



# HIFIS

HELMHOLTZ  
FEDERATED  
IT SERVICES

## Status June 2021

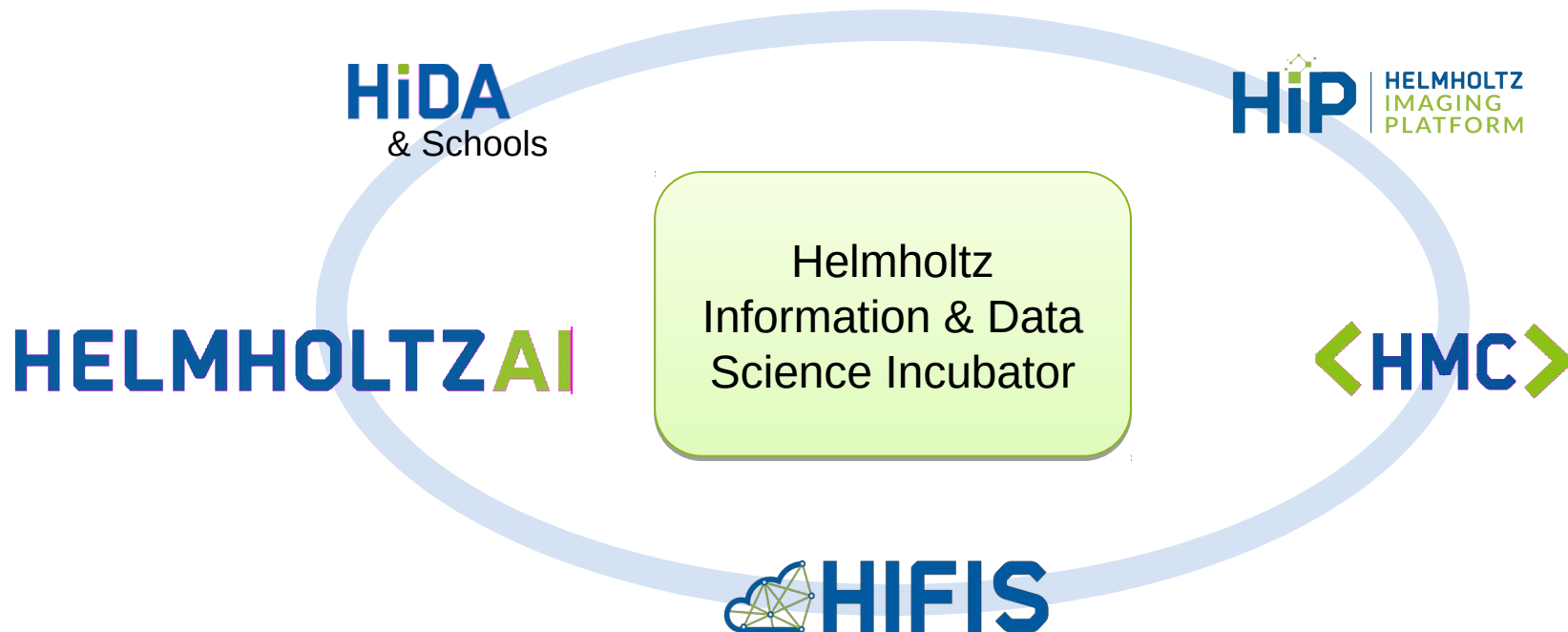
<https://hifis.net>

<https://hifis.net/news>

Uwe Jandt (DESY / HIFIS Coordination)

# Why HIFIS?

Helmholtz aims for joint research & information environment for all Research Fields



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Helmholtz aims for joint research & information environment for all Research Fields

## Helmholtz Cloud + Backbone

- Provide high performance **collaboration and community services**
- **Connect all centres** and their world-wide collaboration partners!
- **Secure, simple access** and **easy-to-use**

