR Imaging of Hepatocellular Carcinoma in the Cirrhotic Liver
 The incidence of hepatocellular carcinoma (HCC) is expected to increase in the next 2 decades, largely due to hepatitis C infection and secondary cirrhosis.
 Jonathon M. Willatt: Radiology 2008; 2(247): 311-330 [Abstract](#) [Full Text PDF](#)

Carcinoma of the Anus: Strategies in Management
 Carcinoma of the anal canal was about one-tenth as common as rectal cancer in a 10-year registry study in Ontario, Canada [2], and this is in general agreement.
 Nata Esiashvili: The Oncologist 2002; 3(7): 188-199 [Abstract](#) [Full Text PDF](#)

Transitional Cell Carcinoma of the Upper Urinary Tract: Spectrum of
 Transitional cell carcinoma (TCC) accounts for up to 10% of neoplasms of the upper urinary tract and usually manifests as hematuria. Imaging plays an important role.
 Ronan F. J. Browne: Radiographics 2005; 6(25): 1609-1627 [Abstract](#) [Full Text PDF](#)

EXTERNE QUELLEN

The Product: Thieme RadBase 2.0 Key Features



- Intelligent Search
 - Semantics
 - Facets like anatomy
 - Understand medical terms
- Compare diagnoses and images
- Get additional information in context and precision
- Personal notes
- Search external sources



Product: Requirement for a New Release

Version 1.0



Version 2.0

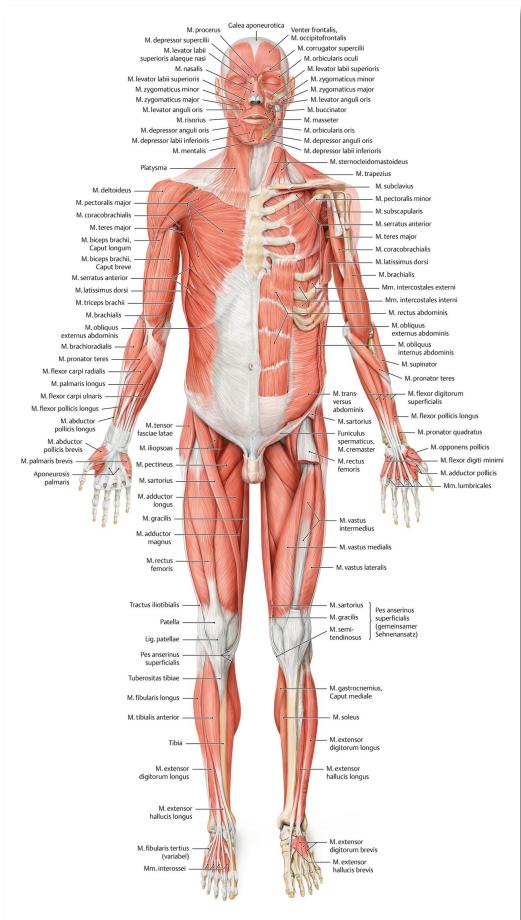
- Search could not be improved any more
 - Full text search not sufficient any more
 - Expensive and long iterations
 - Technological dead end
 - ... not created by EBCONT ;-)
-
- Intelligent search
 - High quantity and quality of content
 - High performance
 - New content
 - Intelligently linked content
 - New features
 - Reduce manual processes

Challenges: Variety



- 1,200 Diagnoses (XML)
- Differential diagnoses out of 700 tables
- 70 E-Books split into 40,000+ chapters
- 7 Journals split into 15,000+ articles
 - Different XML formats
- 100,000 Images
- Extract and assign 100,000+ meta data elements
- Ongoing updates and inserts
- Link everything on the fly

