

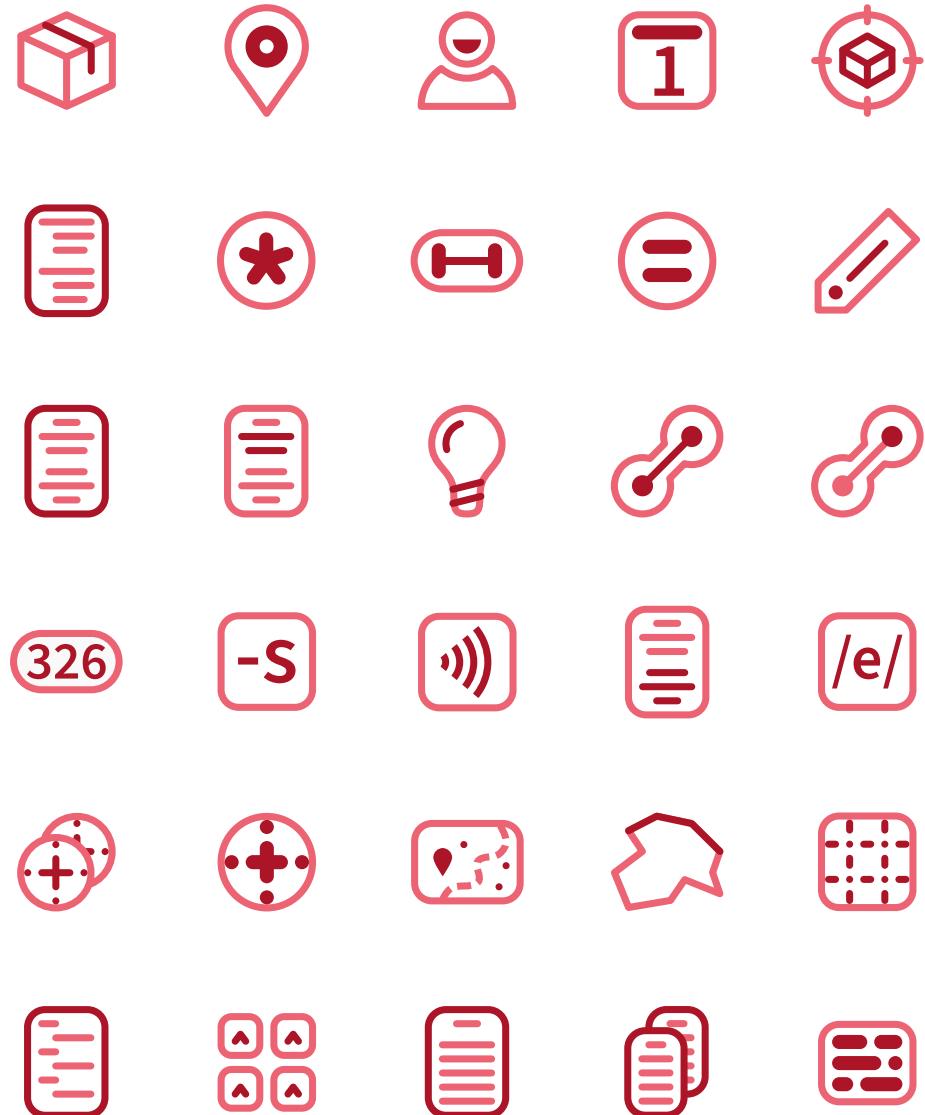


Sustainability, coherence, and accessibility: Reinventing the Cultural Heritage Framework for convergent multimodal editions



