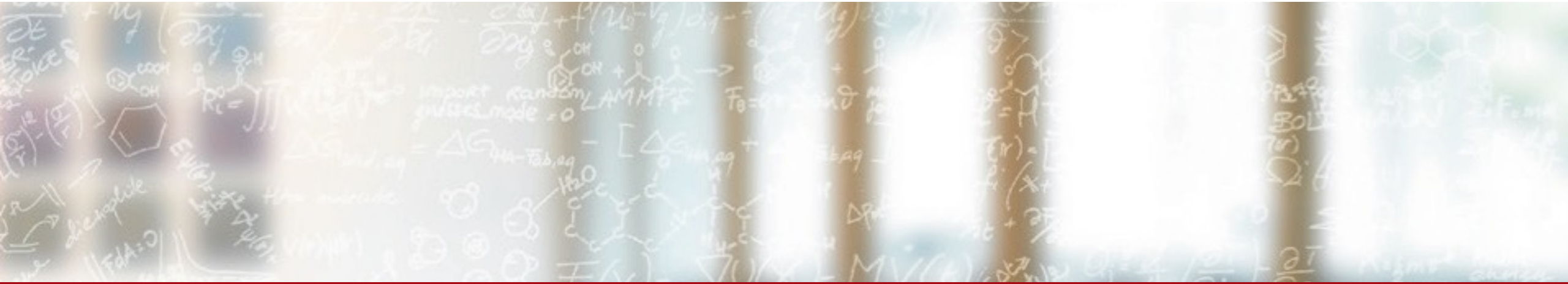




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# Computing Platforms and Infrastructure Program Update

SKACH spring meeting

Victor Holanda Rusu, CSCS

June 1st, 2023



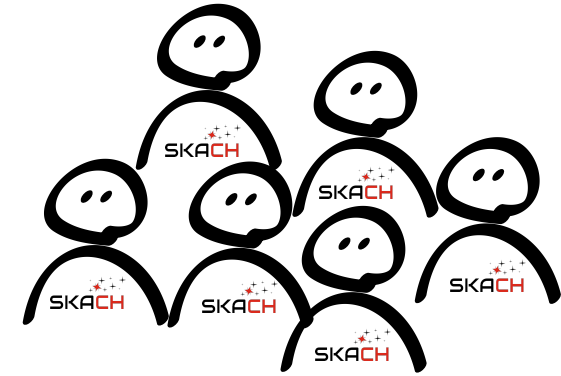
# Who are we?

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# Computing Platforms and Infrastructure

## Who are we?

- We are part of team SKACH
- We aim to
  - Enable first science use cases, data analysis, and data management projects in Switzerland through the existing CSCS HPC Platform
  - Develop and provide a vCluster for the first prototype SRC that can connect to the international SRC network
  - Promote synergies between CTA and SKA communities



Collaboration Manager

Architect/Solution Engineer

Platform, Systems and Archive  
Engineers

HPC Software Specialist



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# Enable SKA first science use cases using existing CSCS HPC Platform

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# Enabling first science use cases at CSCS

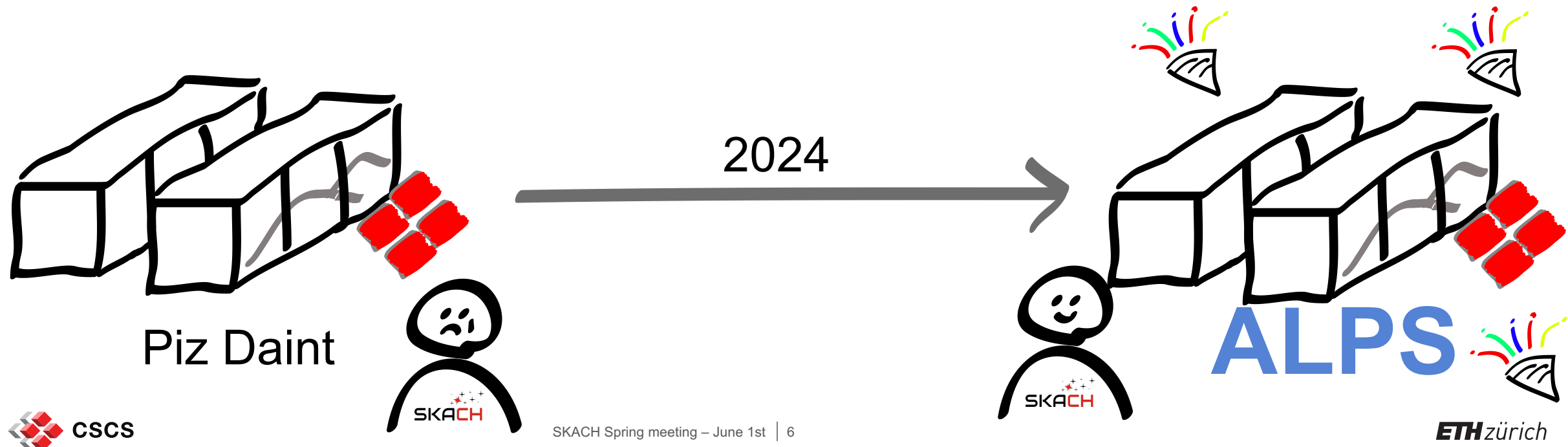
## What are we doing?