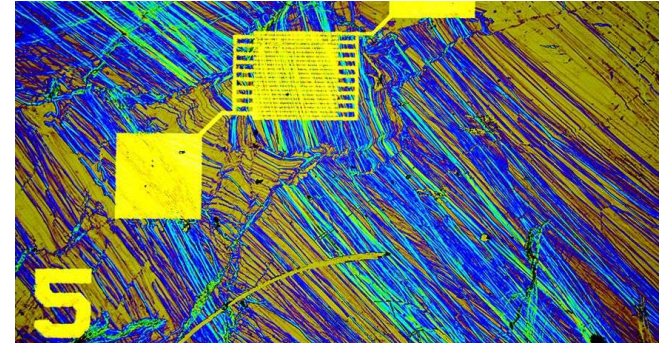


Bild 1: Strukturen aus organischen Halbleiter-Polymeren/ Himani Arora/HZDR

Bild 2: Mosaic Expedition/Stefan Hendricks/AWI

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Establish **best-practices** for the development of **research software**:

- High level of knowledge, quality, visibility and sustainability
- State-of-the-art SW development infrastructures

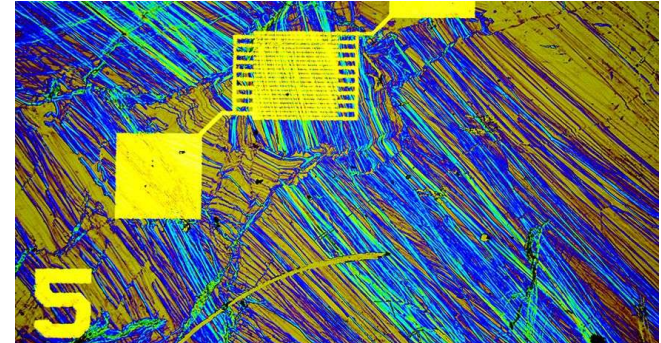


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Free of charge!

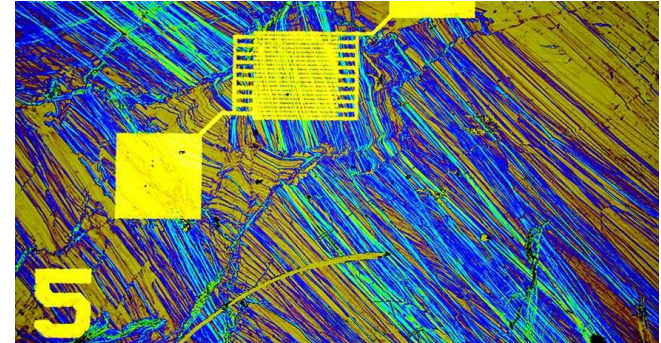


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# Who is HIFIS?

## Core Team of 11 centres

Organized in three Clusters:

### Backbone Services

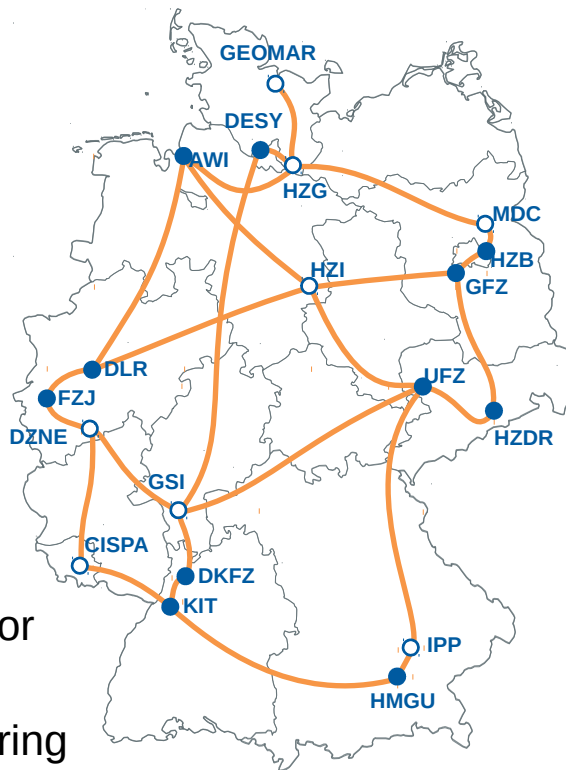
- Helmholtz AAI, VPN, Core Services

### Cloud Services

- Helmholtz Cloud Platform

### Software Services

- Platform, Training, Support for high quality, sustainable Research Software Engineering



V. Gülzow



A. Finke



U. Konrad



U. Jandt



A. Spicker



T. Huste



P. Fuhrmann



A. Klotz

- <https://hifis.net/team>
- <https://hifis.net/services>

# HIFIS Services <-> HIFIS Clusters



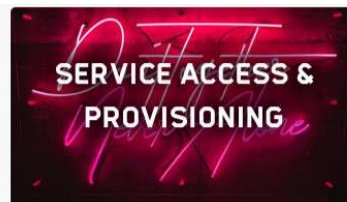
High-performance  
trusted network  
infrastructure with  
unified basic services.