Challenges: Search Problems to Face

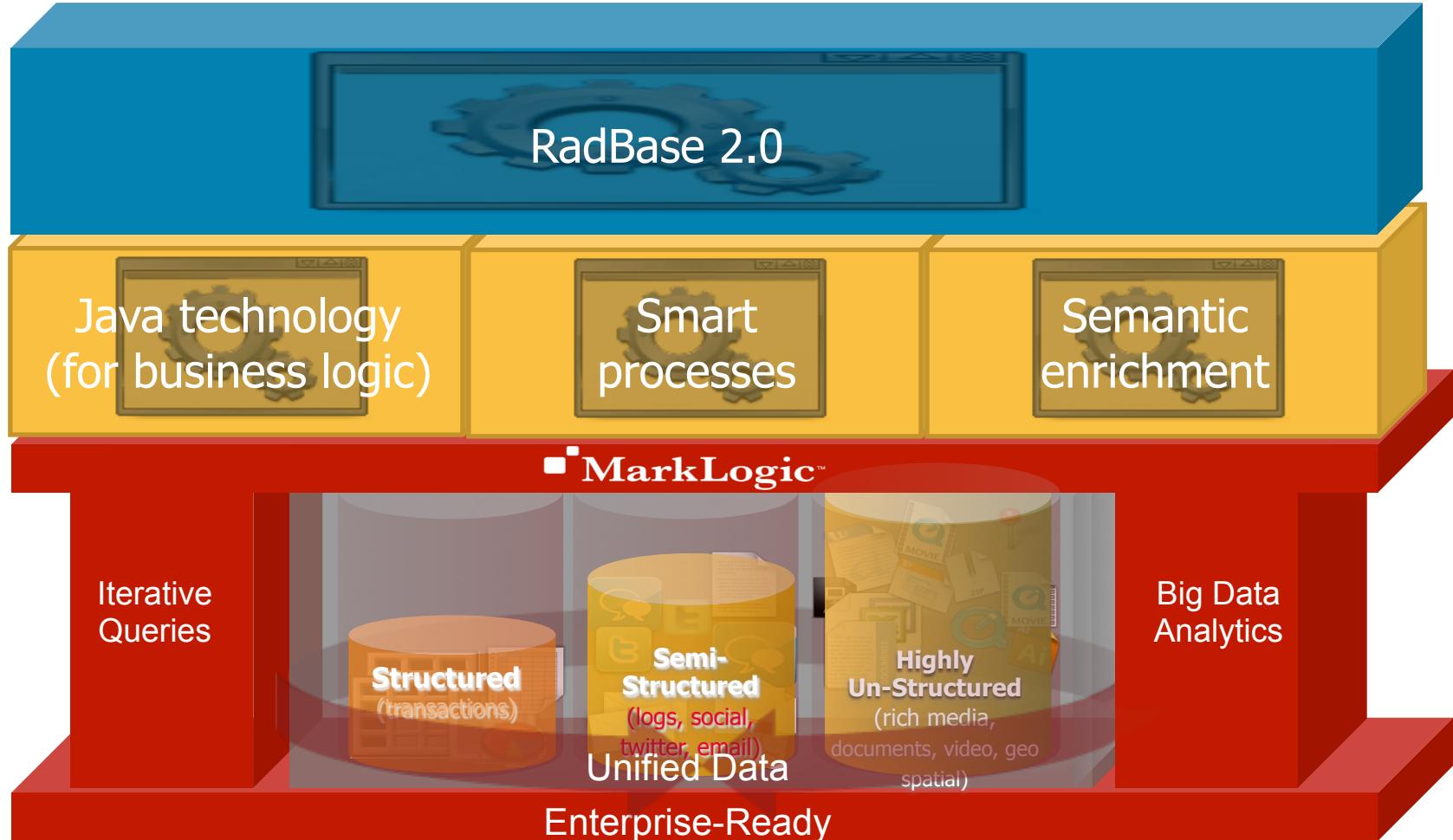


- Deliver accurate and high quality results for mission critical searches
 - Semantic enrichment / search
 - Anatomy
 - Pathology
 - Modality
 - German language
 - Compound words
 - Spelling differences
 - Mixed language (content in English!)
 - Tolerate common typos
 - Latin terms
 - Introduce custom thesaurus based on MeSH

