HELMHOLTZ

HIFIS Software Services –
Objectives and current work

HIFIS-Konferenz 2019

HIFIS | HELMHOLTZ
FEDERATED
IT SERVICES

HIFIS Software Services

Task: Establish & Support a professional Software Development

HIFIS

- SW-Architecture
- Usability
- Licensing
- SW Engineering
- Code Review

Support Services

- Development & Test Infrastructure
- Repository
- Publication Service
- Project Management

Technology Services

Software Service Coordination

- Exchange Network
- Communities for Scientific Domains
- Communities for Organisations
- Communities for SW-Technology

Community Services

Education & Training

- Basic Courses
- Advanced Courses
- Workshops
- Hackathons
- Guidelines, Handouts

HIFIS Software Team

Started between August and October

Estimated to start in November

Open Positions

HIFIS Software Team

HIFIS

| Cluster Spokesperson |
| Uwe Konrad |

| **Community Services** Maximillian Dolling | **Technology Services** Tobias Huste | **Education & Training** Tobias Schlauch | **Consulting Services** |

| Maximillian Dolling GFZ | Nornan Ziegner UFZ | Fredo Erxleben HZDR | |
| | Christian Hüser HZDR | Bezaye Tesfaye GFZ | |
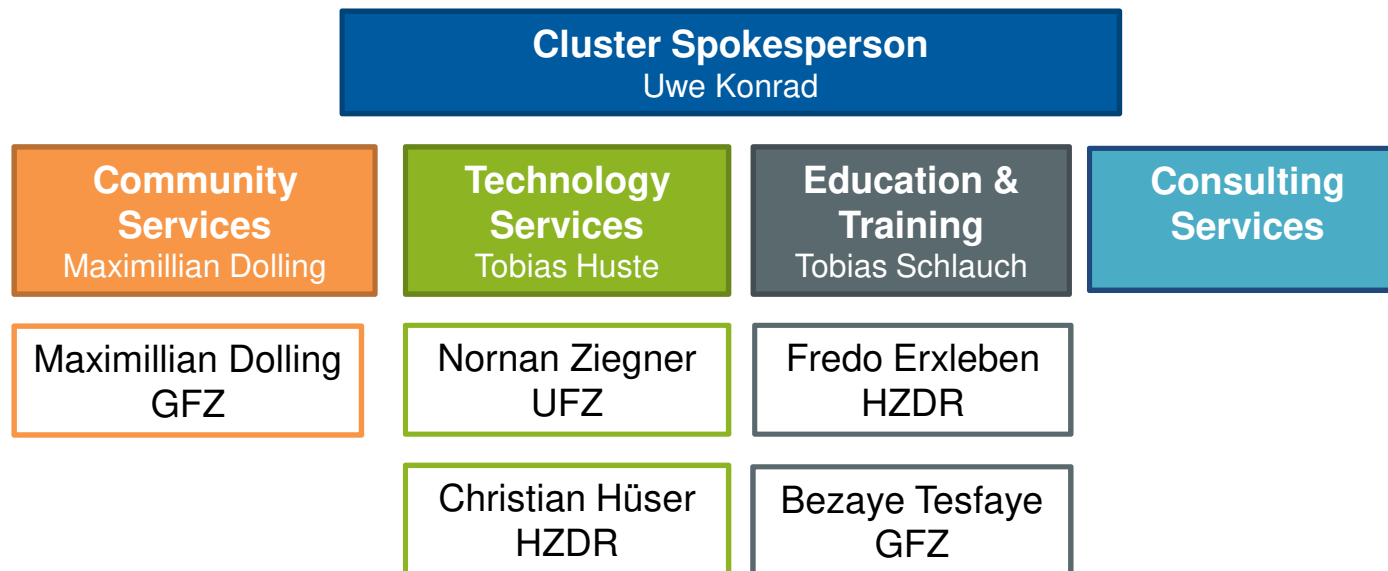
Training & Education

Basic plan

- **Basic idea:** Align course offer with desired development practice.

