



Introducing FOLIO - An Open Source Library Management System

Openness and open source in library systems: a DE-UK dialogue
A collaborative VBD-RLUK meeting

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- VZG = Headquarter of the Common Library Network GBV (<https://www.gbv.de/>) in Göttingen, Lower Saxony
- One of six regional library service networks in Germany



Quelle: Wikipedia



VZG - Headquarter of the GBV

- Service provider / host (public-service)
 - 72 academic libraries, 400 research libraries
- K10plus = regional union catalogue “OCLC CBS” since 1993, incl. ILL
- LMS “OCLC LBS” since 1993
 - 204 tenants at 30 sites (27 hosted in VZG, 92 SaaS, 3 local)
- LMS “FOLIO” since 2016 (live since 2020)
 - FOLIO platform hosted in VZG for GBV network
 - FOLIO ERM first: 2 live, 4 started, more tbd
 - FOLIO full implementation in evaluation process
- Discovery and digital services

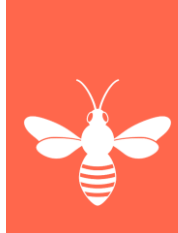


FOLIO - Introduction



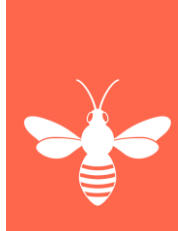
- The FOLIO project started in 2016 and is ongoing
- FOLIO is both: software and a community
- Latest international release is Iris (May 3, 2021)
- VZG started it's first development project (FOLIO ERM) in March 2018





FOLIO - Introduction

- Goal
 - Development of a Library Service Platform (LSP) to serve as library management system and more
 - Open source, sustainable, innovative, flexible, enhanceable
- Target group
 - Academic and research libraries
 - Public libraries and special institutions



FOLIO - Governance

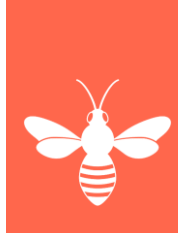
- [Open Library Foundation](#) (OLF)
 - Serves as roof organization since 2016
 - Each project has its own governance structure: [FOLIO](#), [GOKb](#), [ReShare](#), [VuFind](#), [ARC](#), ...
- FOLIO Project
 - New governance structure since 2021
<https://wiki.folio.org/display/COMMUNITY/FOLIO+Governance+Model>
 - Based on membership model
<https://wiki.folio.org/display/COMMUNITY/FOLIO+Governance+Model#FOLIOGovernanceModel-Membership.3>



FOLIO - Governance

- Elected committees
 - Community Council: strategy, finances, membership, FOLIO SMLLC
 - Product Council: functionality, roadmap, special interest groups
 - Technical Council: technical architecture + development
- Decision making is based on „lazy consensus“ concept

“Lazy Consensus” is a form of decision-making that assumes that a stated path forward is acceptable to all in the group unless objections are raised (also known as “yes becomes the default”). Typically this means that someone will state a decision and a plan to act on that decision unless someone objects in a timely fashion (usually 72 hours). Assume best intent. See a description of how Lazy Consensus is used in the [Apache OpenOffice project](#) and how it has been [applied to library operations](#).” (Quelle: <https://wiki.folio.org/display/PC/FOLIO+Product+Council+Charge>)