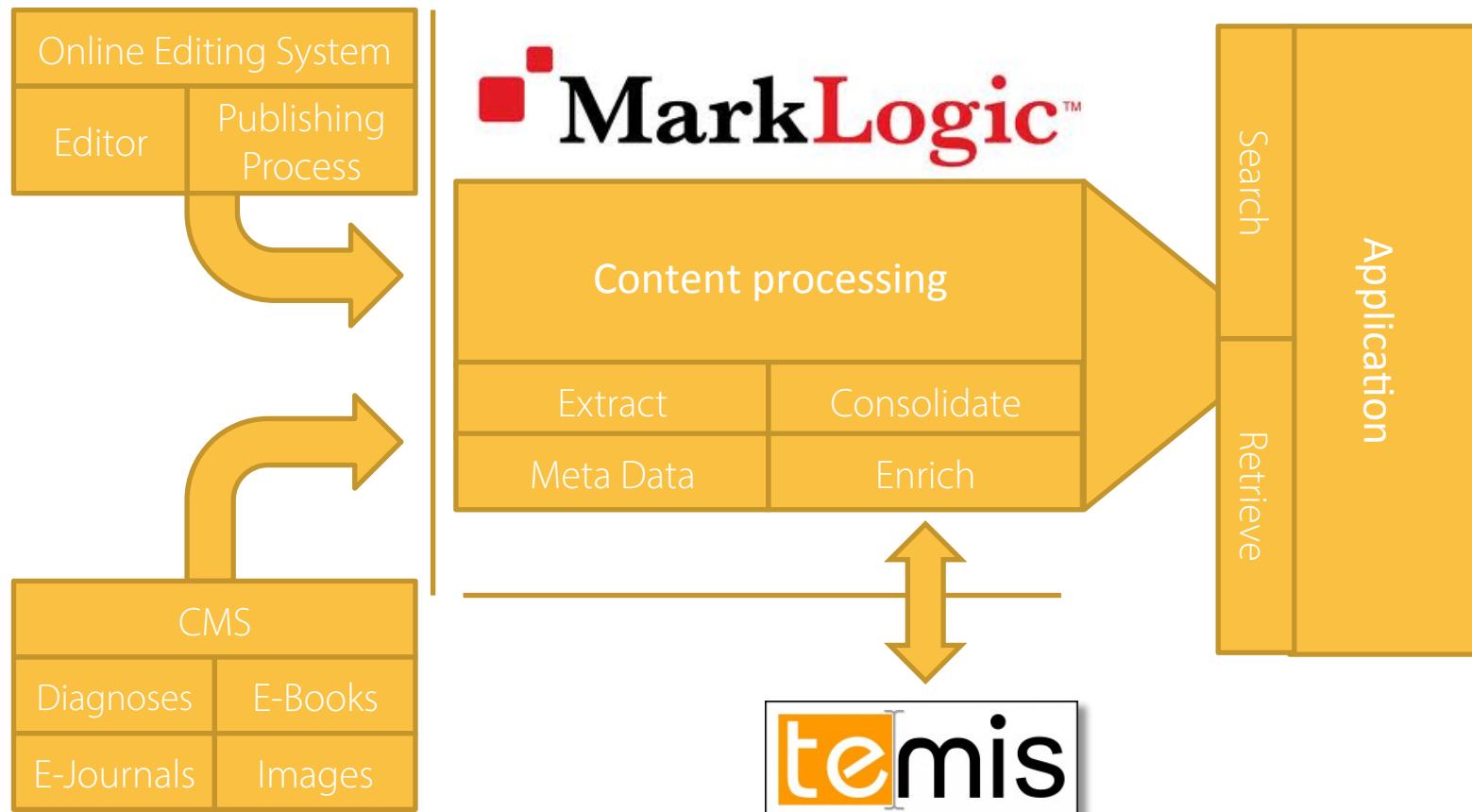
Solution

- **Architecture Overview**
- **Processes**
- **Results**

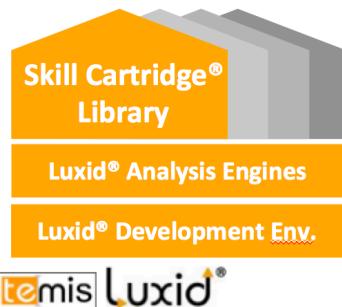
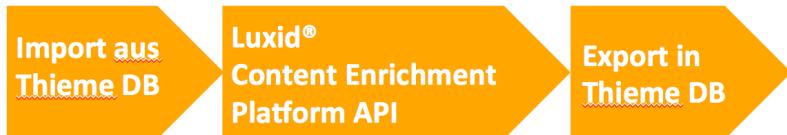
Solution: Building blocks



Solution: Content processing



Semantic Enrichment: What does it mean?



