



UNIVERSITY OF
SASKATCHEWAN

A vision for the future of GIWS

G I W S

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Outline

- Take home message – my priorities
- Review of GIWS history
- Vision for the future of GIWS
- About me
- Summary

My priorities

GIWS exists to promote the interests of the USASK water research community.

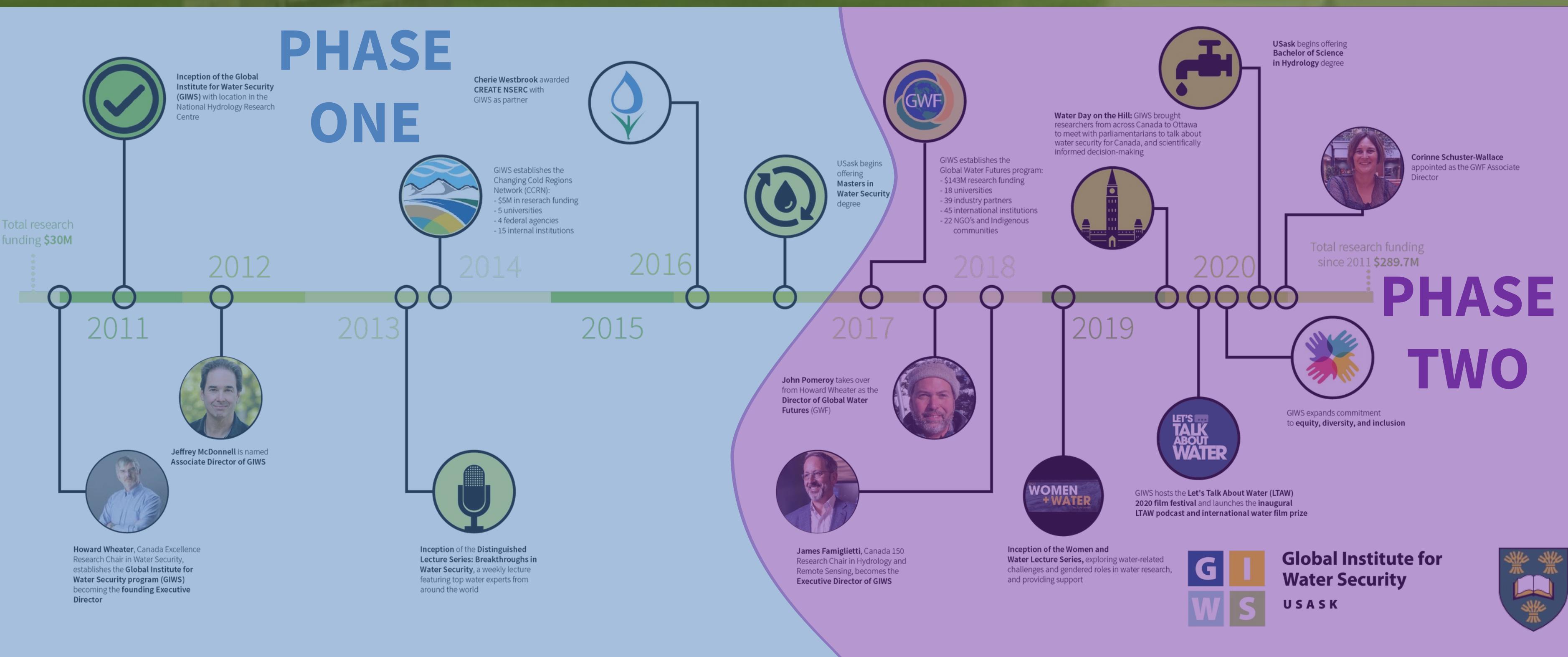
GIWS must be

- Open
- Collaborative
- Transparent
- Proactive
- Inclusive



A brief history of GIWS

GIWS since inception



Phase III: Where are we now?



We have:

- A global/national reputation
- A team of experienced, high performing staff
- A network of faculty and students

We don't have:

- Money

Don't we also have field sites, a building, labs, data management infrastructure?

Our reputation

Rankings are only useful in so far as they help us to attract people and funding.