- Desired development practice:
  - Short-term topics
    - Basis is going to be laid by the Software Policy (SP)
    - Concept for practical information to accompany the SP
    - Verifiability through introducing suggestions for application classes (compare DLR suggestions)
  - Mid-term topics:
    - Proceed on making advanced practice verifiable

- Provide course offer to enable the desired development practice

- Establish cross-link to the Helmholtz Data Science Academy (HIDA)

Training & Education
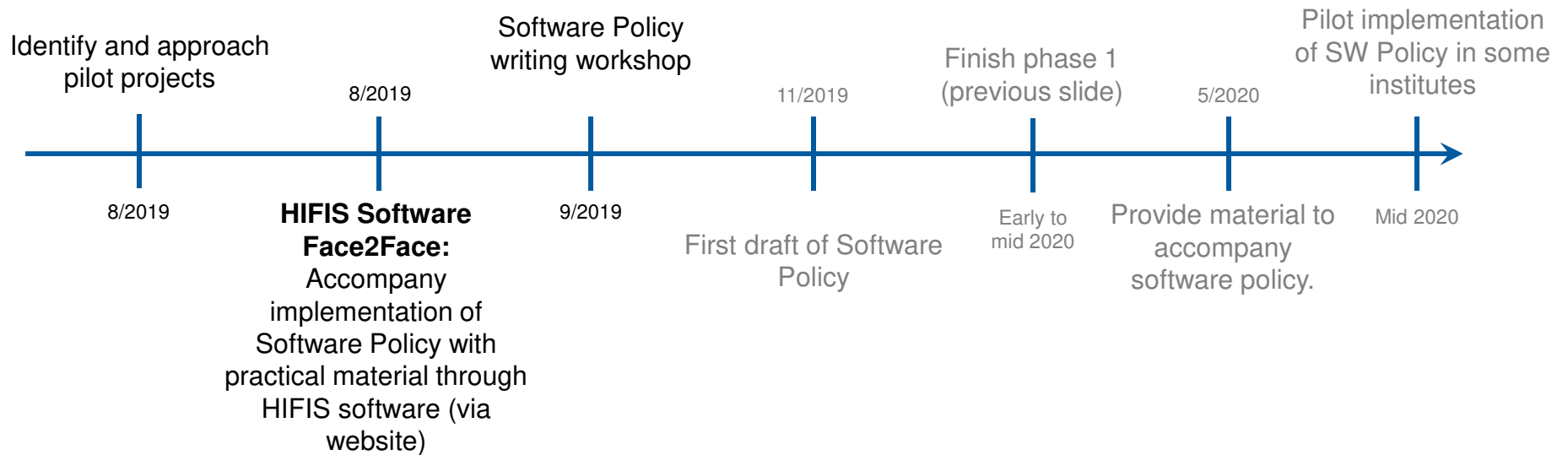## Current activities

Consulting Services

Basic plan

- Creation of a general consulting concept and framework (phase 1)

  - Define the scope of the offered consulting services
  - Prominent presentation of the offers on the HIFIS Software website
  - Setup the required tools
  - Introduce quality criteria

- Implementation of the offers in practice and continuous refinement according to quality criteria (phase 2)

Consulting Services

Current activities

Identify and approach pilot projects

8/2019

8/2019

HIFIS Software Face2Face: Accompany implementation of Software Policy with practical material through HIFIS software (via website)

Software Policy writing workshop

9/2019

11/2019

First draft of Software Policy

Finish phase 1 (previous slide)

Early to mid 2020

5/2020

Provide material to accompany software policy.

Pilot implementation of SW Policy in some institutes

Mid 2020

Community Services

Basic plan

- Identify software related topics having potential to create effective communities
    - Hand in hand with 'Training and Education'

- Identify experts within a specific topic, who are willing to invest time. Support them
    - A 'critical mass' must be achieved

- Cross-event-promotion, so that people know about the different communities
    - Promote communities and show benefits
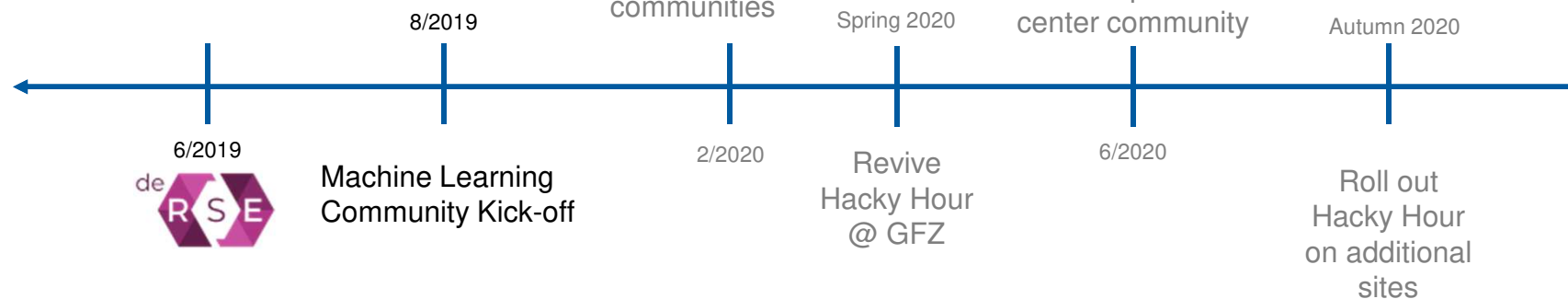
Community Services
Current activities

deRSE'19 conference:
- Co-organization
- HIFIS Software presentation
- HIFIS Software workshop