# HIFIS Services <-> HIFIS Clusters



High-performance trusted network infrastructure with unified basic services.

Access, harmonization, integration and provisioning of cloud services.





# HIFIS Services <-> HIFIS Clusters



High-performance  
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Education & Training,  
Technology,  
Consulting and  
Community Services.

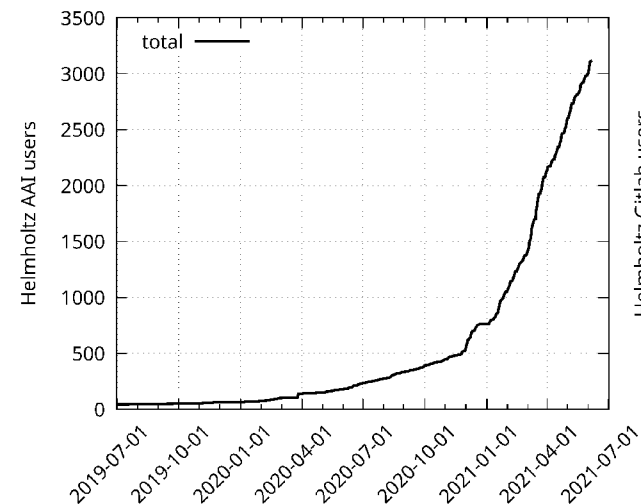


## Reshaped KPI with respect to user acceptance / quality of services

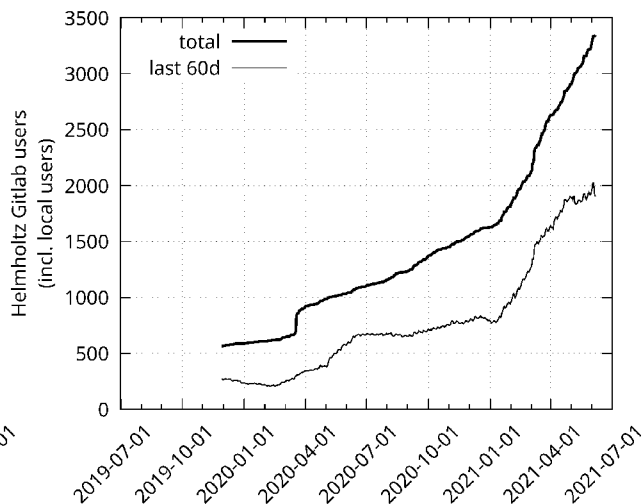
	KPI	2019	2020	2021-06
P1a	Number of individual users	65	769	>3000
P1b	Number of collaborating projects	3	26	40
P2a	Number of IT services (all AAI registered)	14	85	92
P2b	Number of IT services in Cloud Service Portfolio	0	38	~38
P3	Number of courses and events organised	-	24	≥19
P4	Number of published resources	7	31	>6
P5	Number of Milestones achieved	1	7	N/A

- <https://hifis.net/publications>
- <https://gitlab.hzdr.de/hifis/communication/service-usage-plots>

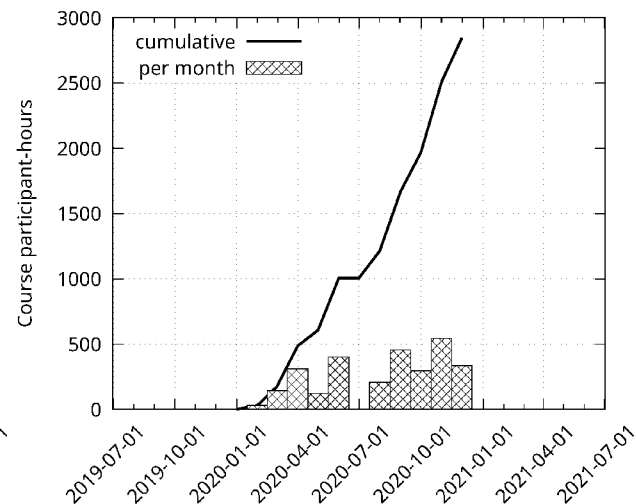
## Temporal development of selected KPI



AAI  
--> Cloud Services



Gitlab HZDR



Course participant hours

## HIFIS conducted surveys throughout Helmholtz

- Covering all research fields, centres, scientists, users and ICT providers!