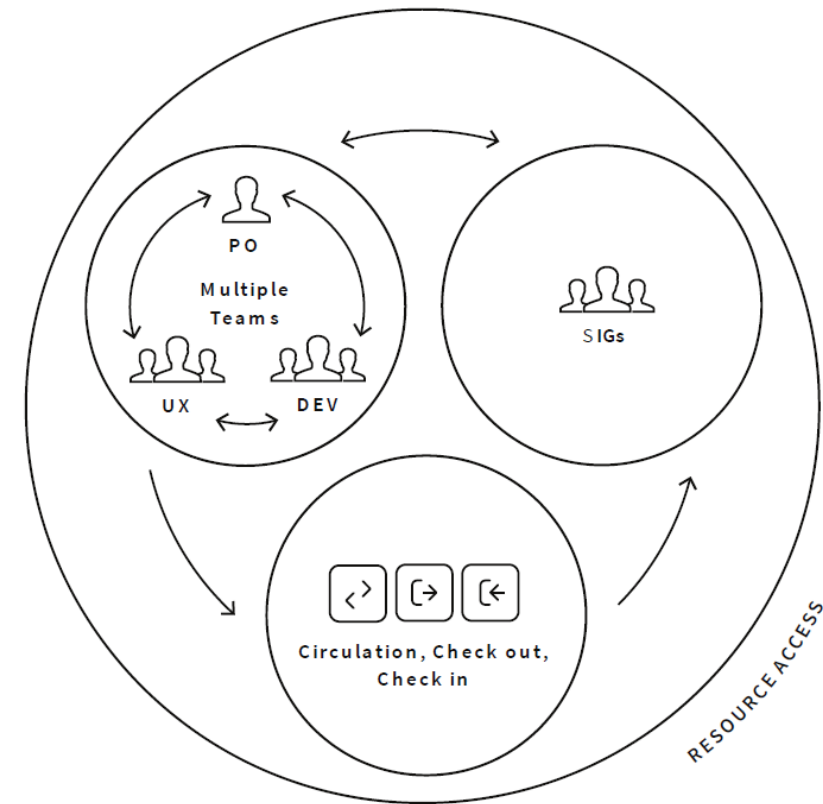
FOLIO – How we work

- Special Interests Groups (SIGs) + Subgroups
 - Subject matter experts (SMEs)
 - Resource Access, Acquisitions, ERM, Metadata Management, App Interaction, Reporting, Support, SysOps, User Management, Consortia, Privacy, Accessibility, Internationalization, Implementers
- Tech Leads Group
 - Lead developers and technical architects
- Product Owner
 - Responsibility for assigned apps / areas of development

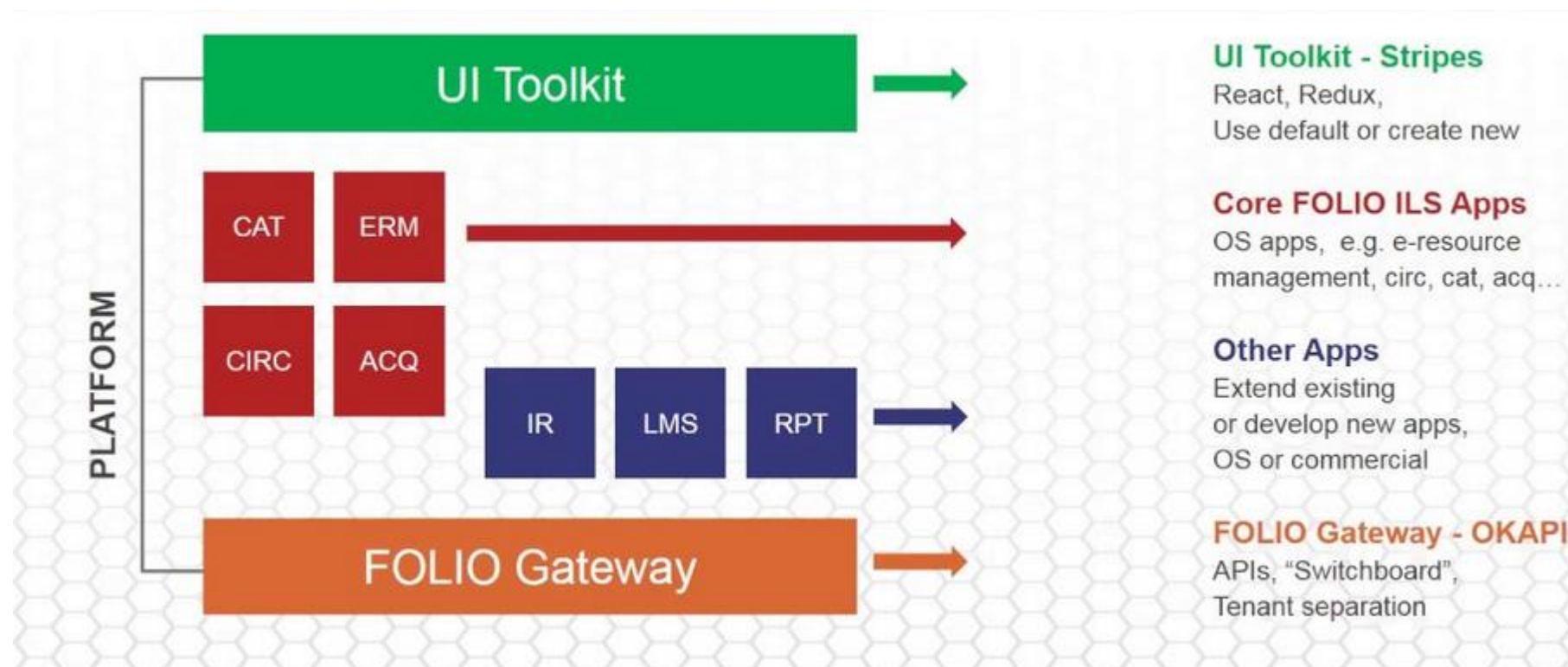


FOLIO – Development Circle

- SIGs = Special Interest Groups
- UX = User Experience Designer
- DEV = Developer
- PO = Product Owner

