The GOBLET Journey
& where are we heading?

Celia van Gelder, GOBLET Chair
11 October 2022

@mygobletorg   mygoblet.org   info@mygoblet.org

Welcome to CoBLET2022!

- Welcome to you all on behalf of the GOBLET Executive Board

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Mohammad Asif Khan

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Beykoz Institute of Life Sciences and Biotechnology

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COBLET2022
Istanbul

1st COLLOQUIUM ON BIOINFORMATICS LEARNING, EDUCATION AND TRAINING
In conjunction with 11th GOBLET AGM 2022

11–14th OCTOBER 2022

Bioinformatics Training and Education: Charting the Path Ahead

Hybrid

Organized by
BEZMIALEM VAKIF UNIVERSITY 1845

GOBLET
Global Organisation for Bioinformatics Learning, Education & Training

Partially Funded By
Chan Zuckerberg Initiative
CS&S Code for Science & Society

Contact us
Yalıköy Mahallesi, 34820
Beykoz/İstanbul

goblet2022@bezmialem.edu.tr

Social Media

Supported by
ISCB REGIONAL Student GROUP
Turkey

Big thank you to our sponsor

- CoBLET2022 was awarded $11,125 by Code for Science & Society (CS&S) through sponsorship from Chan Zuckerberg Initiative

- CS&S helps fund events about data science being used to improve the socioeconomic status of people worldwide through education, science and technology through other funding agencies such as Grant GBMF8449, the Wellcome Trust, and Chan Zuckerberg Initiative.

Outline

- Introducing GOBLET

- GOBLET Deliverables

- The GOBLET journey & where are we heading?

Building a community that cares

Mission

- To cultivate the global bioinformatics trainer community, set standards and provide high-quality resources to support learning, education and training.

Vision

- To unite, inspire and equip bioinformatics trainers worldwide.

Ethos

- *Inclusivity*: welcoming all relevant organisations, networks, societies
- *Sharing*: expertise, best practice, materials, tools, compute resources
- *Openness*: using Creative Commons Licence
- *Innovation*: welcoming imaginative ideas and approaches
- *Tolerance*: transcending national, political, cultural and social boundaries
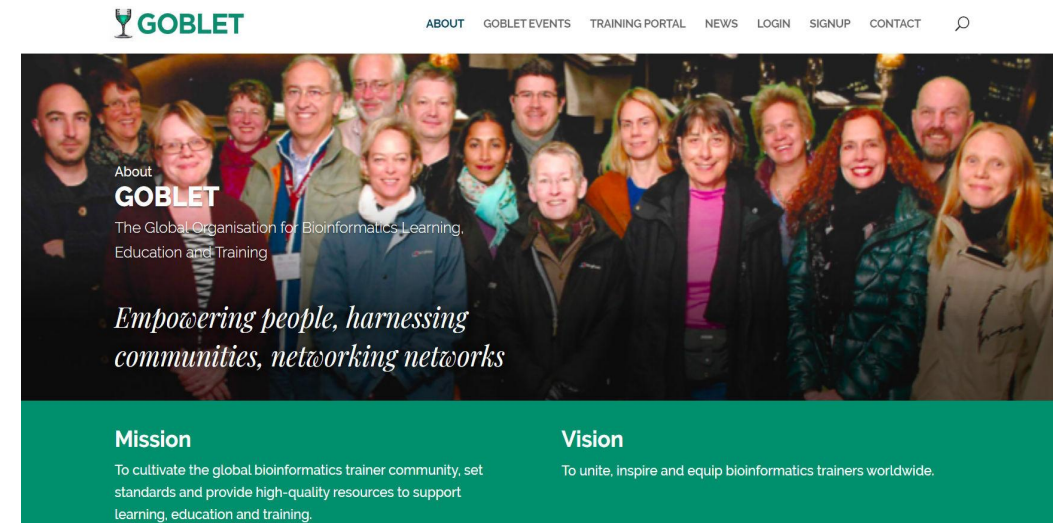
GOBLET Objectives