Digital Academy

Introduction
Methodology
Ecosystems
Components
Coherence/a10y



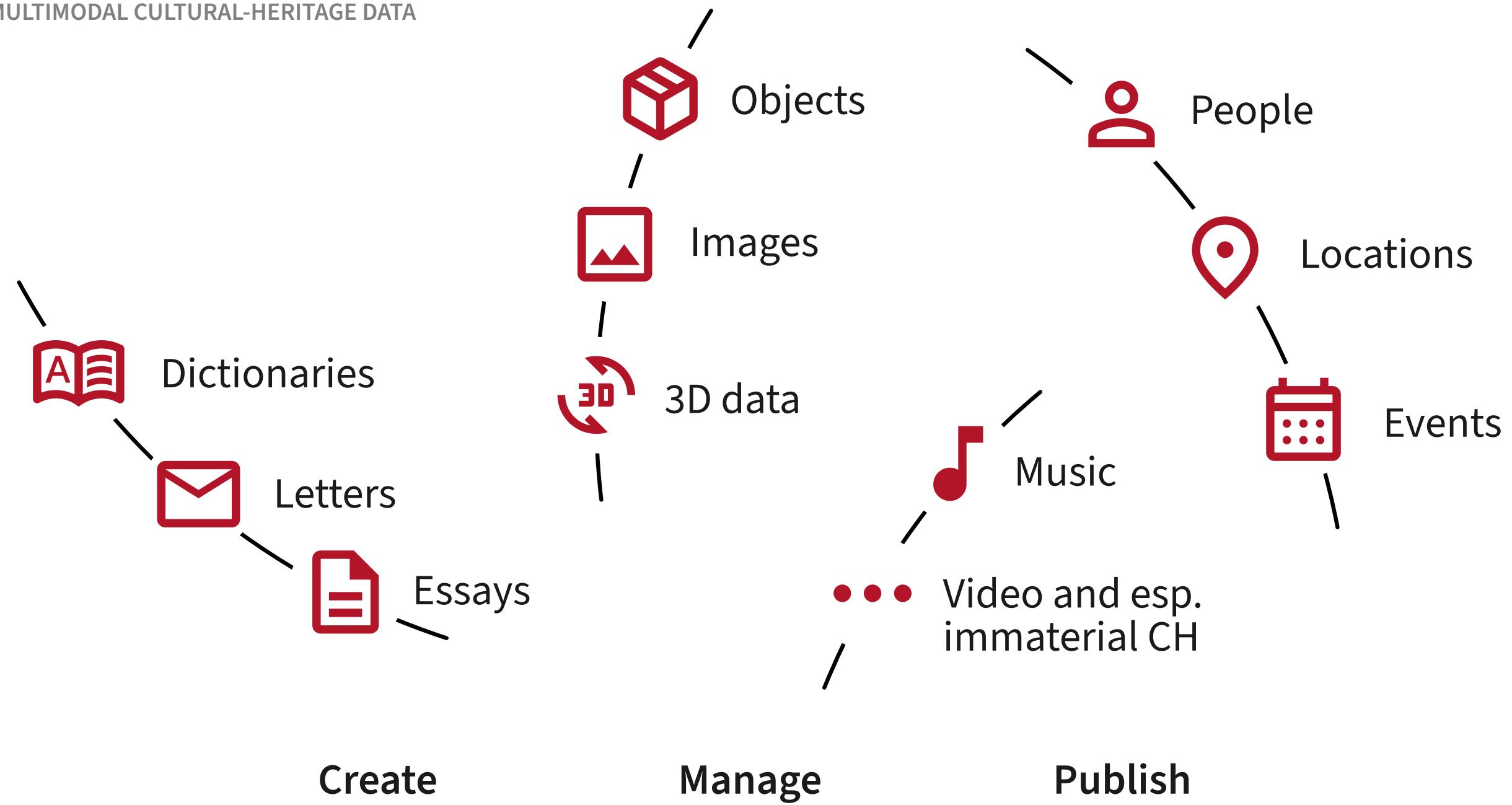
German academies execute **humanities** and social-sciences projects

Usually with **long funding periods** of 12 or more years

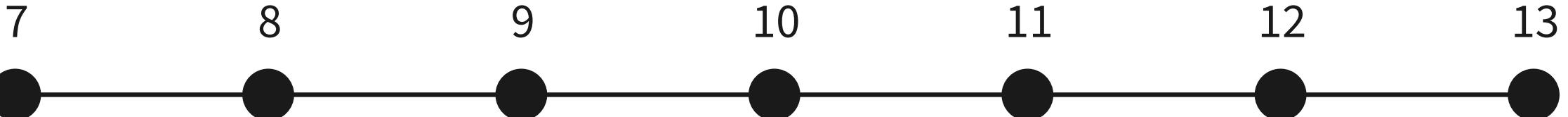
Various **editions** and cultural-heritage projects