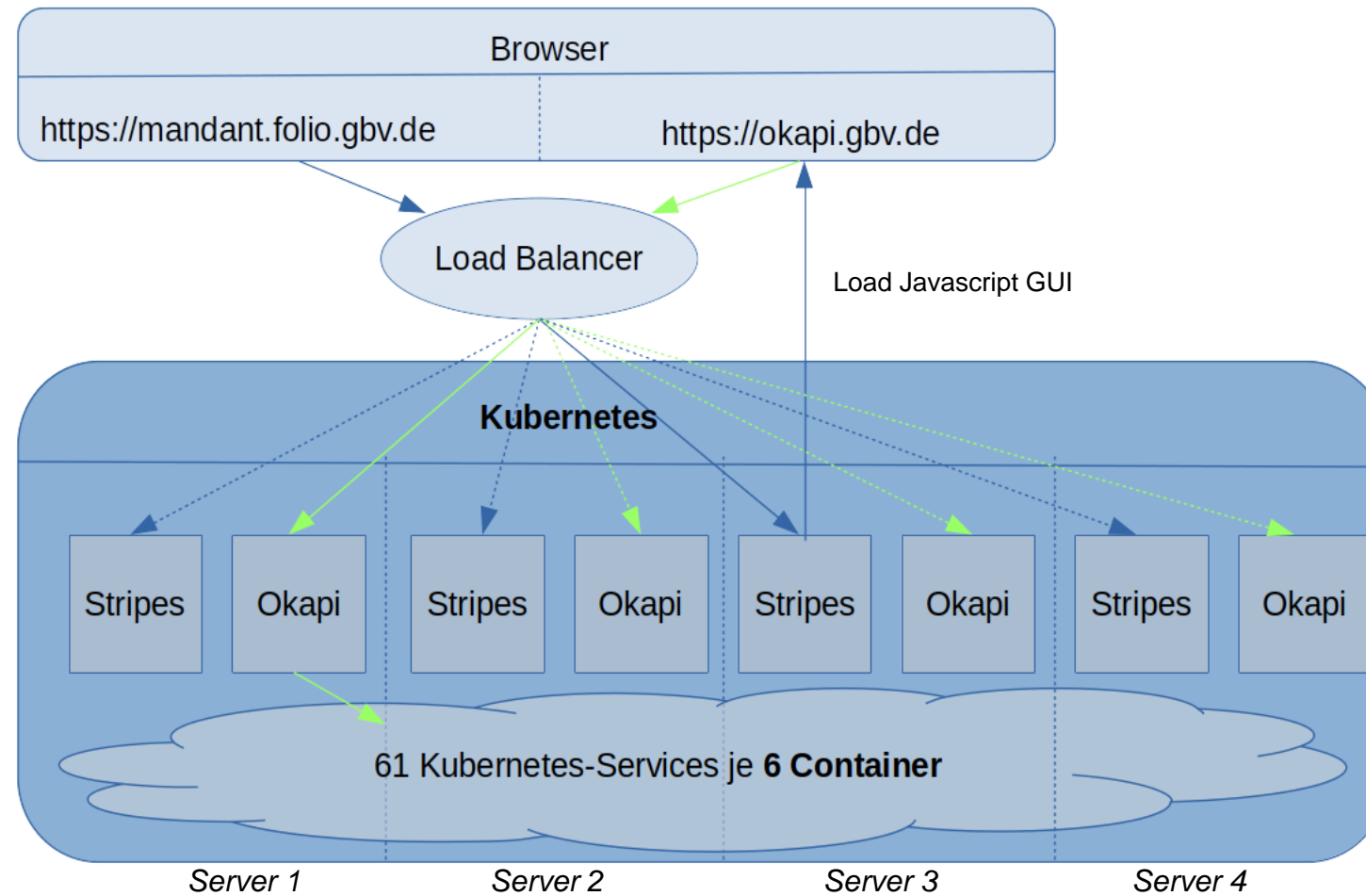


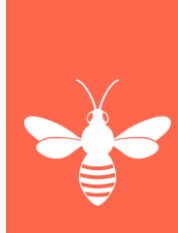
FOLIO – Architecture





FOLIO – Plattform (Kubernetes)