Before

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After



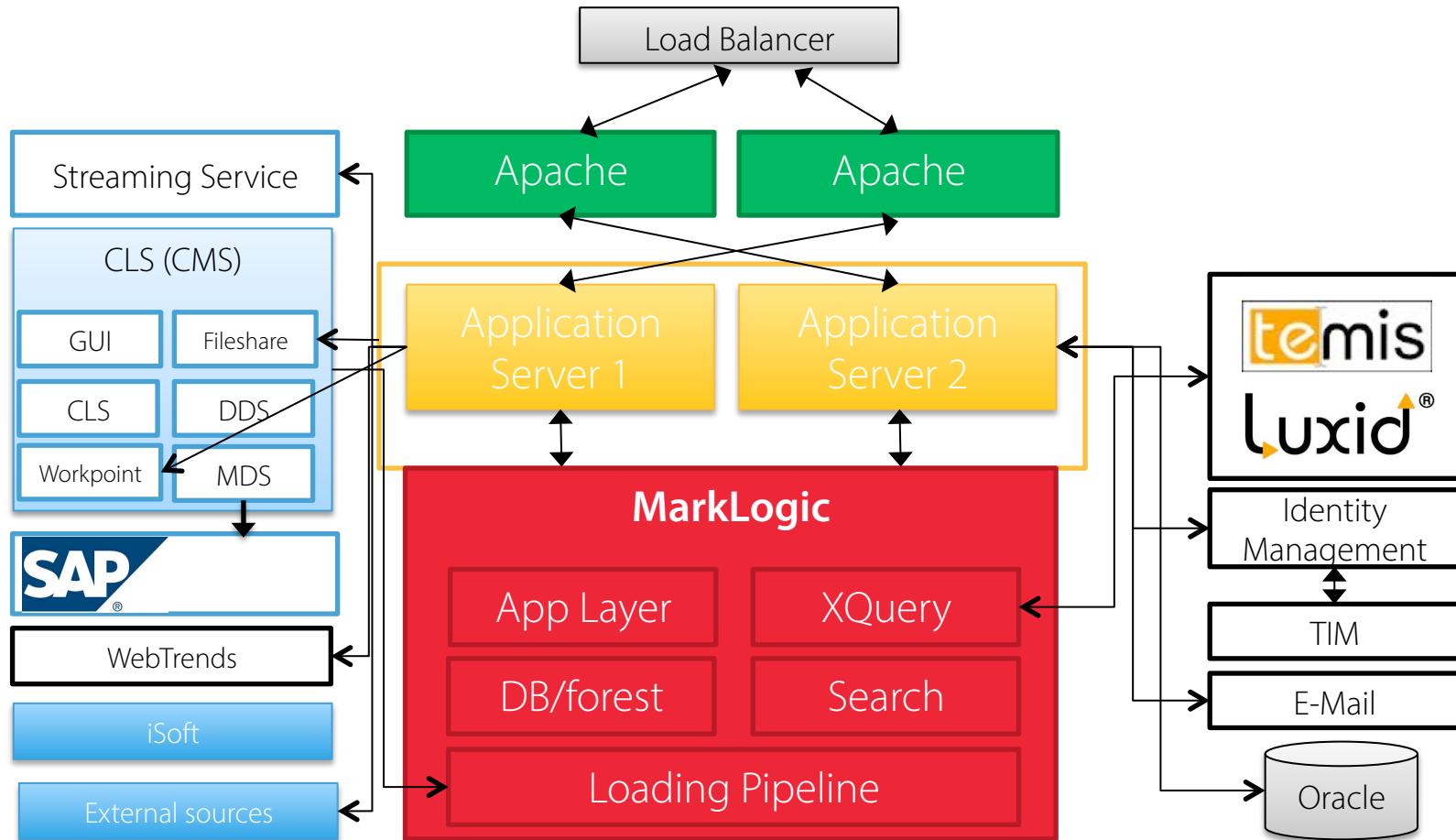
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Total Solution Landscape (how we met our goals)