- Set standards and provide high-quality resources to support learning, education and training
- Provide a Training Portal
- Offer training for trainers and end-users
- Develop (branded) training material and course standards
- Provide training resources (surveys, best-practice guidelines, *etc*.)
- Raise funds to be able to meet our objectives
- Give further consideration to mechanisms for trainer recognition

@OzolinsJanis
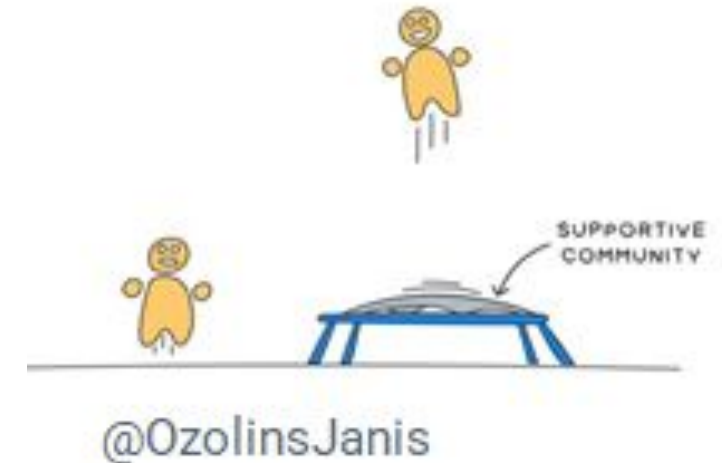
Quality - **Accreditation** - **Incentivisation/Recognition** - **Training methods** - **Outreach** - **Sustainability /Funding**

Organisational Members 2022
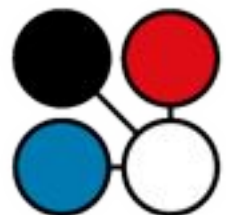
My training & skill building hats
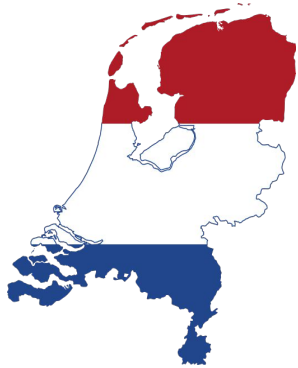
2003-2013

Since 2014

Since 2014

Since 2020

Since ca. 2019

Since 2012

Outline

- Introducing GOBLET

- GOBLET Deliverables

- The GOBLET journey & where are we heading?

GOBLET deliverables

- Events
- Publications
- Strategic collaborations
- Securing grants
- Dissemination: PR/Outreach & GOBLET website
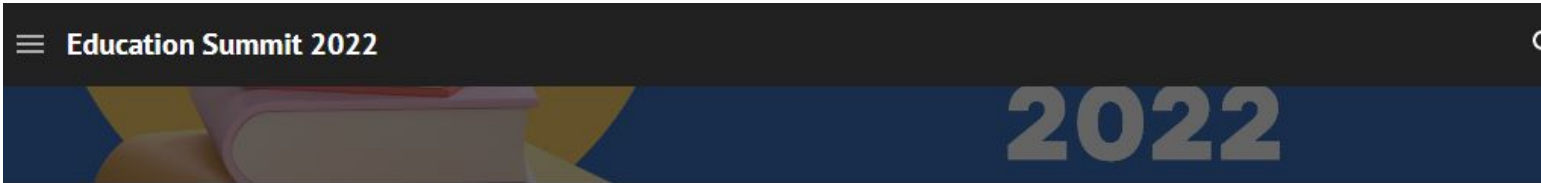
About Bioinformatics Education Summits

- Started in Cape Town, 2019
- **Aim:** Bring together Bioinformatics trainers and educators to drive the development of standards and guidelines for Bioinformatics training and education globally
- Not a research or scientific conference, but rather a **Working Meeting** where participants are expected to contribute with their experience and their active involvement
- Monthly meetings to keep up momentum
- ~90 people from 35 countries, and growing!