FOLIO – Technical Concept

- Horizontal scalability and load balancing
- High availability
- Multi-tenancy ability
- Microservice architecture and strictly API-based development
 - Freedom of choice of programming language
 - Independent development
 - Independent choice of modules

FOLIO – Functional Scope



Inventory - Co-operation in library automation : the COLA project ; Report of a research project undertaken by LASER and supported by a grant from the British Library Research and Development Dep. during the period Nov., 1974 to March, 1975 / By John Ashford, Ross Bourne, Jean Plaister

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Search

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Language

Resource Type

Format

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Nature of content

Staff suppress

Title	Contributors	Publisher
Benefit assessment for system change in libraries and information services : Period covered by report: SI/G/165: Oct. 1975 - Sept. 1976, SI/G/225: Jan. 1977 - Dec. 1977 ; Final report to the British Library Research and Development Department on Projects Numbers SI/G/165 and SI/G/225 / J. Hawgood, W. E. M. Morris	Hawgood, John ; Morris, W. E. M.	Univ. (1977)
Bibliotheca Americana : or, a chronological catalogue of the most curious and interesting books, pamphlets, state papers, &c. upon the subject of North and South America, from the earliest period to the present, in print and manuscript; for which research has been made in the British Museum, and the most celebrated public and private libraries, reviews, catalogues, &c. with an introductory discourse on the present state of literature in those countries	Rede, Leman Thomas	printe Burlin Cornh Patern Jame: [1789]
Bibliotheca americana; or, A chronological catalogue of the most curious and interesting books, pamphlets, state papers, &c. upon the subject of North and South America, from the earliest period to the present, in print and manuscript; for which research has been made in the British Museum, and the most celebrated public and private libraries, reviews, catalogues, &c. with an introductory discourse on the present state of literature in those countries	Rede, Leman Thomas ; Homer, Arthur ; Dalrymple, Alexander ; Debrett, John	[s.n.]

Instance record Co-operation in library automation : the COLA project ; Report of a research project undertaken by LASER and supported by a grant from the British Library Research and Development Dep. during the period Nov., 1974 to March, 1975 / By John Ashford, Ross Bourne, Jean Plaister

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Co-operation in library automation : the COLA project ; Report of a research project undertaken by LASER and supported by a grant from the British Library Research and Development Dep. during the period Nov., 1974 to March, 1975 / By John Ashford, Ross Bourne, Jean Plaister

Holdings: Zentrale Leihtheke > cl 7794

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Record last updated: 5/22/2021 1:02 AM

Instance HRID	Source	Cataloged date
223746843	K10plus	-

Instance status term	Instance status code	Instance status source
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Inventory

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Title	Contributors	Publisher
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British National Bibliography Research Fund report / British Library	British National Bibliography Ltd Research Fund	[Wech
Co-operation in library automation : the COLA project ; Report of a research project undertaken by LASER and supported by a grant from the British Library Research and Development Dep. during the period Nov., 1974 to March, 1975 / By John Ashford, Ross Bourne, Jean Plaister	Ashford, John ; Bourne, Ross ; Plaister, Jean	LASER
Curriculum development in librarianship and information science : proceedings of a workshop held at the College of Librarianship, Wales / [supported by the British Library Research and Development Department]		Britisl
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Evaluation of the Lancaster University Library management game : a report of a research project commissioned by the British Library Research and Development Department (formerly O.S.T.I.) / [bvl C.	Eastcott, C. N. ; @Lancaster, Eng / University / Library ; @British Library / Research and Development Dept	Leeds Librar

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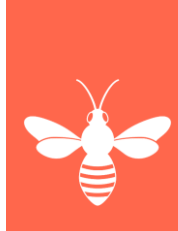
Codex Search

Receiving

Requests

Settings

Users



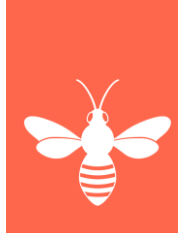
FOLIO – Free choice of business model

- SaaS (Cloud) from commercial service provider
 - Hardware and software by cloud provider (e.g. EBSCO, Index Data, ...)
- Local implementation
 - Institutional self-service
 - With additional services from commercial service providers (Knowledge Integration, Index Data, EBSCO, ...)
- Hosting and/or SaaS by public-service service provider
 - „Cloud“ in public-service domain
 - With additional services from commercial service providers (Knowledge Integration, Index Data, EBSCO, ...)