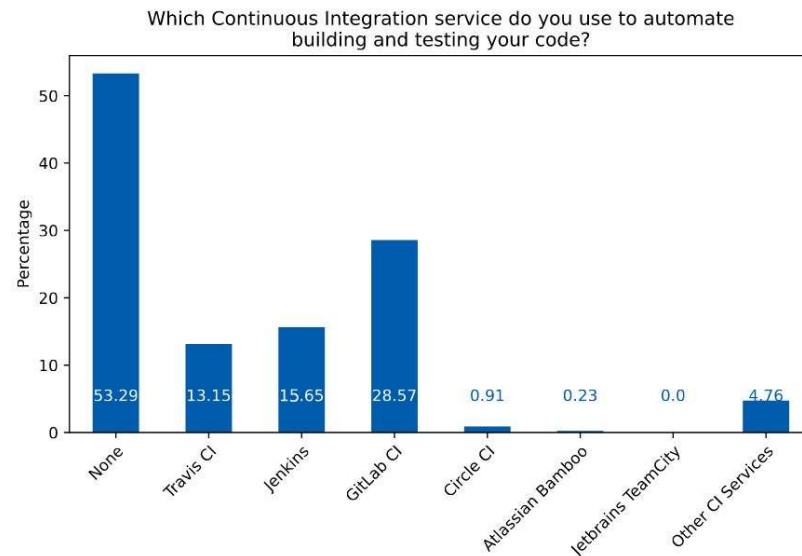
- Software Services Survey:

Approx. 470 complete replies from nearly all centers

- 4 analysis articles with perspectives on Community, Consulting, Best practices and Technologies

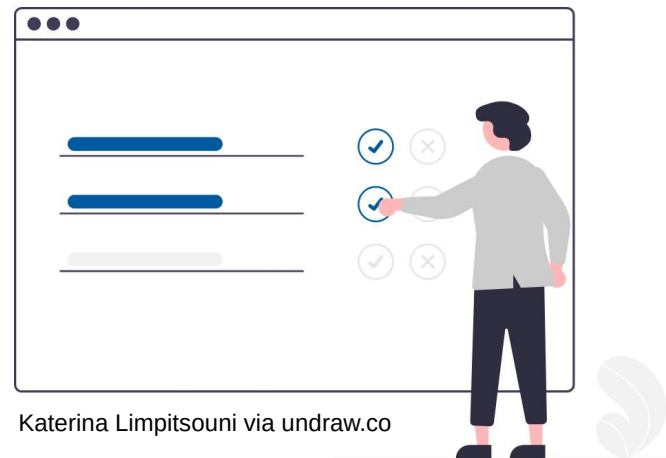
- Cloud Service Survey:

Feedback from ~110 scientists and ~100 IT-experts resulted in initial service portfolio



**Survey in whole-Helmholtz** on scientist's and other employee's use cases and practices.

- Attempt to tackle the **“IT knowledge gap”**
- Focus on **scientific workflows rather than tools**
- **Combined view** on Cloud services and RSE practices
- Distribution of the survey randomly to all employees within Helmholtz





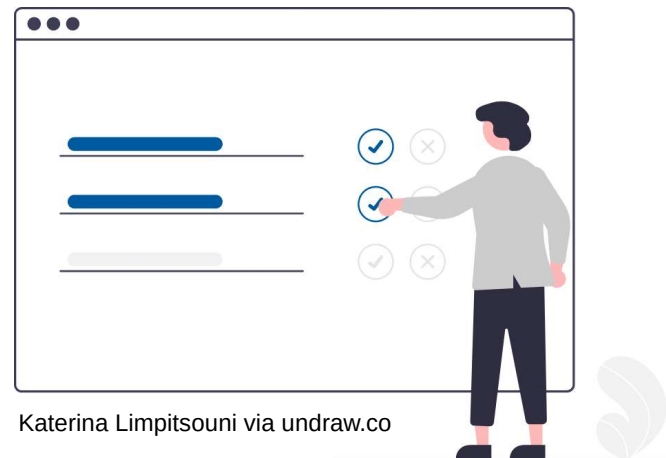
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- Distribution of the survey randomly to all employees within Helmholtz
- Time plan:

➤ **Dissemination:** May/June 2021

❖ 14/19 distributed, 5 delayed

➤ **Evaluation until:** October / December 2021



# Cross platform / external collaboration



- **Communication channels** for intra + inter platform
- **Common announcements** to respective communities
- **Collabo Tools**
  - Chat, Sync&Share, Gitlab for all-Helmholtz
  - Ticketing → Voucher system for Helmholtz AI
    - + HIP helpdesk
    - + HMC + Head Office ongoing
  - Backbone Data Transfer (FTS) with Helmholtz AI
  - [Events Management](#)
- **Advertise Helmholtz AAI** on upcoming initiatives as an **open Platform** that may be used by all interested academic initiatives.

**HELMHOLTZAI**

**HIP** | HELMHOLTZ  
IMAGING  
PLATFORM

**HiDA** <HMC>

**HELMHOLTZ**  
Open Science

**HELMHOLTZ**  
RESEARCH FOR GRAND CHALLENGES  
The Helmholtz Leadership Academy

## FEDERATED IT FOR SCIENCE

HIFIS ensures an excellent information environment for outstanding research in all Helmholtz research fields.

  
Helmholtz Cloud (beta)  
Helmholtz AAI  
Consulting  
Education & Training

### EVENTS

 16. Jun. 21  Hacky-hour

Helmholtz Hacky Hour  
#30

 24. Jun. 21  Workshop

Software Carpentry  
Workshop: Shell, Git and  
R programming

 30. Jun. 21  Hacky-hour

Helmholtz Hacky Hour  
#31

[All Events](#)[Events Feed](#) 

### NEWS & BLOG POSTS

 02. Jun. 21  Tutorial


Easy Diagram  
creation in Gitlab

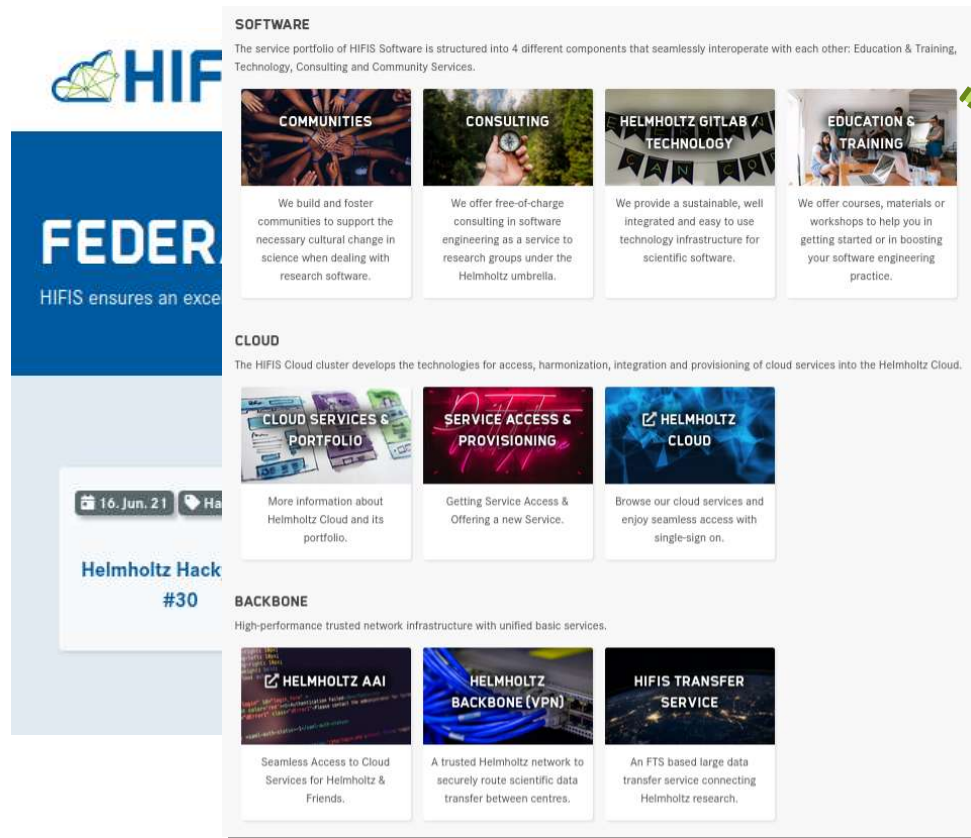
 19. May. 21  News

Policies for Research  
Software

 12. May. 21  News


HIFIS Homepages  
unified

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**SOFTWARE**

The service portfolio of HIFIS Software is structured into 4 different components that seamlessly interoperate with each other: Education & Training, Technology, Consulting and Community Services.