Evaluate ML community
- lessons learned
- create guidelines for building up and sustaining communities
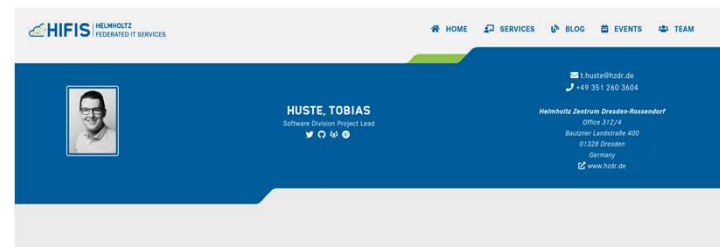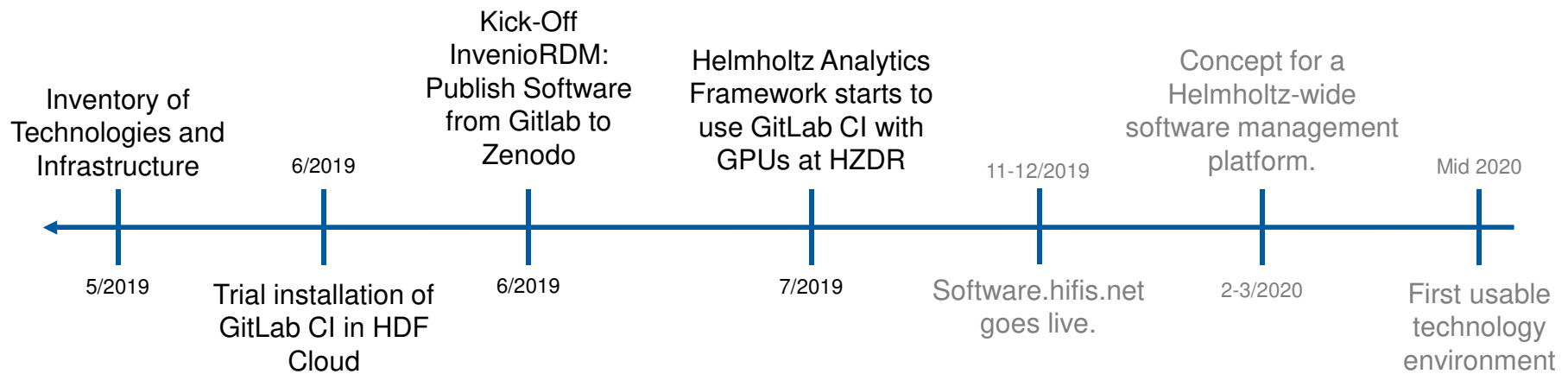
Start first pilot cross center community

8/2019

Spring 2020

Autumn 2020

6/2019

2/2020

6/2020

Machine Learning Community Kick-off

Revive Hacky Hour @ GFZ

Roll out Hacky Hour on additional sites

Technology Services
Basic plan

- Create concept for a Helmholtz-wide software management platform (by Q1 2020)
  - Incorporate the findings from the inventory of existing technologies and infrastructure
  - Interaction with existing infrastructure like Helmholtz Data Federation (HDF)
  - Compare free vs paid solutions

- Stepwise implementation of the proposed concept
  - First usable environment expected for spring to mid 2020

Technology Services

Current activities

Inventory of Technologies and Infrastructure

Kick-Off InvenioRDM: Publish Software from Gitlab to Zenodo

Helmholtz Analytics Framework starts to use GitLab CI with GPUs at HZDR

Concept for a Helmholtz-wide software management platform.

6/2019

11-12/2019

Mid 2020

5/2019

6/2019

7/2019

2-3/2020

Trial installation of GitLab CI in HDF Cloud

Software.hifis.net goes live.