Education Summit 2022 (4ᵗʰ edition)

Education Summit 2022

2022

PLEASE REGISTER HERE

https://docs.google.com/forms/d/e/1FAIpQLSdGNz57LYQ98FT805zSgrRC80y52RRhTVU-eXi356IDEIDTqA/viewform

This year the Bioinformatics Education Summit (hosted by APBioNet) will be held on the 9th-11th of May.

Polite Reminder - this is not a Research or Scientific Conference or Congress, but rather a Working Meeting where we expect participants to contribute with their experience and their active involve...
Participation is free and open to all people working in the area of Bioinformatics teaching and...
or that have a clear interest in contributing to it.

Select the Day

Day 1 - May 9	Day 2 - May 10	Day 3 - May 11
Stream 1 : Trainer guidance and resources/portal	Stream 1 : Training in Low to Middle Income Countries	Stream 1 : Virtual to Hybrid Model
Stream 2 : Competencies and related docs/guidelines	Stream 2 : ISCB endorsement	Stream 2 : Train the Trainer

GOBLET

CABANA
Capacity building for bioinformatics in Latin America

elixir

H3ABioNet

GOBLET
Global Organisation for Bioinformatics Learning, Education & Training

APBioNET

iSCB
INTERNATIONAL SOCIETY FOR COMPUTATIONAL BIOLOGY

Recent Workshops

- **Making training materials FAIR:**
    - 15 October 2021: First Hackathon on Developing (FAIR) training materials for a lesson on how to develop (FAIR) training materials (by Allegra Via and Patricia Palagi)
    - 13 October 2022 CoBLET2022: **Teaching how to FAIRify training materials** (by Patricia Palagi, Melissa Burke, Celia van Gelder)
    - 7-11 November 2022, ELIXIR Europe Biohackathon
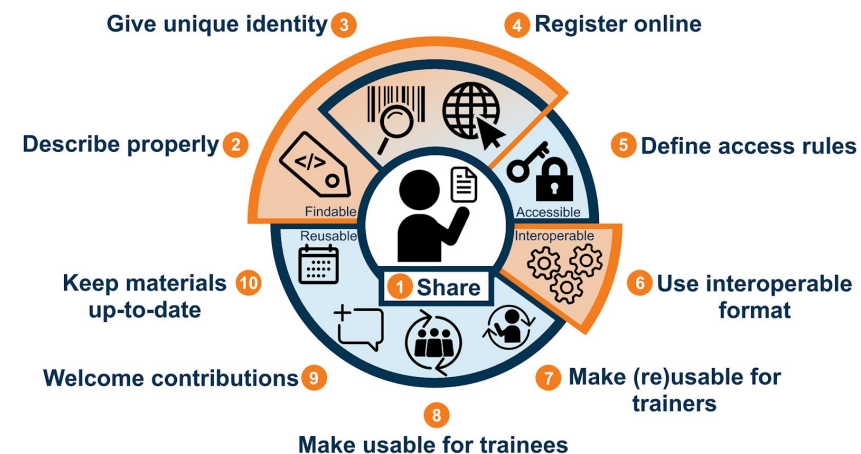
- **Train-the-trainer**
    - ELIXIR-GOBLET Train-the-Trainer workshop, 14.-17.12. 2021
    - Nordic ELIXIR-GOBLET Train-the-Trainer – Online, 10.-13.05.2022

- **Single-cell RNA-seq data analysis**
    - ELIXIR-GOBLET Workshop for scRNA-seq data analysis trainers. 30.11. 2021
    - 11 October 2022: CoBLET2022 Flash Talk