**COMMUNITIES**

We build and foster communities to support the necessary cultural change in science when dealing with research software.




**CONSULTING**

We offer free-of-charge consulting in software engineering as a service to research groups under the Helmholtz umbrella.



**HELMHOLTZ GITLAB TECHNOLOGY**

We provide a sustainable, well integrated and easy to use technology infrastructure for scientific software.




**EDUCATION & TRAINING**

We offer courses, materials or workshops to help you in getting started or in boosting your software engineering practice.


**CLOUD**

The HIFIS Cloud cluster develops the technologies for access, harmonization, integration and provisioning of cloud services into the Helmholtz Cloud.




**CLOUD SERVICES & PORTFOLIO**

More information about Helmholtz Cloud and its portfolio.



**SERVICE ACCESS & PROVISIONING**

Getting Service Access & Offering a new Service.




**HELMHOLTZ CLOUD**

Browse our cloud services and enjoy seamless access with single-sign on.


**BACKBONE**

High-performance trusted network infrastructure with unified basic services.




**HELMHOLTZ AAI**

Seamless Access to Cloud Services for Helmholtz & Friends.



**HELMHOLTZ BACKBONE (VPN)**

A trusted Helmholtz network to securely route scientific data transfer between centres.



**HIFIS TRANSFER SERVICE**

An FTS based large data transfer service connecting Helmholtz research.



**SERVICES** | BLOG | EVENTS | FAQ | ROADMAP | TEAM | CONTACT



**Helmholtz Cloud (beta)**



**Helmholtz AAI**



**Consulting**



**Education & Training**

**NEWS & BLOG POSTS**



**Tutorial**

Diagram in Gitlab



**19. May. 21 News**

**Policies for Research Software**



**12. May. 21 News**

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**FEDERATED**  
HIFIS ensures an excellent information service

**HELMHOLTZ AAI**

**HELMHOLTZ AAI & HELMHOLTZ ID**  
Seamless Access to Cloud Services for Helmholtz & Friends.  
Helmholtz AAI is maintained by  **HIFIS** | HELMHOLTZ  
FEDERATED IT SERVICES.

**HELMHOLTZ AAI**

**Education & Training**

**HIFIS Hacky Hour #30**  
16. Jun. 21

**R programming**

**HIFIS Homepages unified**  
12. May. 21

**All Events** **Events Feed** **All HIFIS News** **Subscribe** **News Feed**



## ■ News + All Newsletters:

➤ [hifis.net/news](https://hifis.net/news)

## ■ Services

➤ [hifis.net/services](https://hifis.net/services)

## ■ Events + Courses

➤ [hifis.net/events](https://hifis.net/events)

## ■ Roadmap

➤ [hifis.net/roadmap](https://hifis.net/roadmap)