- Working on making sure that SKACH project are running at CSCS
  - System issue or questions: [support ticket](#)
  - Other questions: contact me
- Defined a renewal process for SKACH projects
- Apply for resources and renewals: [Google Form](#)
- Created a questionnaire to assess feedback from allocated projects
  - 5 out of 14 projects replied
  - Positive feedbacks
- Working on the SPH-EXA and Blueblid projects

# Enabling first science use cases at CSCS

## What is coming?

- Developing a plan to migrate SKACH projects from current Piz Daint to Alps
- The current high-level plan is to
  - First, migrate CPU-only projects into eiger
  - Migrate GPU project into ALPS



# SKACH resource allocation

## How to apply

- Use the [Google Form](#) to apply
- Small projects (< 5'000 node hours, 1 TB of storage, < one year)
  - Approval for this submission should take an average of 1-2 weeks
  - Requires board member approval – may take a while for the board member to reply
  - Can submitted at any time
- Large projects (> 5'000 node hours,  $\geq$  1 TB of storage, = one natural quarter)
  - must be submitted two months prior to the quarter
  - October - December 2023 (Submitted by August, 1st)
  - January – March 2024 (Submitted by October, 1st)
- Long projects (> 5'000 node hours,  $\geq$  1 TB of storage, = one natural year)
  - **Submission closed on May 15th**

# SKACH resource allocation

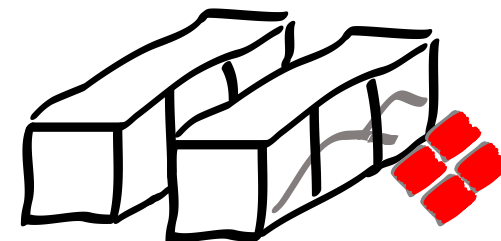
## Q2 2023





# SKACH resource allocation

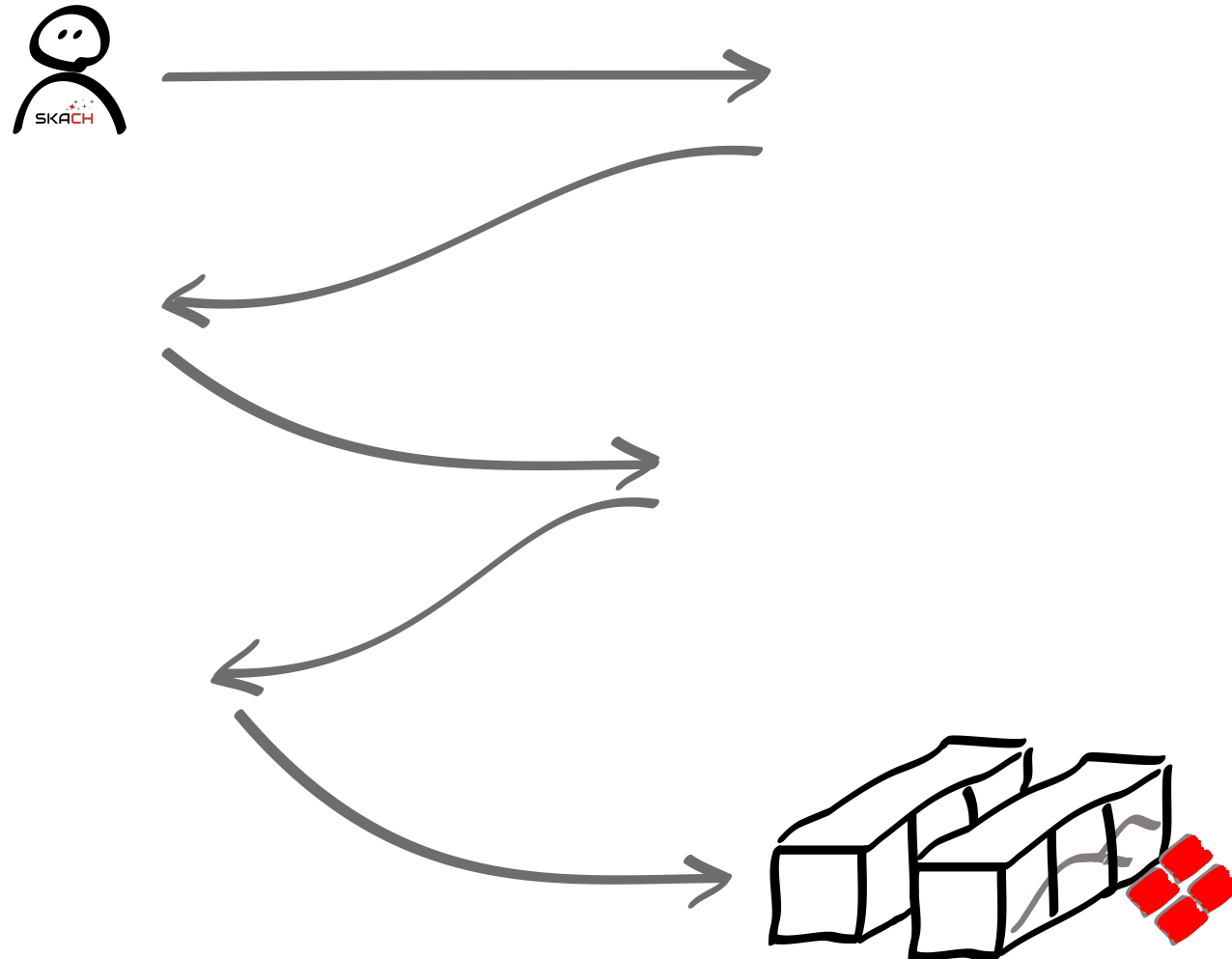
## Requesting resources – Who is eligible?