Websites are, in theory, obliged to be **privacy-preserving** and accessible

AdWL Mainz also coordinates NFDI4Culture, a **research infrastructure** provider



ISSUES ENCOUNTERED IN PREVIOUS EFFORTS



● Most sites, but with residue of code from previous versions

● Most recent site upgrade, dev. left

● Prominent component

● Multiple incompatible versions

Breakage

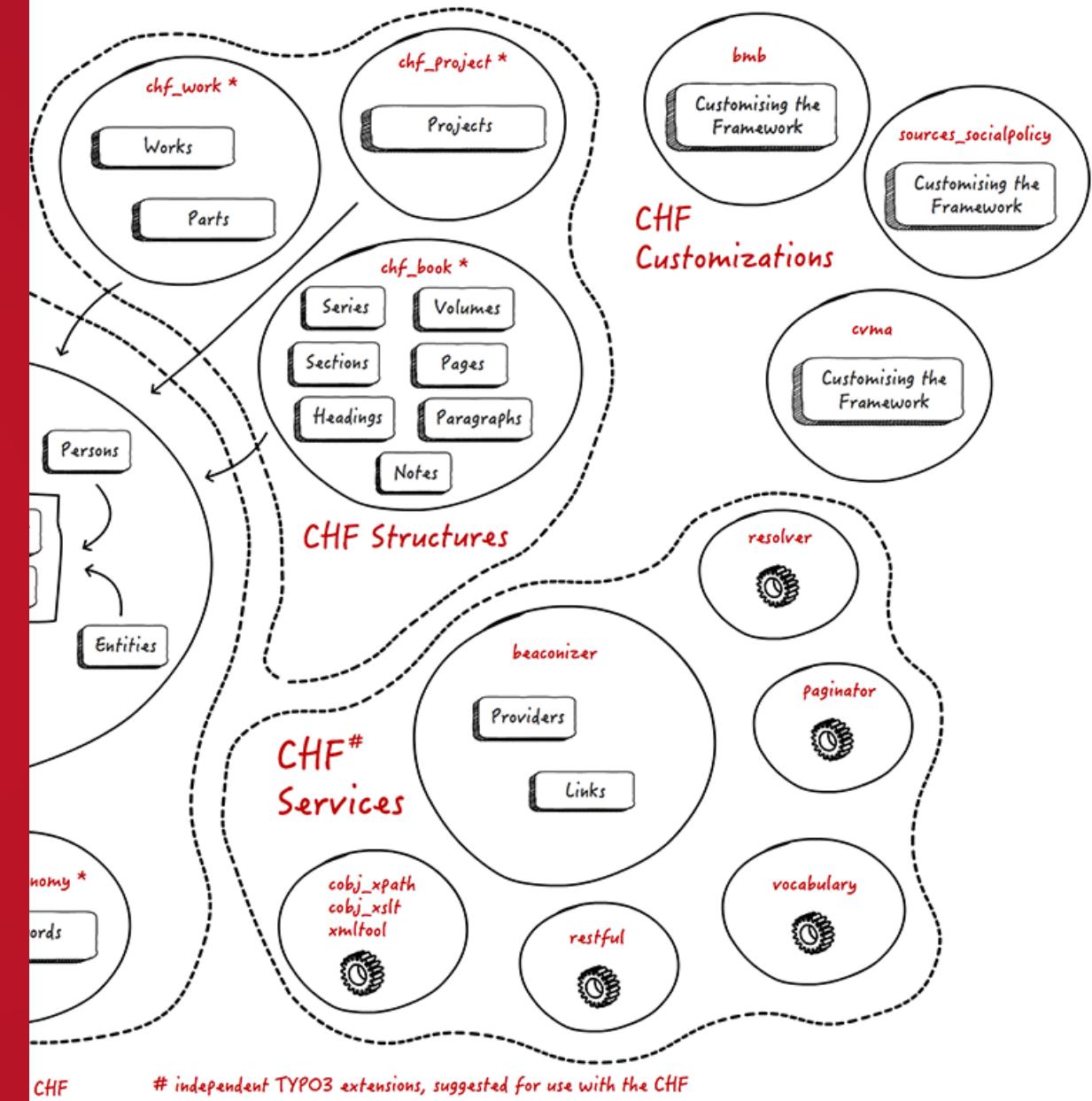


● Heavily patched third-party component

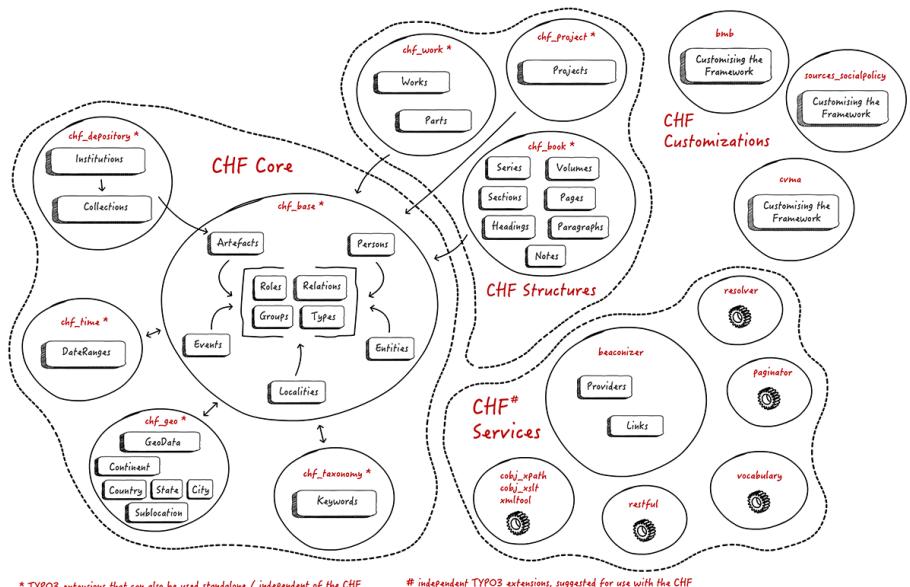
Overwhelmed staff



Introduction Methodology Ecosystems Components Coherence/a10y



SELECTION OF EXISTING OPEN-SOURCE SOLUTIONS



2017 CHF concept by Torsten Schrade

LEXONOMY
Lexonomy

COLLECTIVE
ACCESS
CollectiveAccess



Omeka

Arches®
Arches



WissKI



Wikibase Suite

KITODO
KEY TO DIGITAL OBJECTS

Kitodo



TEI Publisher

ediarum
Ediarum

MerMEId
MerMEId

Edirom
Edirom

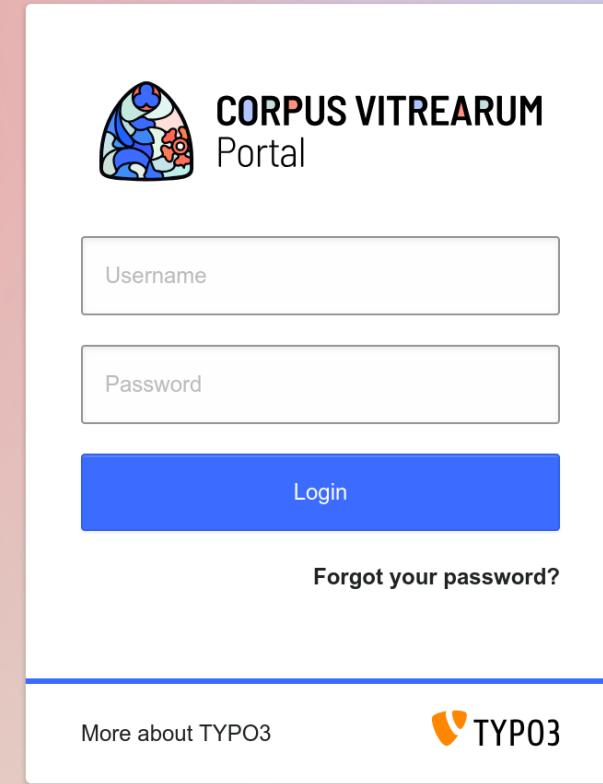


Media ecology tries to find out what roles media force us to play, how media structure what we are seeing or thinking, and why media make us feel and act as we do. [...] Ecology is the scientific study on organisms and their interactions with the environment. In this context, an ecological approach focuses on the distributions, abundances, and relations between organic and nonorganic beings in an ecosystem.

Carlos A. Scolari. “Media Ecology: Exploring the Metaphor to Expand the Theory.” *Communication Theory*, vol. 22, no. 2, 2012, pp. 204–225, DOI: 10.1111/j.1468-2885.2012.01404.x.

- User stories ▶ Desires of communities?
- Mapping a domain ▶ Generic models and formats?
- Ubiquitous language ▶ Existing ontologies?
- Component reuse ▶ Components removable?
- Bounded contexts ▶ Resilient tech and data flow?
And how these may change!

Introduction
Methodology
Ecosystems
Components
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(DIGITAL) ECOSYSTEMS

As few physical servers as possible
Limited data duplication
Energy-preserving frontend

Semantic annotation and search
Screenreader-ready interfaces
No vendor lock-ins

Responsive design
In-text glossaries
Multiple paths into the data

Include XML-based serialisation like TEI
Options to download all data
Standardised data models if possible

Atomic design
Machine-readable metadata
Serialisations, APIs, LOD

Data licences
Privacy
Limited telemetry

Maintainable for newbies
Simple code beats elegant code
Documentation & education