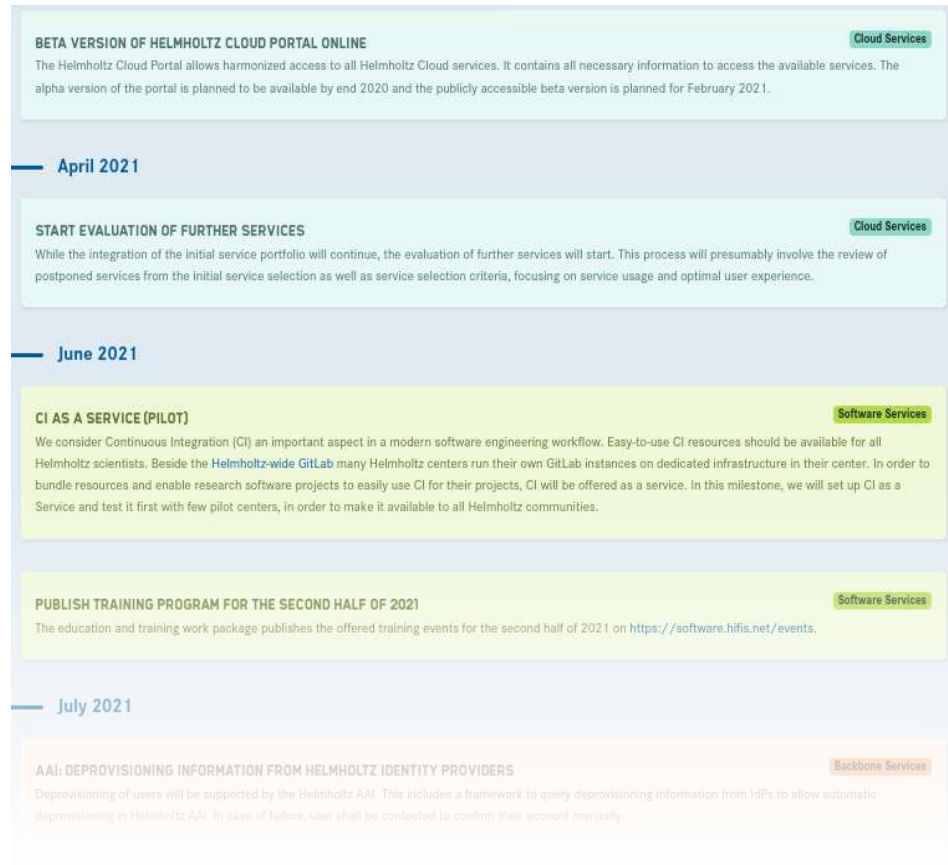
## ■ Helpdesk, Consulting

➤ [hifis.net/contact](https://hifis.net/contact)

## ■ Documentation, Publications

➤ [hifis.net/documentation](https://hifis.net/documentation)

➤ [hifis.net/publications](https://hifis.net/publications)

A screenshot of the HIFIS Cloud Portal interface. It features a light blue header with the HIFIS logo. The main content area is divided into sections by horizontal lines. The first section, titled "BETA VERSION OF HELMHOLTZ CLOUD PORTAL ONLINE", includes a "Cloud Services" tag and text about the portal's purpose and timeline. The second section, dated "April 2021", is titled "START EVALUATION OF FURTHER SERVICES" and includes a "Cloud Services" tag. The third section, dated "June 2021", is titled "CI AS A SERVICE (PILOT)" and includes a "Software Services" tag. The fourth section, dated "July 2021", is titled "PUBLISH TRAINING PROGRAM FOR THE SECOND HALF OF 2021" and includes a "Software Services" tag. The fifth section, dated "July 2021", is titled "AAI: DEPROVISIONING INFORMATION FROM HELMHOLTZ IDENTITY PROVIDERS" and includes a "Backbone Services" tag. Each section contains a brief description of the service or event.

- **Intensify interaction of central components** of Helmholtz AAI, cloud infrastructure and distributed services for:
  - Automated deprovisioning, improved monitoring, user enrolment, federated services
- **Structured communication channels** into all Helmholtz centres and scientific communities: make HIFIS services accessible to potentially interested communities.
- **Encourage predominant usage** of Helmholtz-based infrastructures/services as a requirement in future project and collaboration calls. (E.g., collaboration tools).
- Advertise **Helmholtz AAI** on upcoming initiatives as an **open Platform**

# QUESTIONS?



Katerina Limpitsouni via undraw.co

SPARE SLIDES

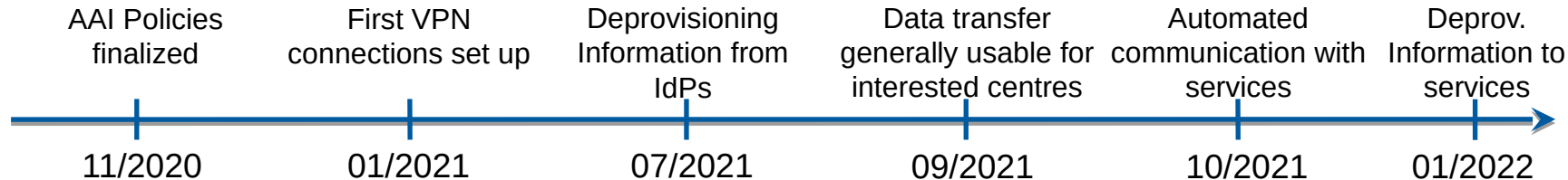


<https://hifis.net>

- [Subscribe for HIFIS announcement letter!](#)
- All queries to: [support@hifis.net](mailto:support@hifis.net)