First usable technology environment

HIFIS Software Developer Survey

- **Goal:**
    - Acquisition of the status quo
    - Determination on the demand for concrete services

- **Target audience:**
    - All Helmholtz employees who develop software of arbitrary size
    - No categorical exclusion of external participants; Exclusion in the analysis phase

- **Communication:**

- Open Science Newsletter
- Various center mailing lists
- Helmholtz Incubator newsletter
- deRSE newsletter
- KODA mailing list
- …

- **Official start: 21. to 27. October (Staged rollout)**

HIFIS Workshop

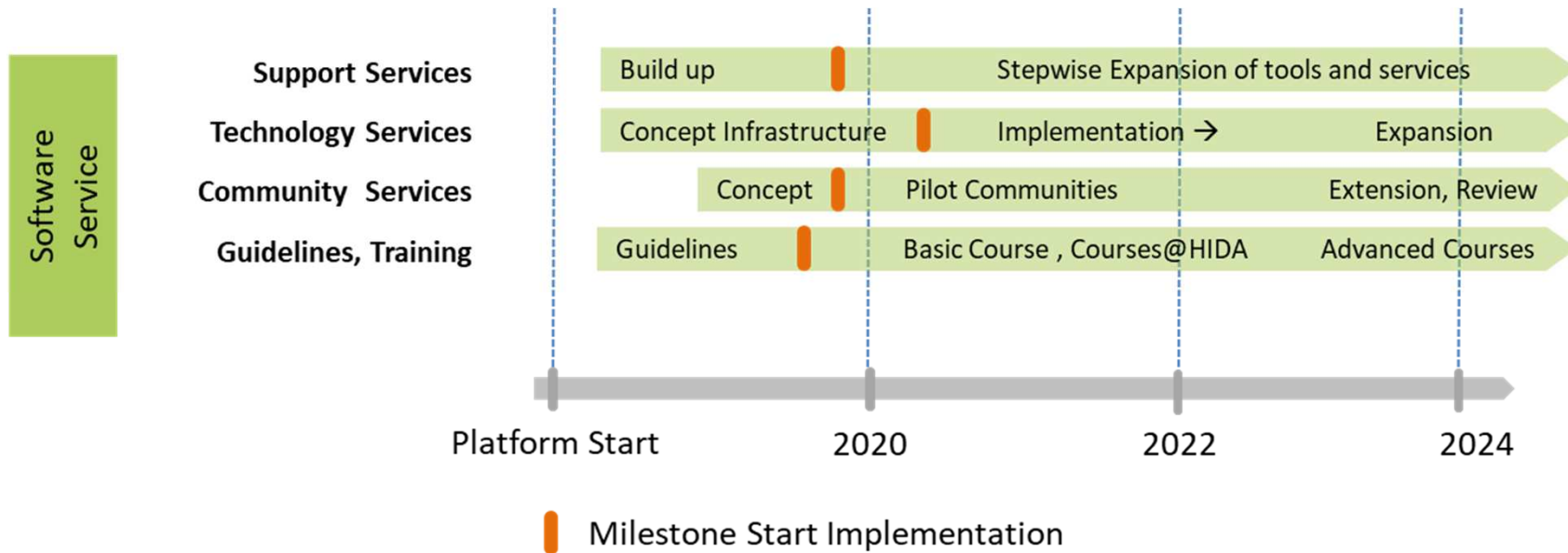## User Story Creation Workshop

- Interactive session

- Collect expectations and requirements

- Hope for input from many different directions
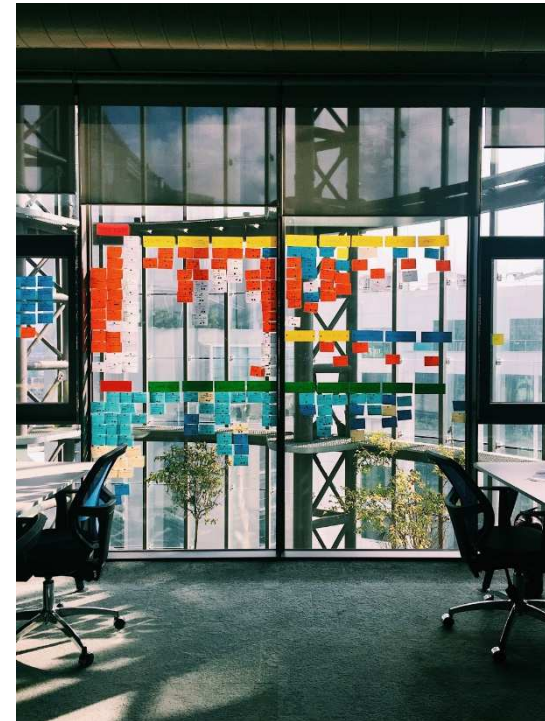
HIFIS Software Services

Objectives and current work

Proposed Work Packages & Time line

Summary

Helmholtz Software Services will …

- Empower scientists of any domain to implement and to perpetuate modern scientific software development principles

- Raise software development at Helmholtz Centres to a new level of quality and protect invested efforts

- Be part of an overall Helmholtz ICT strategy

- Provide sustainable services to make research software **F**indable, **A**ccessible, **I**nteroperable and **R**eusable