Stay up to date
Act in good faith & contribute
Engage with the community

Compatible to DoS protection
Download availability
Containerisation

Environment

Accessibility

Interested public

Domain-specific communities

Web and digital humanities infrastructure

International legal frameworks

German academia

Software stack

Bad-faith actors

Analysis of digital ecosystems

Relational, but **web app-**
and graph-enabled

Multilingual, a10y-
enabled web software

PHP plus Python (RDF) and
Rust (search) on the server

One coherent, **semantic** data
model fits all, incl. serialisations

Visualisations
and testing (TBD)

Semantic portal with
equitable access

Embedded
metadata

Atomic, accessible
frontend HTML/CSS

Rule of least power,
as little JS as possible

EXTENSIBLE DESIGN

TYPO3 with
Cultural Heritage
Framework

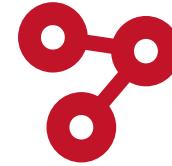
Optional automated
ingest routines

Data models Editing Serialisations UI Embedded metadata Search Social Container

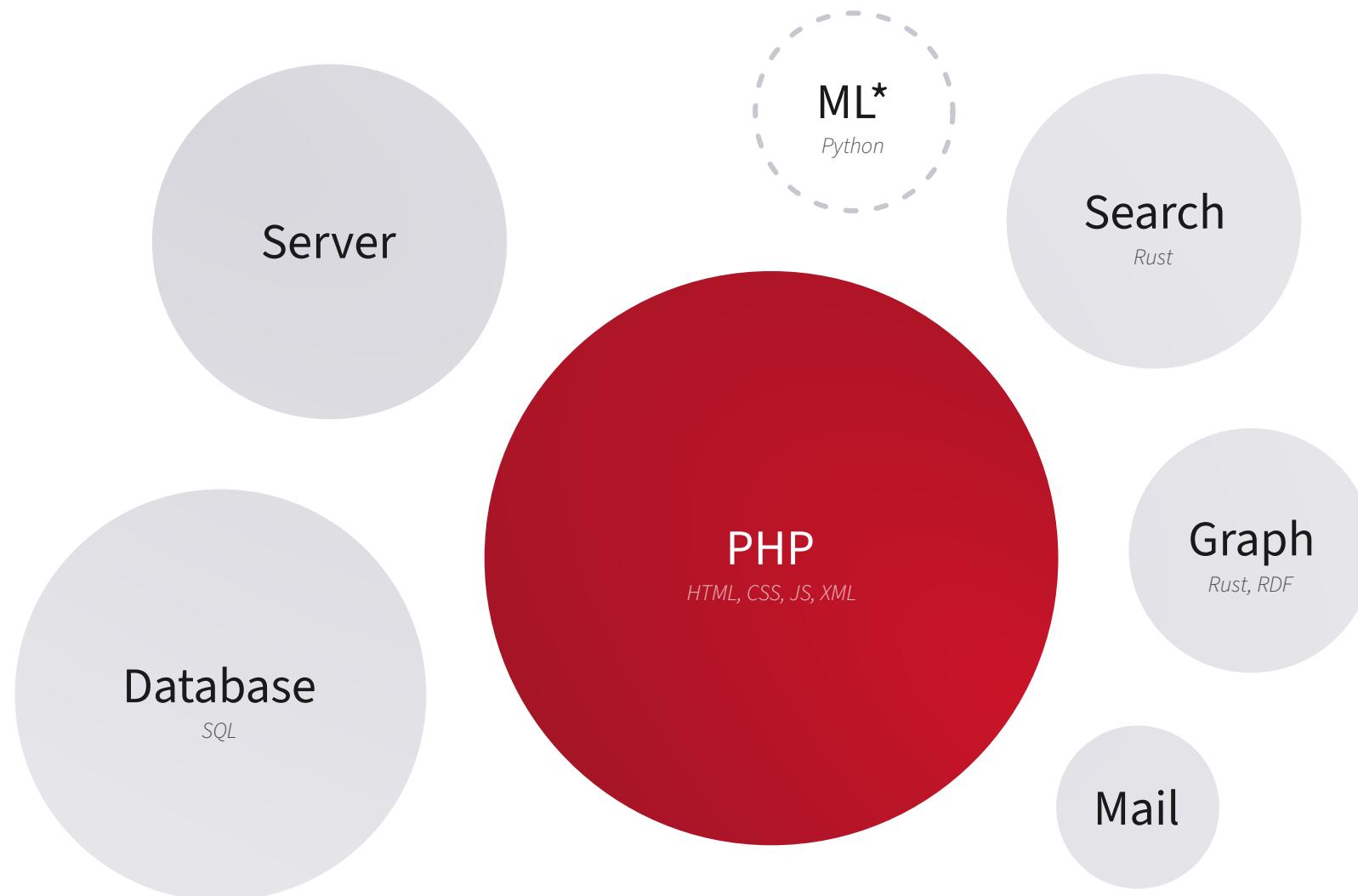
Project-specific overwrites

Optional additional APIs Optional QA routines Optional visualisations

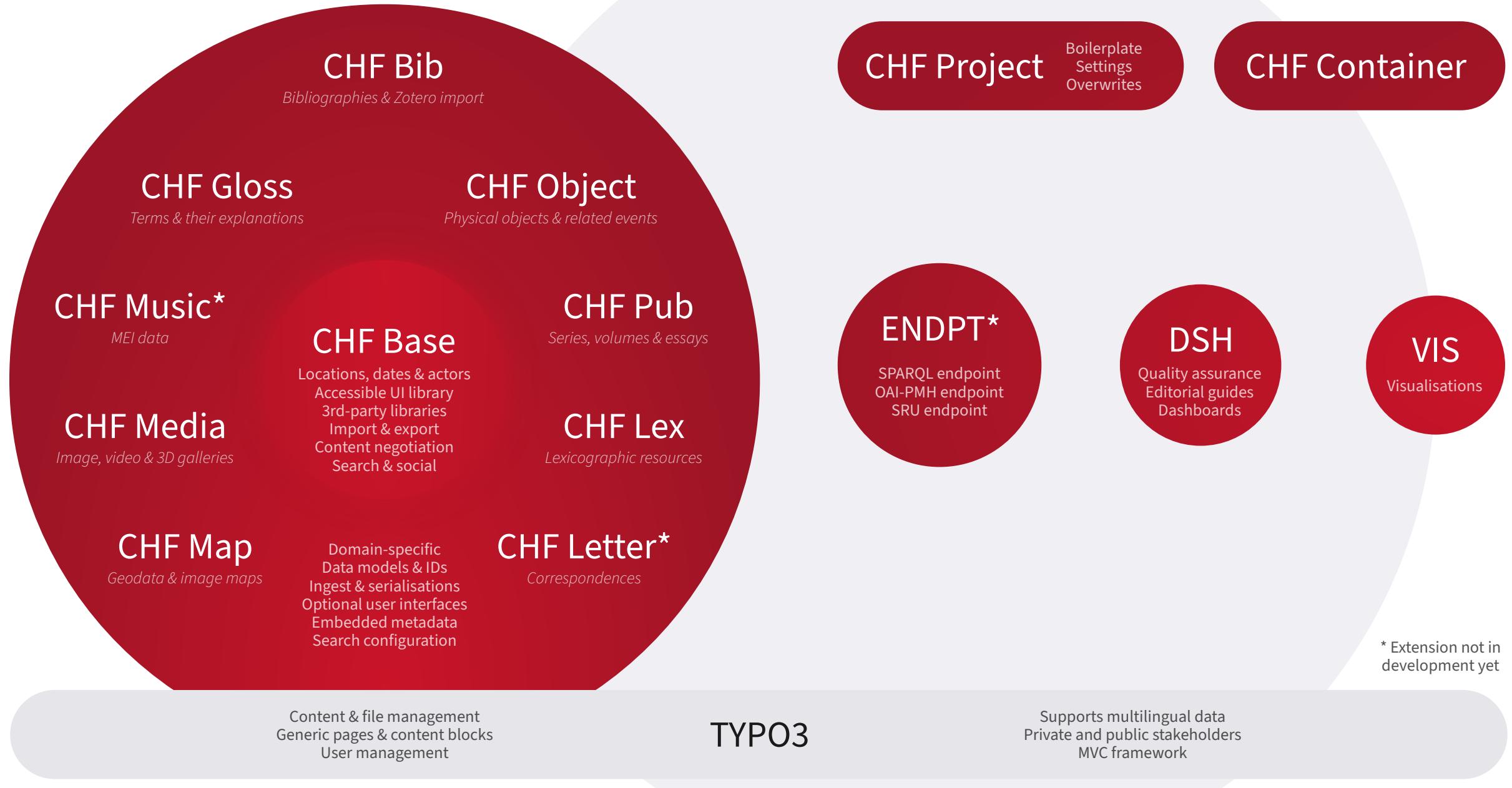
Introduction
Methodology
Ecosystems
Components
Coherence/a10y