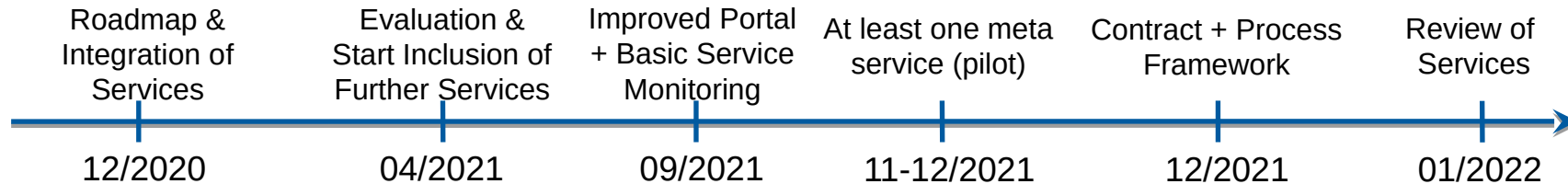
# Backbone Services for Helmholtz



- ✓ More than **3000 Helmholtz AAI / Cloud (pilot) users** from Helmholtz. **Increasing!**
- ✓ Close collaboration with European / Int'l Initiatives
  - AARC Initiative ➢ EOSC ➢ WLCG ➢ Open Storage Network (OSN) ➢ NFDI ➢ EGI
- ✓ **Helmholtz Backbone / Trusted Network:** First Six centres connected. Scientific use case with HZDR / Helmholtz AI in preparation.
- ✓ **HIFIS Transfer Service** demanded and in use for Helmholtz AI projects

## Next steps

- Framework to query **deprovisioning** information from IdPs to allow automatic deprovisioning in Helmholtz AAI.
- Easy usage of HIFIS transfer service: Any combination of interested centres shall be able to participate using a lightweight client



- ✓ **First Cloud Services integrated** and available as Pilot
  - collaboration, community and infrastructure services
- ✓ Service Selection Process reviewed by Fed Board
  - Strong focus on **benefit for researchers**, and research platforms + International compatibility
- ✓ Top priority: **Urgent interest in collaboration** services and **common access** infrastructure
- ✓ First version of **Helmholtz Cloud Portal**: [cloud.helmholtz.de](https://cloud.helmholtz.de)

## Next steps

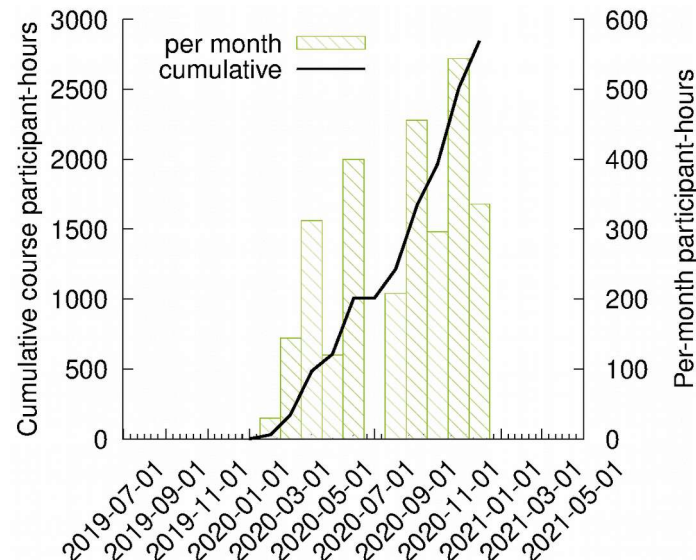
- Deeper **Integration** of services + more services;
- Helmholtz Cloud Contract Framework



- ✓ Software Survey: Evaluation<sup>1</sup>
- ✓ **>24 Courses** and **Events** organised, >300 attendees (SW Carpentry, Git, Python, Shell, Let's make your script / code ready ...)

## Next steps

- **CI as a Service**: Important environment for modern Research Software Engineering.
- Evaluate software topics of the **Overall HIFIS Survey**  
→ Adoption for Course Programme



<sup>1</sup> <https://hifis.net/news/2021/03/26/survey-results>