Give unique identity 3
Register online 4
Describe properly 2
Define access rules 5
Findable
Accessible
Reusable
Interoperable
Keep materials up-to-date 10
1 Share
Use interoperable format 6
Welcome contributions 9
Make (re)usable for trainers 7
8
Make usable for trainees

https://doi.org/10.1371/journal.pcbi.1007854

Workshop for Single-Cell RNA-seq Data Analysis Trainers gathered trainers around the world

Single-cell RNA sequencing (scRNA-seq) offers unprecedented opportunities for life science research, and new experimental technologies and data analysis methods have been developed at a rapid pace. The training needs in this fast moving area are huge. The GOBLET-ELIXIR workshop on 30 November 2021 brought together scRNA-seq trainers from around the world to share experiences, challenges and best practices. The slides are available on the workshop website, and the presentation videos are available on GOBLET YouTube channel. The workshop was considered very useful, so future collaboration meetings will be planned.

Events: Annual General Meetings (AGM)

- 2021 saw the 10th AGM.

- Some organized with acquired funding, some without
- Some f2f (with a few virtual participants)
- Some fully virtual because of COVID-19
- Evolved from members-only meeting to longer events, open for all, where the AGM is only 1 of the days

Previous AGMs

- 2012, kick-off, NBIC (DTL), Amsterdam, the Netherlands
- 2013, TGAC, Norwich, UK
- 2014, Bionformatics.ca, Toronto, Canada
- 2015, H3ABioNet, Cape Town, South-Africa
- 2016, ABACBS, Brisbane, Australia
- 2017, IGC, Oeiras, Portugal
- 2018, Bioinformatica.ca, Toronto, Canada
- 2019, APBioNet, Jakarta, Indonesia
- 2020, CSC, Virtual
- 2021, EMBnet, Virtual
- 2022, Bezmialim Vakif University, Istanbul, Turkey
- 2023, ????

GOBLET Critical Guides

- Introductory guides for bioinformatics beginners
  - include teaching goals, learning outcomes, key terms, exercises, take-homes, further reading..
  - Guides: Basic Unix, UniProtKB, UniProtKB flat-file, BLAST, InterPro, PDB, NeXtPro

- Project driven by Prof. Teresa K. Attwood
- Available at www.mygoblet.org & in F1000 Research Bioinformatics Education and Training Collection

Bioinformatics
Education and
Training Collection

GOBLET Practical Guides –
Bringing bioinformatics into classroom

- [Using bioinformatics to hunt SARS-CoV-2, its variants & its origins – a practical guide](#)
  Marie-Claude Blatter, Philippe Le Mercier, Teresa K. Attwood, The GOBLET Foundation (2021)
- [Introducing computer-aided drug design – a practical guide](#)
  Attwood TK, Blatter MC, Baillie Gerritsen V et al. (2020)
- [Bioinformatics: Food Detective](#)
  Bain SA, Barker D, Attwood TK, The GOBLET Foundation (2020)
- [Using Bioinformatics to Understand Genetic Diseases](#)
  Blatter M-C, Palagi PM, Attwood TK, The GOBLET Foundation (2019)
- [Bioinformatics – the Power of Computers in Biology: A Practical Guide](#)
  Daniel Barker, Heleen Plaisier, Stevie Anne Bain, Teresa K. Attwood (2019)

We need volunteers to:

- Translate the Guides in other languages
- Identify new topics
- From writing teams

GOBLET Professional Guides

- [Course design – Considerations for trainers](#)
  Via A., Palagi PM, Lindvall JM, Tractenberg RE, Attwood TK, The GOBLET Foundation (2020)
- [Using the The Mastery Rubric for Bioinformatics](#)
  Via A., Palagi PM, Lindvall JM, Attwood TK, The GOBLET Foundation (2022)
- [Introducing the The Mastery Rubric for Bioinformatics](#)
  Via A., Palagi PM, Lindvall JM, Attwood TK, The GOBLET Foundation (2022)

GOBLET papers & reports

- Garcia L, Batut B, Burke ML, Kuzak M, Psomopoulos F, Arcila R, Attwood TK, Beard N *et al*. (2020) T**en simple rules for making training materials FAIR**. *PLoS Comput. Biol.*, **16**(5):e1007854. doi: 10.1371/journal.pcbi.1007854