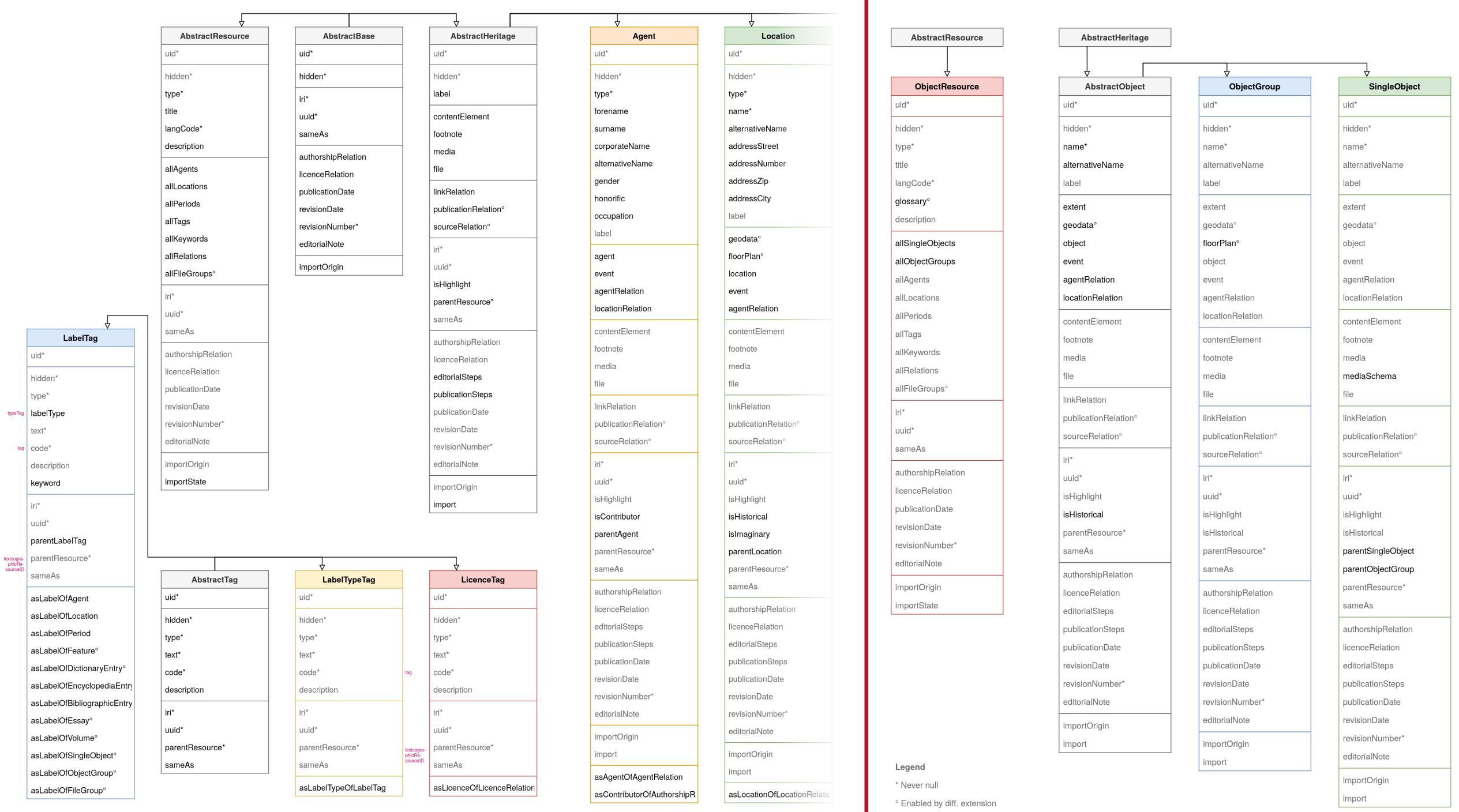
CONTAINERS



* Container not implemented yet







Introduction
Methodology
Ecosystems
Components
Coherence/a10y



DFD



Corpus
Vitrearum

Digitales Familiennamenwörterbuch Deutschlands

Familiennamen suchen

Suchbegriff eingeben

Name der Woche: Düring

Benennungsmotiv ▾

Sprachvorkommen ▾

Eintragsart ▾

1 Vorkommen 501 10.001 50.001 50.000+ 100.000+

A B C D E F G H I J K L M N O P Q R S T

Wörterbuch Erkunden Daten Namenforschung Projekt

In Einträgen stöbern

Häufig Beliebt Zufall ERKUNDEN

Rang ⓘ	Name	Vorkommen ⓘ
1	Müller	256.003
2	Schmidt	190.584
3	Schneider	115.749
4	Fischer	97.658
5	Weber	86.061