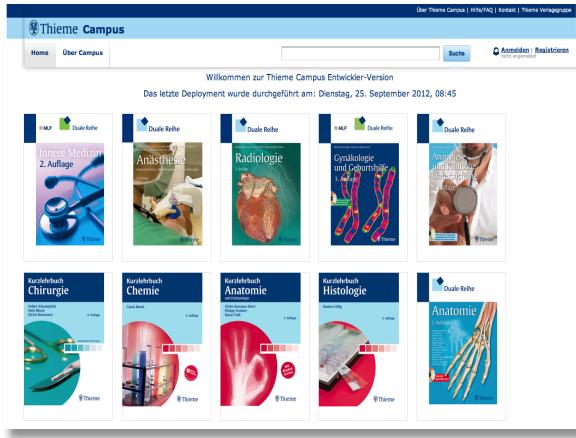
Requirement	Solution
<ul style="list-style-type: none">• Intelligent Search• Link content• High performance search	<ul style="list-style-type: none">• MarkLogic
<ul style="list-style-type: none">• Semantic Aspects (Anatomy, ...)• Show content which may be interesting	<ul style="list-style-type: none">• Temis Luxid
<ul style="list-style-type: none">• Reliable web application• Integrate with other systems like identity management, etc.• Extendable and easy to maintain business logic• Generate PDFs etc. on the fly	<ul style="list-style-type: none">• Java technology• Popular frameworks• Our experience

Solution: Architecture Overview



Some other productive solutions

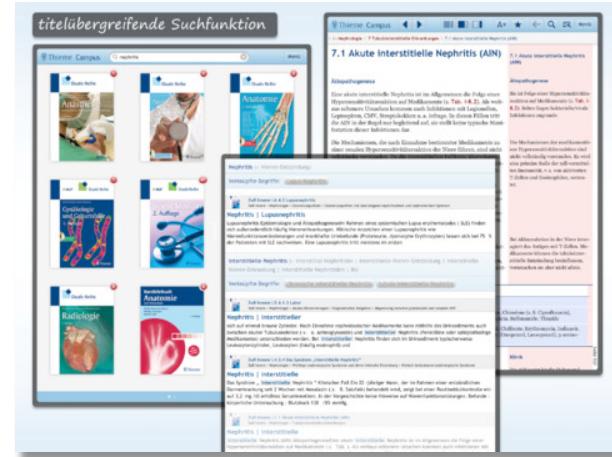
Other solutions we built on top of MarkLogic



The screenshot shows the homepage of the Thieme Campus developer version. At the top, there's a navigation bar with links for 'Home', 'Über Campus', 'Suche' (Search), and 'Anmelden / Registrieren'. Below the navigation, a message says 'Willkommen zur Thieme Campus Entwickler-Version' and 'Das letzte Deployment wurde durchgeführt am: Dienstag, 25. September 2012, 08:45'. The main content area displays a grid of book covers from the 'Duale Reihe' series, including 'Internes Medizin 2. Auflage', 'Anästhesie', 'Radiologie', 'Gynäkologie und Gynäkologische Onkologie', 'Anatomie und Physiologie', 'Kardiologie Chirurgie', 'Kardiologie Chemie', 'Kardiologie Anatomie', 'Kardiologie Histologie', and 'Anatomie'. Each book cover includes the 'Duale Reihe' logo and a small image of the book.

Online E-Learning Platform

<http://campus.thieme.de>



The screenshot shows a search result page for 'Akute interstitielle Nephritis (AIN)' on the Thieme Campus platform. At the top, it says 'titelübergreifende Suchfunktion'. The search results are displayed in a grid format. One result is highlighted with a red border, showing a detailed view of the book 'Akute interstitielle Nephritis' by J. A. L. Lepage et al. The detailed view includes a summary, author information, and a link to the full text.



The screenshot shows a chapter from 'Harrison's Innere Medizin 18. Auflage' titled 'Racial and Ethnic Disparities in Health Care'. The page includes a table of contents with sections like 'Einführung in die klinische Medizin', 'Leitsymptome von Krankheiten', 'Genetik, Umwelteinflüsse und Krankheit', 'Regenerative Medizin', 'Altersmedizin', 'Ernährung', 'Onkologie und Hämatologie', 'Infektionskrankheiten', 'Terrorismus und klinische Medizin', 'Kardiovaskuläre Erkrankungen', 'Atemwegserkrankungen', and 'Intensivmedizin'. The main content features a section on 'Age-adjusted death rates for selected causes by race and Hispanic origin, 2005' with a bar chart comparing rates for different groups. Below the chart is a section on 'Recommended hospital care received by Medicare patients with pneumonia, by race/ethnicity, 2005' with another bar chart.