- Tractenberg RE, Lindvall JM, Attwood TK & Via A. (2020) **Guidelines for curriculum and course development in higher education and training**. *SocArXiv*, April 3. doi: 10.31235/osf.io/7qeht

- Tractenberg RE, Lindvall JM, Attwood TK, Via A (2019) **The Mastery Rubric for Bioinformatics: A tool to support design and evaluation of career-spanning education and training**. *PLoS One*, **14**(11), e0225256. doi: 10.1371/journal.pone.0225256.

- Van Horn J, Abe S, Ambite JL, Attwood TK *et al.* (2019) **Advancing the international data science workforce through shared training and education** [version 1; peer review: 1 approved, 1 approved with reservations]. *F1000Res.*, **8**, 251. doi: 10.12688/f1000research.18357.1

- Hodson S, Shanahan H… Attwood T… & Rans J (2018) **The Objectives, Scope & Activities of a Possible GO TRAIN Implementation Network**. *Zenodo*, doi: 10.5281/zenodo.1168504

- Attwood TK, Brazas MD, van Gelder CWG & McGrath A. (2018) **GOBLET Genesis & Evolution: First Five Years Report.** *F1000Research*, **7**, 739.

- Attwood TK, Brazas MD, van Gelder CWG & McGrath A. (2018) **GOBLET Genesis & Evolution: First Five Years Report – Executive Summary**. *F1000Research*, **7**, 735.

- Brazas MD, Blackford S, Attwood TK. (2017) **Training: Plug gap in essential bioinformatics skills.** *Nature*, **544**, 161.

GOBLET papers & reports

- Attwood TK, Blackford S, Brazas MD *et al*. (2017) **A global perspective on evolving bioinformatics & data-science training needs.** *Brief. Bioinform.*, bbx100.

- Brazas MD, Brooksbank C, Jimenez RC *et al*. (2017) **A global perspective on bioinformatics training needs.** *BioRXiv,* doi.org/10.1101/098996

- Horro C, Cook M, Attwood TK *et al*. (2017) **BioCIDER: a Contextualisation InDEx for biological Resource discovery**. *Bioinformatics*, **33**(16), 2607-2608.

- Attwood TK, Leskosek BL, Dimec J *et al*. (2016) **Defining a lingua franca for the ELIXIR/GOBLET e-learning ecosystem**. *Zenodo*, doi.org/10.5281/zenodo.166378

- Atwood TK, Bongcam-Rudloff E, Brazas ME *et al*. (2015) **GOBLET: The Global Organisation for Bioinformatics Learning, Education and Training**. *PLoS Comput.Biol.*, **11**(4), e1004143.

- Corpas M, Jimenez RC, Bongcam-Rudloff E *et al*. (2015) **The GOBLET training portal: a global repository of bioinformatics training materials, courses and trainers.** *Bioinformatic*s, **31**(1), 140-42.

- GOBLET Consortium. (2014) **GOBLET: achievements and goals a year on**. *EMBnet J.*, **20**, e751.

- GOBLET Consortium. (2013) **The Global Organisation for Bioinformatics Learning, Education & Training (GOBLET).** *EMBnet J.*, **19**(1), 10-13.

- Via A, Blicher T, Bongcam-Rudloff E *et al*. (2013) **Best practices in bioinformatics training for life scientists**. *Brief. Bioinform*., **14**(5), 528-537.

- Jimenez RC, Albar JP, Bhak J *et al*. (2013) **iAnn: an event sharing platform for the life sciences**. *Bioinformat*ics, **29**(15), 1919-21.

Collaboration ISCB-GOBLET

- Conversations ongoing between ISCB and GOBLET Board members to strengthen collaboration

- GOBLET is always present at **ISMB conferences** with posters, a booth and contributions to the WEB and the Education COSI sessions!