SKACH HPC  
resources

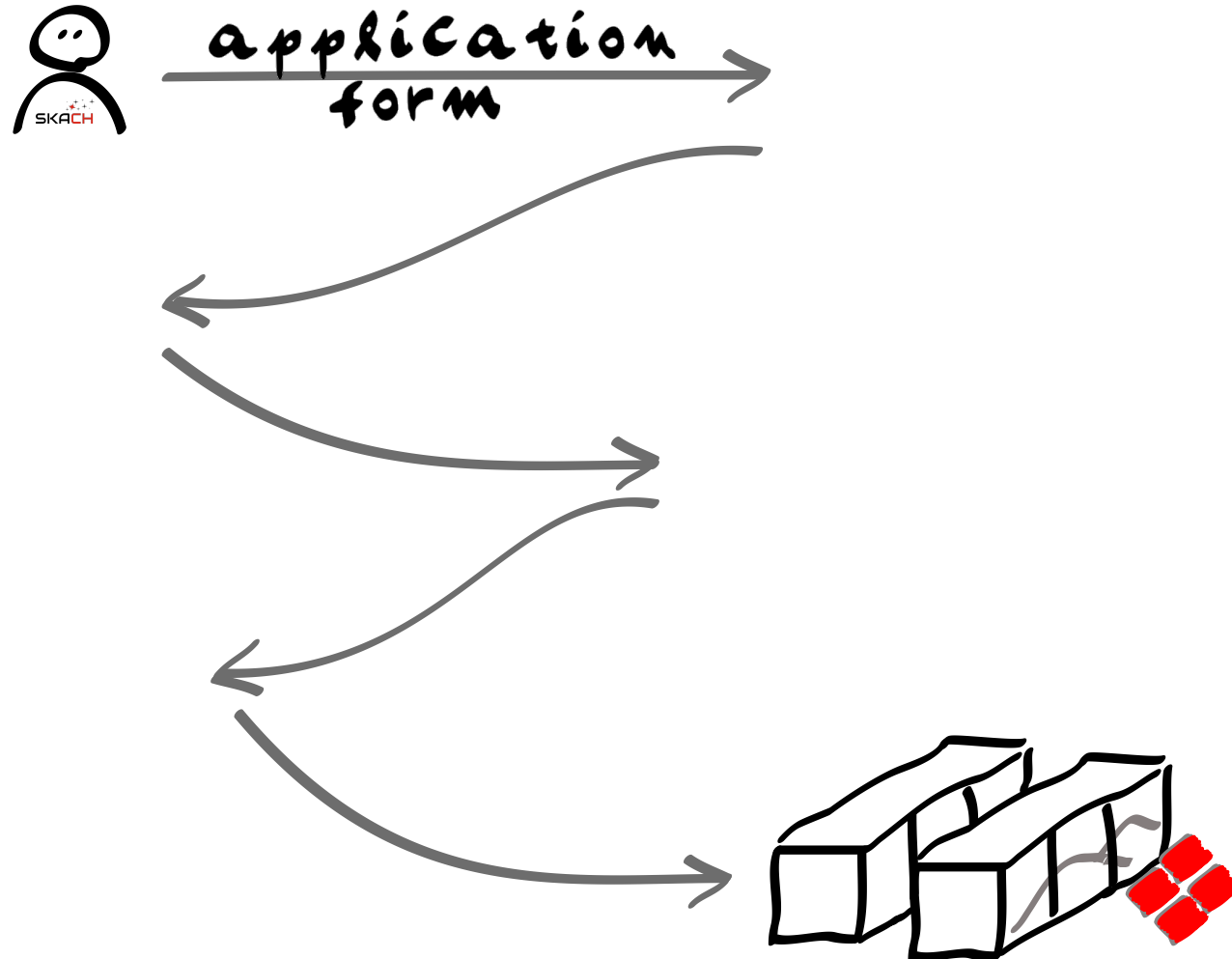
# SKACH resource allocation

## Requesting resources



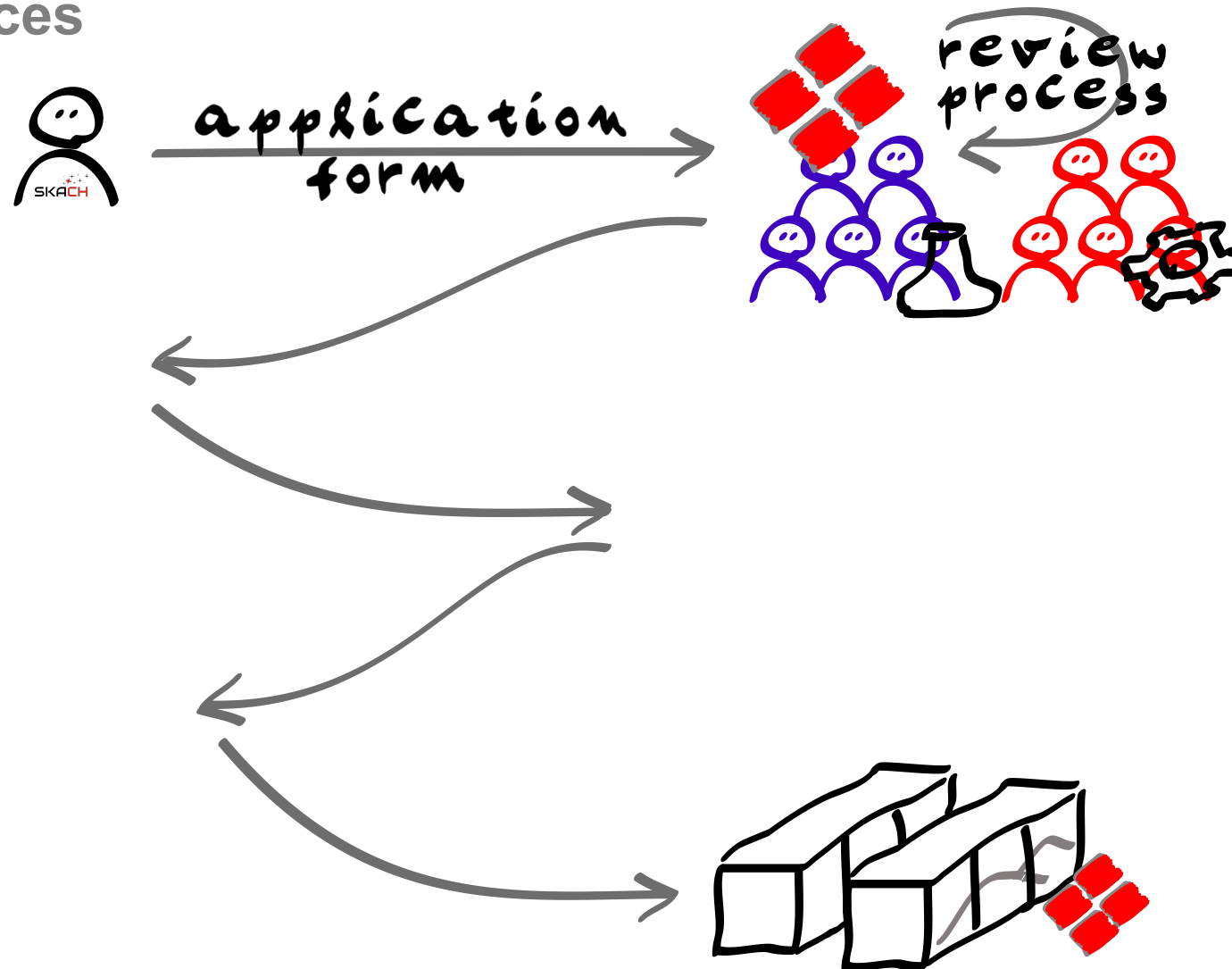
# SKACH resource allocation

## Requesting resources



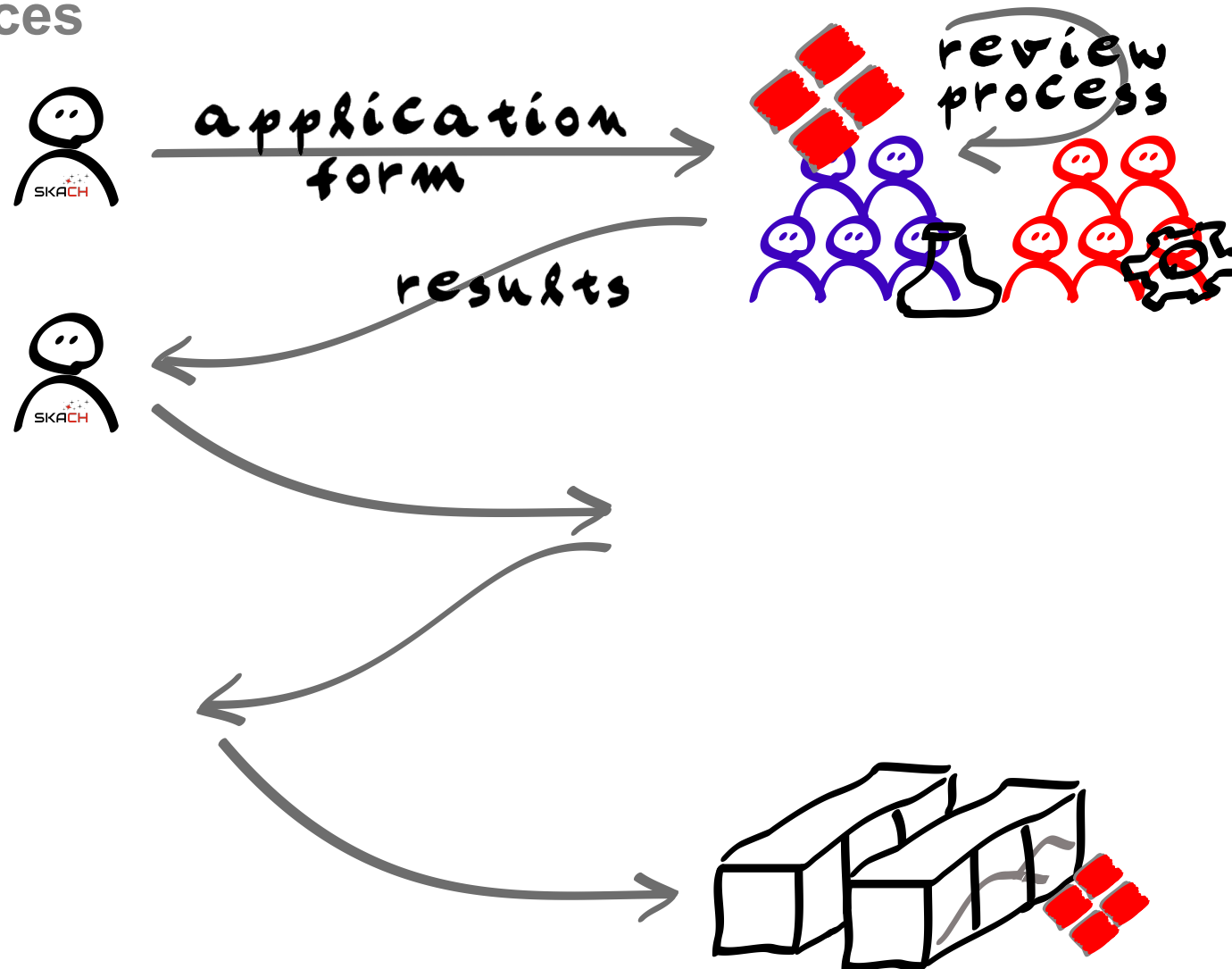
# SKACH resource allocation

## Requesting resources



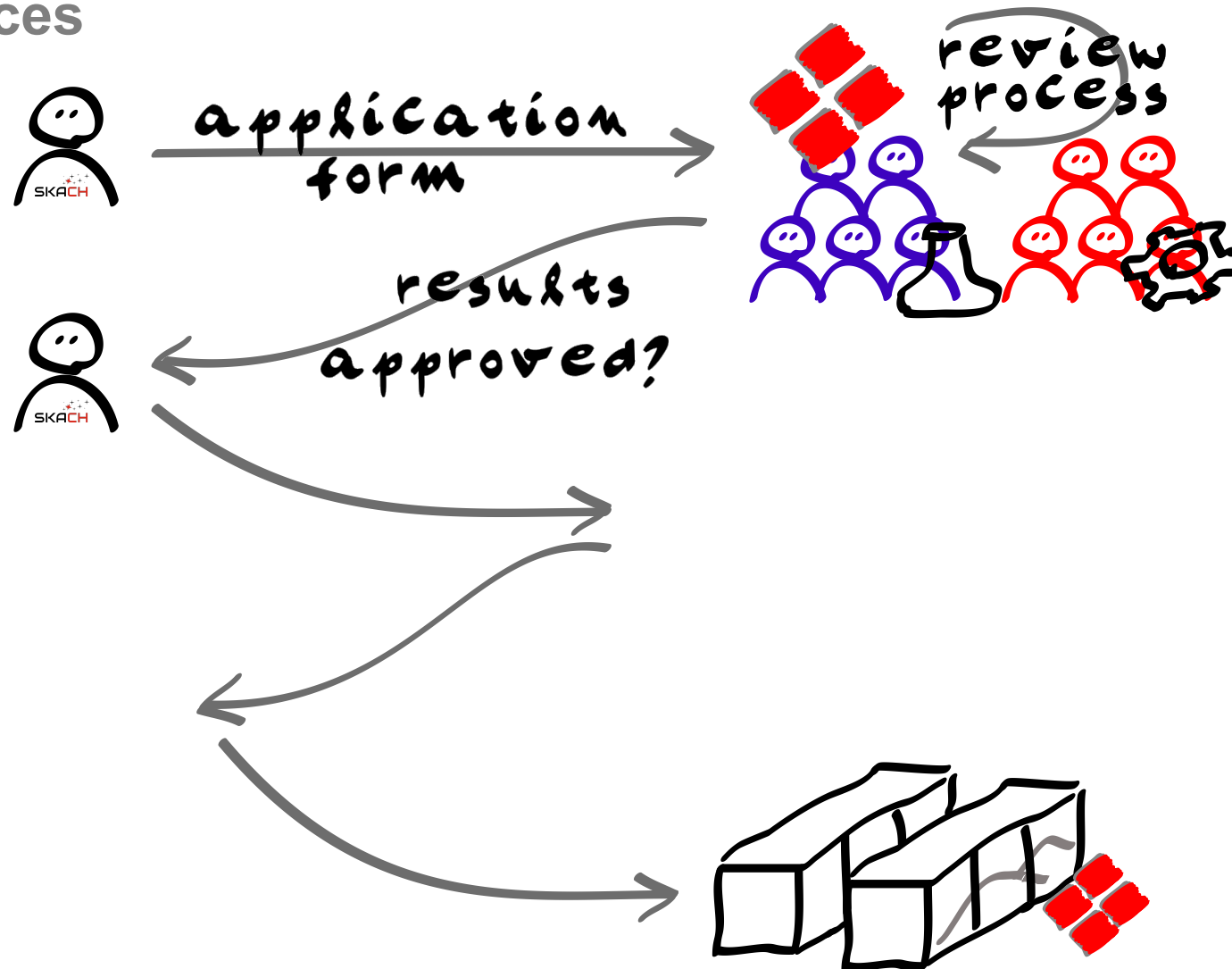