E-Learning App

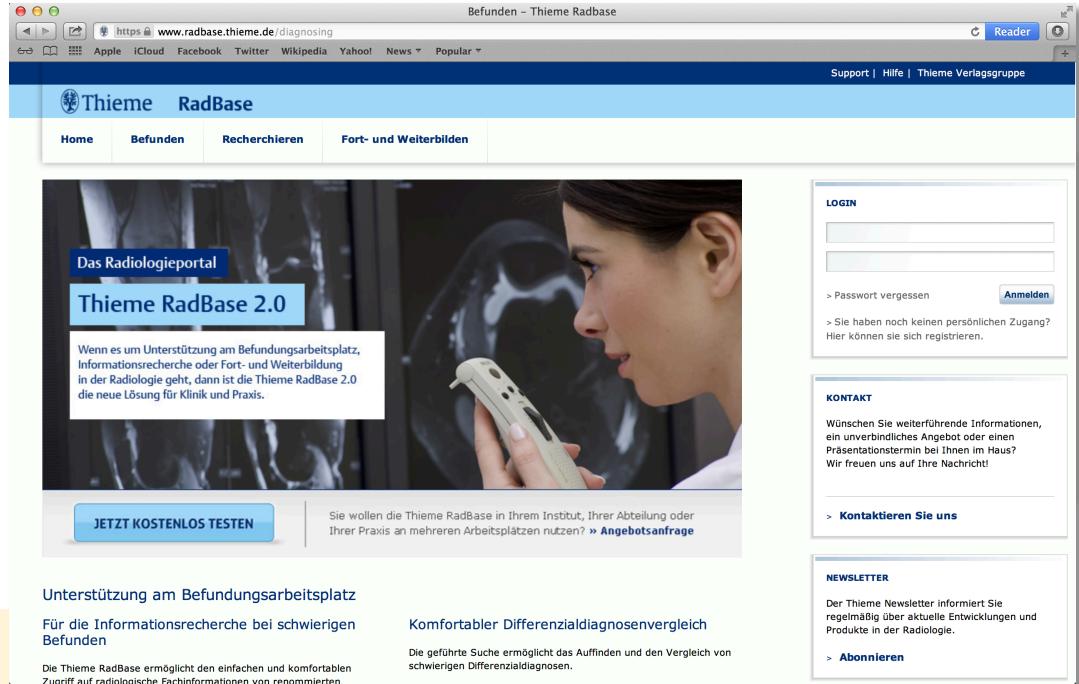
<https://itunes.apple.com/de/app/campus/id521710638?mt=8>

Harrison's Online

<http://harrisonsonline.de>

and some more ...

Live demo



The screenshot shows the homepage of the Thieme RadBase 2.0 website. At the top, there's a navigation bar with links for Home, Befunden, Recherchieren, and Fort- und Weiterbilden. Below the navigation is a large image of a female radiologist holding a handheld ultrasound probe over an X-ray image of a patient's spine. To the left of the image, there's a blue banner with the text "Das Radiologieportal" and "Thieme RadBase 2.0". Below the banner, a text block says: "Wenn es um Unterstützung am Befundungsarbeitsplatz, Informationsrecherche oder Fort- und Weiterbildung in der Radiologie geht, dann ist die Thieme RadBase 2.0 die neue Lösung für Klinik und Praxis." A blue button at the bottom left of this section says "JETZT KOSTENLOS TESTEN". To the right of the main image, there's a sidebar with sections for LOGIN, KONTAKT, and NEWSLETTER. The LOGIN section has fields for email and password, and links for "Passwort vergessen" and "Anmelden". The KONTAKT section asks if the user wants further information or a presentation at their location, with a link to "Kontaktieren Sie uns". The NEWSLETTER section informs users about the Thieme Newsletter, which keeps them updated on developments and products in radiology, with a link to "Abonnieren".



Any Questions?