FOLIO – Free Choice of Services

- Hosting (incl. release management and testing)
- Modul-based, individual services
 - Hard- and software maintenance either in public service or commercial cloud
 - Library responsible for settings, browser-based system control and API maintenance
→ active maintenance of the system / in the community
- Full service (Saas)
 - Library has access to its own part of the system and receives training → system “out of the box” – just usage
 - Full implementation
 - “Modul by modul” implementation
 - Individual modul choice, e. g. ERM → choice of knowledge bases with different workflow options
- tbd - FOLIO is in development



FOLIO – External Data Management Options

- Connection of various data sources
 - Standard metadata sources, e. g. union catalogues (GBV K10plus)
 - Knowledge bases
 - commercial (EBSCO KB, 360°)
 - cooperative ( - www.gokb.org)
 - ...



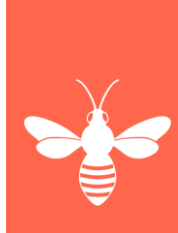
FOLIO – Reasons

- Integration in higher education structures, e.g. eLearning, ERP, IDM
- Possibility of „step by step“ implementation of single modules
=> less fractions, less risk
- Systems architecture strictly open APIs
 - Platform internal between the apps
 - External to 3rd party systems
- Enhanceable by localization and extra services, e. g. 3rd party services, local developed apps (self check app, open access app, ...)
- Integration of future requirements, e.g. APC



FOLIO ... is open!

- Open Source
 - Open APIs: quick, non proprietary add-ons possible
 - No vendor lock-in
- Cooperative, transparent participation and development – community owned
- „Save haven“ of code (Apache 2.0 license) under the Open Library Foundation
- Data security, data safety, data ownership => data sovereignty
- Self determination in information supply
 - Public service hosting possible
- Library networks - proven, strong, collaborative partners in international cooperation



FOLIO – Risks

- Achievement and maintenance of implementable version(s)
- Definition, prioritization and realization of requirements
- Reliable and timely delivery of
 - Funding
 - Staff: developer and functional experts
 - Product owner, project manager / leadership
- Planned software in scope and quality
- Consideration and management of increased efforts in coordination and communication
- Security for sustainable development continuation



FOLIO – Community is key

- Cooperative development
 - „from libraries for libraries“
 - Comprehensive functional and technical knowledge
 - Knowledge about recent and future requirements
 - Only a strong, responsible community secures sustainable development and maintenance
 - FOLIO is time and resource consuming
 - FOLIO needs people and money
 - FOLIO needs leadership
- In cooperation with commercial partners
 - Financial and management support
 - „Outcome oriented“ target settings → Return of Investment



FOLIO – Summary

- Openness as well-introduced concept in higher education (Open Data, Open Science, Open Source)
 - Open source software as one aspect of it
 - Academic and research libraries are used to cooperative projects
 - German funding agencies and ministries foster/expect Open ... Access/Data/Science
 - Transparency with regard to functional scope, sustainability and funding
 - Innovative potential driven by the libraries themselves
 - Building new services for areas in development now and in future = “more than a library management system“, e.g. open access services (APC) and eUsage App
 - Follow up and realization of libraries requirements independently from commercial interests



FOLIO – Summary

- FOLIO is in development ↔ FOLIO is live with broad functionality!
 - Development and implementation in parallel is a challenge and a chance
 - Self-determined and sustainable access to innovations
 - Cooperational options in “public-private partnership”
 - Cooperations of networks, institutions and consortia
- = Providing libraries sustainable development options for required functionality and services in an innovative, self contained, consolidated environment!



FOLIO learn more

- FOLIO Wiki
<https://wiki.folio.org/>
- Open Library Foundation
<http://www.openlibraryfoundation.org/>
- FOLIO
<https://www.folio.org/>
- Code on GitHub
<https://github.com/folio-org>
- Demo installation
<https://folio-demo.gbv.de/> (diku_admin / admin)
- German FOLIO web side
https://www.folio-bib.org/?page_id=63



Thank you.

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#RLUKDSF



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