# SKACH resource allocation

## Requesting resources



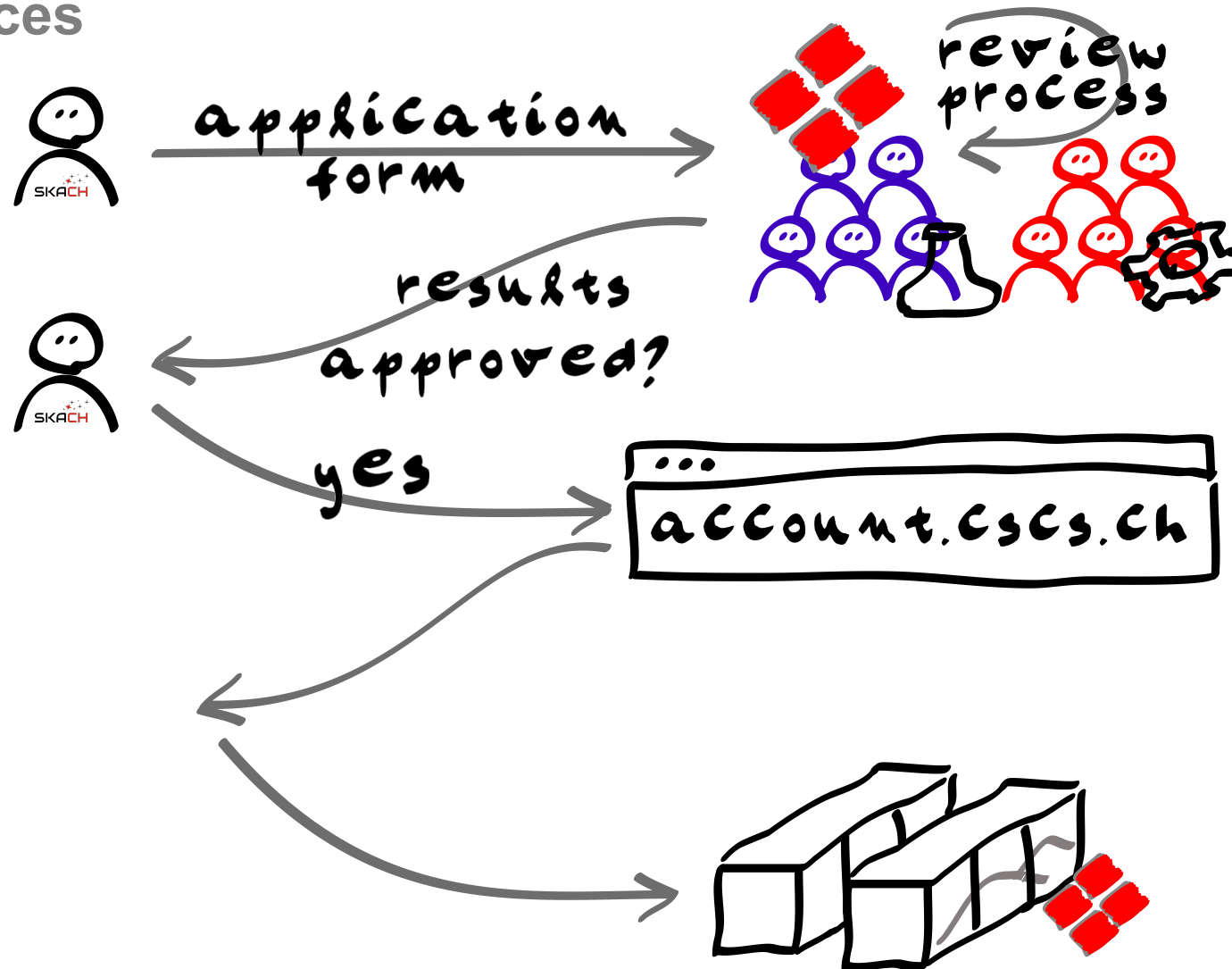
# SKACH resource allocation

## Requesting resources



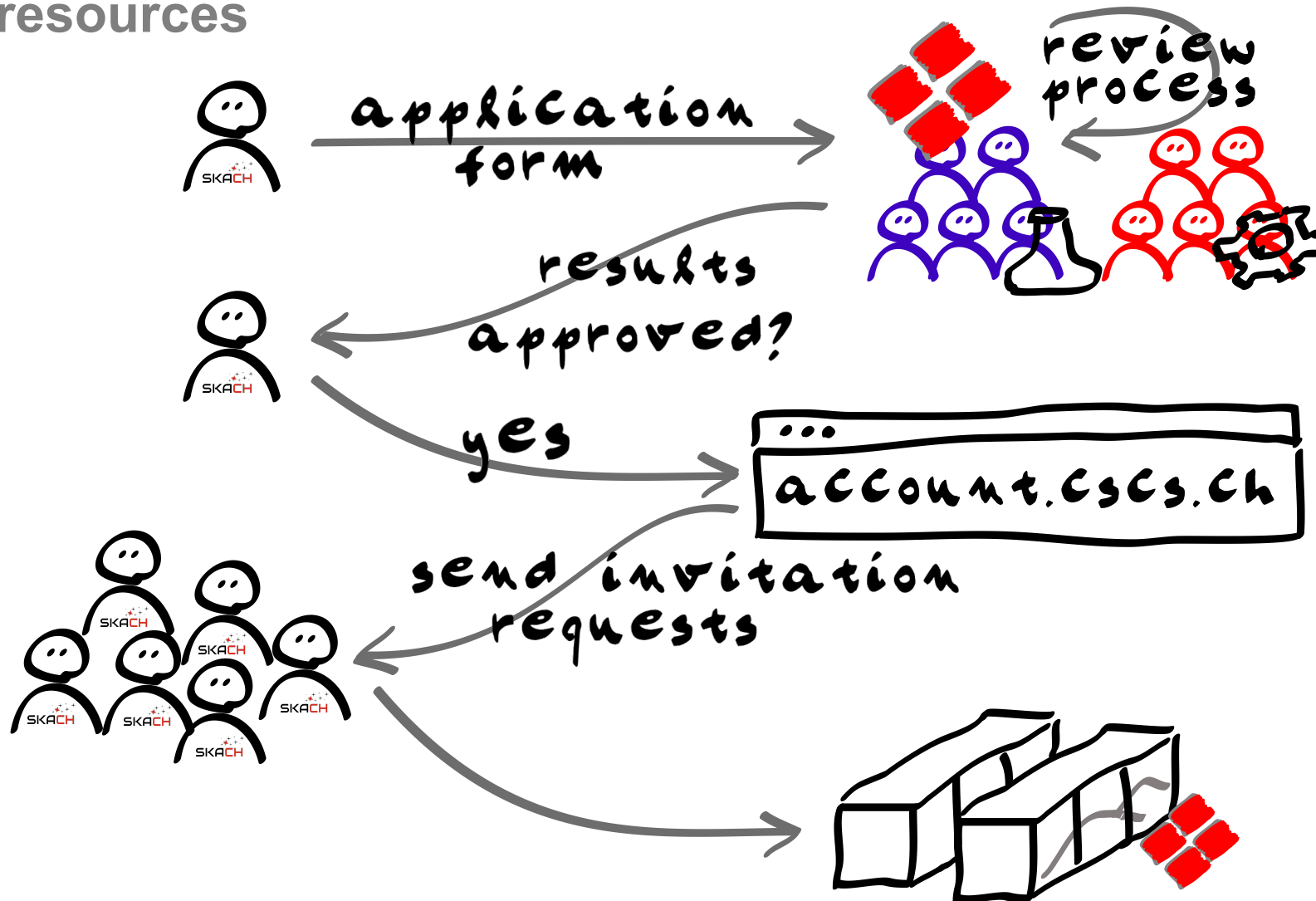
# SKACH resource allocation

## Requesting resources



# SKACH resource allocation

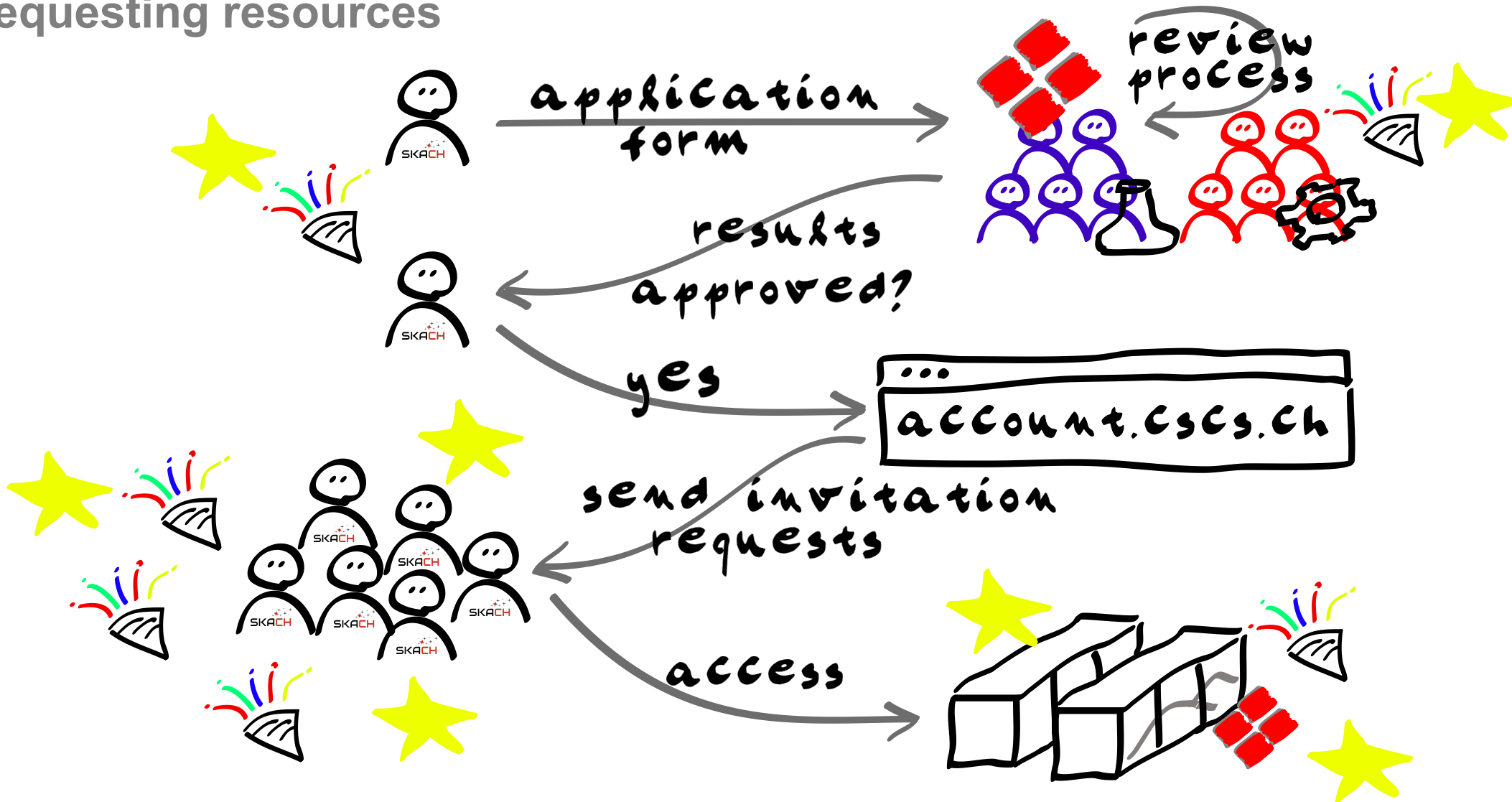
## Requesting resources





# SKACH resource allocation

## Requesting resources