- GOBLET is participating in ISCB Education Committee and **Education COSI**

Collaboration ELIXIR-GOBLET

- **ELIXIR** and **GOBLET** have a **Joint Training Strategy** since 2015
  - https://elixir-europe.org/news/elixir-and-goblet-publish-joint-training-strategy
  - Presentation to ELIXIR Training & Technical Coordinators in November 2020

- **Highlights of collaborative work**:
  - Train the trainer workshops
  - GOBLET Professional Guide - Course design – Considerations for trainers
  - Concerted action to work on FAIR training materials
    - Workshop 13 October 2022: **Teaching how to FAIRify training materials**
  - Working towards community endorsed training profiles for Bioschemas
  - Collaboration on single cell omics training

Collaboration ECCB - GOBLET

GOBLET - APBIONET

INCOB2021
EDUCATION
TRACK

&

BIOINFORMATICS
GRAND
CHALLENGES
CONSORTIUM
(BGCC)

InCoB 2021
Kunming · China

BIOINFORMATICS EDUCATION, SPECIAL TRACK

7 NOV 2021 | 4.20 – 6.20 PM (China Standard Time, CST)
Moderator: Yam Wai Keat (APBioNET)

Yam Wai Keat

GOBLET
Global Organisation for Bioinformatics
Learning, Education & Training
Celia W.G. van Gelder

Open Life Science
Yo Yehudi

LIFE SCIENCE
TRAINERS
Jason Williams

elixir
Melissa Burke

FREE ADMISSION

Registration link:
https://forms.gle/iW6MbRyAQeetAZR29

Organised by:

ASIA PACIFIC BIOINFORMATICS NETWORK
Fostering the growth of bioinformatics in the Asia Pacific region

HOME   ABOUT US   JOIN US   OUTREACH   RESOURCES   CONTACT US

Bioinformatics Grand Challenges Consortium (BGCC)

The convergence of digital and biological information is transforming the way we share and report our research data and findings. Bioinformatics is an interdisciplinary science with a pivotal role to manage and mine biological data for knowledge discovery.

Several independent bioinformatics investigators and agencies have taken steps to come together and work on the bioinformatics grand challenges at various levels from local to international, including the International Society for Computational Biology (ISCB; https://www.iscb.org); the Global Organisation for Bioinformatics Learning, Education and Training (GOBLET; https://www.mygoblet.org); the Asia-Pacific Bioinformatics Network (APBioNET; https://www.apbionet.org); the European ELIXIR research infrastructure (https://elixir-europe.org); the BIOinformatics CLUb for Experimenting Scientists (Bioclues; https://bioclues.org); the Iberoamerican Society for Bioinformatics (SolBio; https://wp.soibio.org), and the Pan African Bioinformatics Network (H3ABioNet, https://www.h3abionet.org). As such, we expand and complement existing efforts with the creation of the Bioinformatics Grand Challenges Consortium (BGCC) – aimed to foster international collaboration between institutions and organisations, including those mentioned above, to proactively and critically reflect on the future challenges and propose solutions. A grand challenge is defined as a complex problem that is difficult to solve and that cannot be simply resolved through the application of more funds, time, manpower and/or resources.

Individuals participating in the BGCC consortium, as experts in their respective domains, would participate in working committees of interest to discuss the various grand challenges relevant to bioinformatics, with the goal of defining the challenges, identifying proposed solutions, developing well-defined metrics (where possible) to allow for a progress charting, and making public the findings collaboratively.

BGCC's policies will strive for inclusivity and diversity for a balanced view on the subject matter, producing living guide documents, updated on a need basis as the field evolves. An inspiration for this is the more than 50 years of virus taxonomy contribution to the community by the International Committee on Taxonomy of Viruses (ICTV; https://talk.ictvonline.org), which has the challenging task of developing, refining, and maintaining a universal virus taxonomy in the ever-changing landscape of science and discovery.