Schäfer Bauer Hartmann Koch Braun
Schröder Schmidt Lange Weber
Neumann Klein Hoffmann Krause
Fischer Wolf Schneider Schmitz Meyer
Becker Schulz Werner Meier Hofmann
Müller Zimmermann Krüger Schwarz
Wagner Schmitt Richter

INFOARTIKEL GLOSSAR ERKUNDEN

DATEN NAMENFORSCHUNG

Wörterbuch Erkunden Daten Namenforschung Projekt

Zwick

ETYMOLOGIE HINTERGRUND QUELLEN METADATEN

Hauptbedeutung

1 Benennung nach Beruf zu mittelhochdeutsch *zwic* 'Nagel, Bolzen, Zwickel, einmaliges Zwicken mit einer Zange, Kniff, Schlag'. Es handelt sich um einen indirekten Berufsnamen für verschiedene Berufe wie z. B. Nagelschmied, Böttcher oder Schuhmacher.

Beruf Metallverarbeitung Schmied (indirekt)
Beruf Leder- und Textilverarbeitung Schuhmacher (indirekt)
Beruf Holzverarbeitung Böttcher (indirekt)

2 Benennung nach Wohnstätte ⓘ zu mittelhochdeutsch *zwic* 'Nagel, Bolzen, Zwickel, einmaliges Zwicken mit einer Zange, Kniff, Schlag' für jemanden, der an einem keilförmigen Flurstück wohnt.

Wohnstätte Örtlichkeit Geländeform

In Einzelfällen

3 Benennung nach Übername ⓘ zu mittelhochdeutsch *zwic* 'Nagel, Bolzen, Zwickel, einmaliges Zwicken mit einer Zange, Kniff, Schlag' für einen kleinen, gedrungenen, derben Menschen. Unklar ist, ob es sich auch um einen Übernamen ⓘ für einen Zwitter oder Kastraten handeln kann (siehe Zoder 1968, Bd. 2: 900).

4 Benennung nach Übername ⓘ, siehe [Cwik 1](#). Es handelt sich um eine eingedeutschte ⓘ Variante.

Weitgehend auszuschließen

CORPUS VITREARUM Deutschland

Glasmalereien Im Kontext Scheibenweise Buchreihe Projekt

← Zurück

Verkündigung an Maria

Ikonografie Weinrebe 471422

Ikonografie Die Wurzel Jesse Ein genealogischer Baum, der aus Jesses Lenden spricht und die Vorfahren Christi zeigt (+ Variante) 73A21(+0)

Ikonografie Die Verkündigung Maria steht 73A521

Ahn Bauernhof Baum belauschen Berufe besuchen Bibel Christus Eltern Erzengel Frucht Gabriel Geburt Gesellschaft Gewerbe Handwerk Industrie Jesse (Wurzel) Kultur Lenden lesen Lukas 01 Maria (Jungfr...) Neues Testa... Obst Pfanne Stammhaus

Bild: Renate Roloff, CVMA Potsdam/BBAW, CC BY-NC Permalink: <https://corpusvitrearum.de/d/F18429>

Metadaten: CCO

Projekt

Map showing the distribution of the name 'Zwick' across Germany in 2005, overlaid on a map from 1890. The map shows green dots indicating the locations of telephone connections in 2005, with a higher density in urban areas like Berlin, Hamburg, and Munich.

Diese Karte basiert auf anonymisierten Telefonanschlüssen von 2005. Historische Karten von ca. 1890 basieren auf Verlustlisten und sind nur bedingt vergleichbar.

Accessibility is a **social** challenge more than a technical one

Plain-language **summaries** benefit everyone's experience

Full dataset downloads may help both harvesters and users

Semantic HTML may require a **custom CSS** framework

Browser APIs are smoother than custom tech

Conservative frontend tech and embedded metadata **improve bot access**

Be willing to respond to browser, mobile, keyboard, Zotero, harvesting tests

To do: user and screenreader tests, a10y-focused QA dashboard

Research software suite for the production
and publication of humanities data,
built with ❤️ by [@digicademy](#) in Mainz



github.com/digicademy-chf
jonatan.steller@adwmainz.de
@jalle@mozilla.social

WIP

CHF2 designed to be useful for various types of **cultural-heritage data**

Combines highly structured **semantic classes** with annotatable fields

To become an extensible **one-stop solution** for editing/management/publication

Based on an analysis of **(digital) ecosystems**, usability and accessibility first