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# Develop and provide a vCluster for the first SRC prototype

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# Develop and provide a vCluster for the first SRC prototype

## What are we doing?

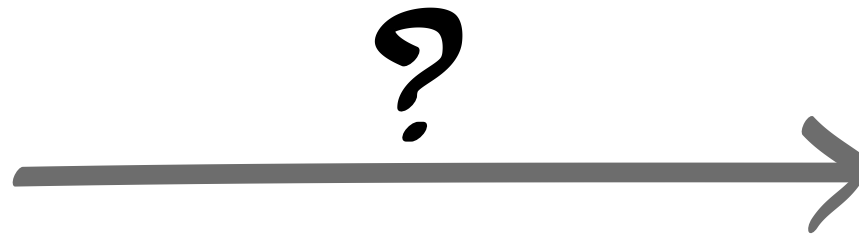
- Working on maintaining the current development platform
  - OpenStack
  - Ceph storage
- Deploying the vCluster, named Gornergrat
  - The initial cluster size is 4 CPU-only compute nodes, 1 login node
  - Services
    - Slurm
    - Cray Programming Environment
    - User defined environments
    - sarus
- Developing a Kubernetes cluster for services
  - Undergoing security assessment

# Develop and provide a vCluster for the first SRC prototype

## What is coming?

- OpenStack development cluster lifetime is ending
- Working to understand the services that cannot run on Kubernetes

Start to get familiarized with kubernetes



kubernetes





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# Promote synergies between CTA and SKA communities

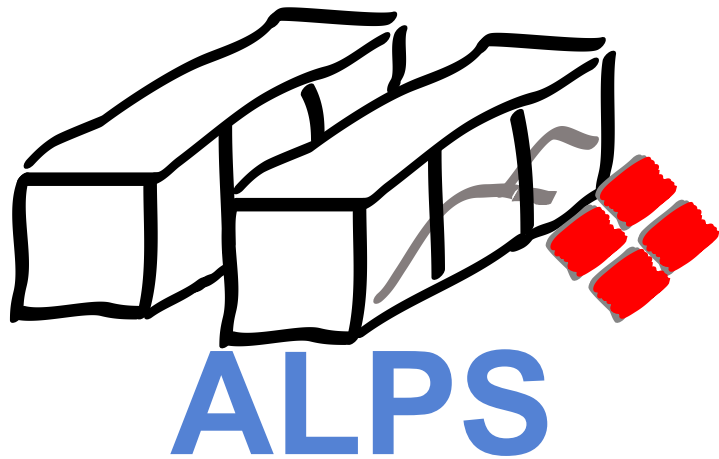