Bioinformatics education is the first grand challenge that BGCC attempted to define. We assembled a working group of experienced educators and trainers, recruited through their membership in and involvement with international and regional organisations dedicated to bioinformatics education and training—ISCB, GOBLET, APBioNET, ELIXIR, Bioclues, SolBio, and the H3ABioNet—to identify a consensus set of grand challenges in bioinformatics education and training.

https://www.apbionet.org/bgcc

1ˢᵗ Asia-pacific bioinformatics joint congress (APBJC 2024)

INAUGURAL APBJC

DATE	LOCATION	PARTNERS	MODE
21 – 24 OCTOBER 2024 (every 3 years)	JAPAN	JSBi APBioNET ISCB AASBi APBC MABBi BIOCLUES GOBLET	IN PERSON (online participation may be offered)

GOBLET Grants

- Secured grants

  - Grants to support AGMs (Canada, South Africa, Australia, Turkey)

  - ICTP - CODATA-RDA Data Science Summer School, Trieste, 2017

  - EU COST Action CHARME - Reproducibility, standards & SOPs in bioinformatics

  - Marie Curie ITN - Long-TREC: The Long-Reads Transcriptomics European Consortium

  - CompBioAsia - Cross-Disciplinary Training in Computational Biology – Genomics, Protein-ligand modeling, and Molecular Dynamics

- Handed out

  - travel fellowship for 'young' or 'new comer' speakers at the Education COSI
    - 1st recipient Vicky Nembaware, 2019
  - ECCB2022 poster awards
  - Microgrants from CoBLET2022

Dissemination: PR/Outreach & Website

- GOBLET Website
  - https://www.mygoblet.org/

- GOBLET Newsletter
  - Subscribe by emailing pr@mygoblet.org
  - Newsletter 1 2022

- GOBLET Social Media
  - Twitter @mygobletorg
  - Facebook @mygoblet

- Youtube Channel
  - https://bit.ly/GOBLETYouTube

Outline

- Introducing GOBLET

- GOBLET Deliverables

- The GOBLET journey & where are we heading?

The GOBLET Journey

- 2012: GOBLET is born!

- 2022:
  - We have built a **global bioinformatics training Community** in the past 10 years with many achievements and activities!!
  - GOBLET is a well-established entity
  - **GOBLET is by the community for the community**
    - But this is both a strength and a challenge

GOBLET is born

- Est. as a not-for-profit, legal Foundation in November 2012
  - kick-off convened 28 November 2012, hosted by NBIC, Amsterdam
  - the Stichting documents were handed over at the meeting
    - registering 'Acting Executive Board'
      - Allegra Via, Secretaris; Celia van Gelder, Treasurer, Terri Attwood, Chair; Barbara van Kampen, Member

SUPPORTIVE COMMUNITY

@OzolinsJanis

By the community for the community

- Across topics
- Across research domains
- Across institutes
- Across projects
- Across countries
- Across research infrastructures
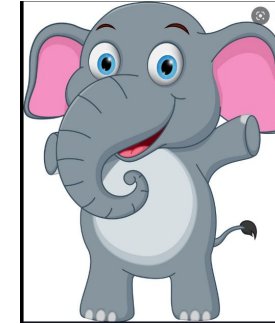- Across languages
- Across cultures

- But all with a training hat and a training heart

Where are we heading?

- We need more community members to get involved

- In the end it is the people that make the difference!

- With
  - A joint vision & goal
  - Passion and commitment
  - Perseverance, determination and hard work

- We thank all GOBLET members & collaborators for their active contribution and support!

- **Join GOBLET & help us to:**

  - stay up-to-date with international training developments and events

  - network with training organisations around the world, share ideas and identify training opportunities and projects, and world-class trainers with whom to work

  - share and shape materials, curricula and other training resources together, to avoid duplicating resources in-house

  - avoid duplication of standards participate in international training initiatives

- Want to join? Contact us at info@mygoblet.org