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# Promote synergies between CTA and SKA communities

## What are we doing?

- vCluster development
- AAI solution based on indigo-iam – SKA IAM prototype
- Tape archive based on dCache



Welcome to **SKA IAM Prototype**

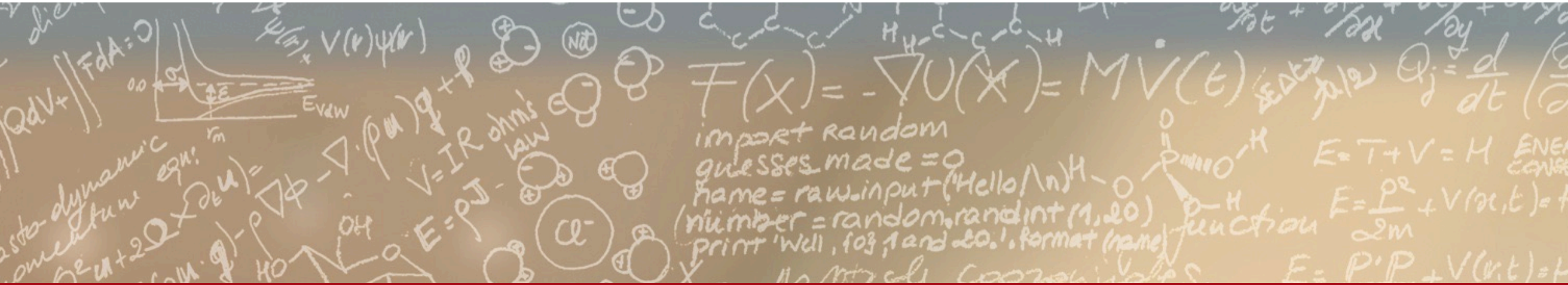




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**Thank you for your attention.**

**Questions?**