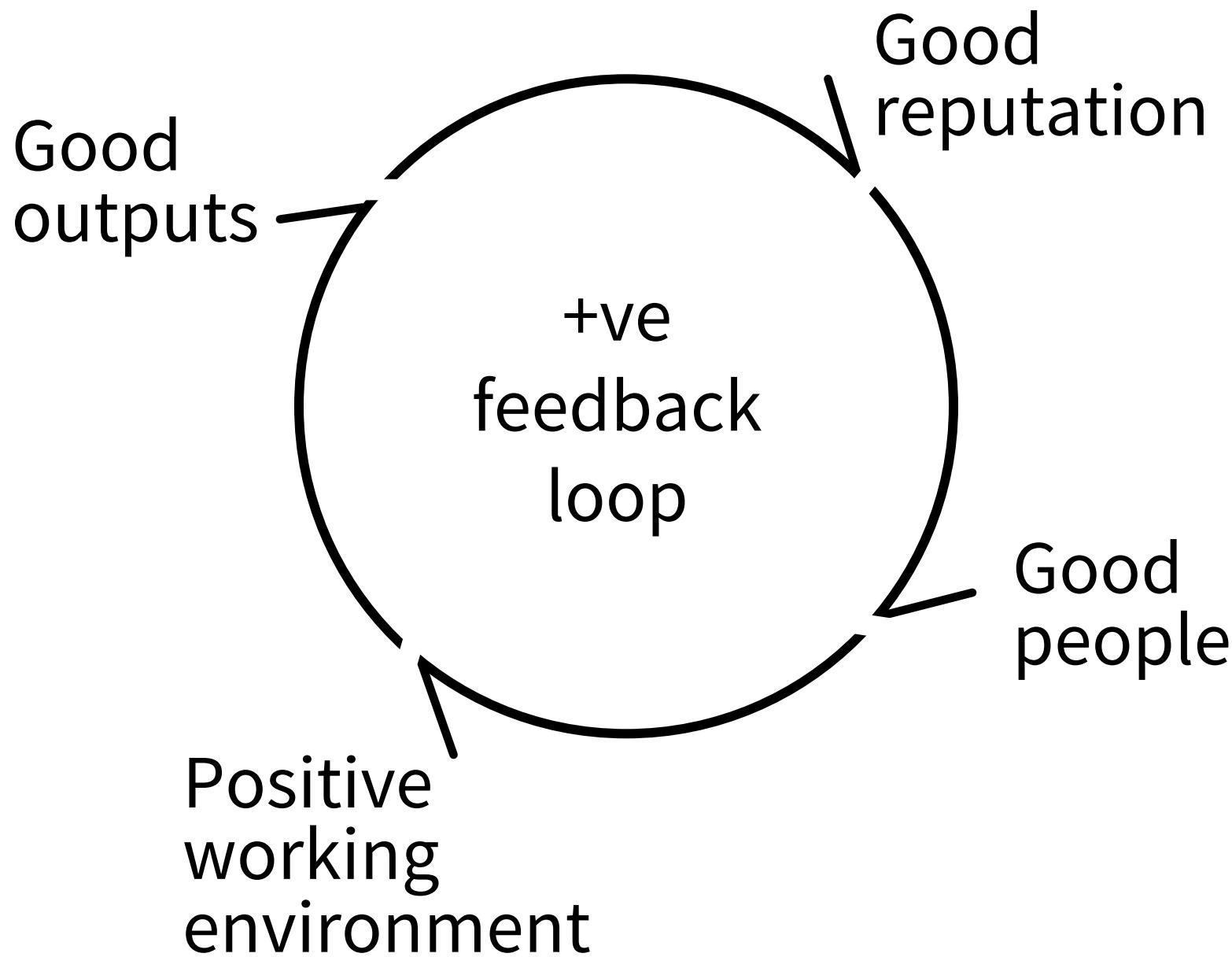
USASK is ranked **#1 in Canada** in Water Resources in the Shanghai Global University Rankings

In 2021 we were **#15 globally** but in 2022 we dropped to **#23**.

Now is a decisive moment for us.

Reputation: people at the center

Our mission depends on **attracting** and **retaining** good people



A vision for GIWS



Global Institute for Water Security
Results of Campus Engagement Sessions and Survey
Executive Summary of Responses
Prepared for the USask VP Research Office
Draft: April 20, 2023

Background
The Global Institute for Water Security (GIWS) Campus Engagement Initiative began in March 2023. Seven sessions were hosted over two days that included 21 colleges, units and centres from across the University of Saskatchewan (USask). Thirty-five participants contributed their time and expertise to envisioning the future of GIWS and the future of water research globally. An additional 16 people contributed to the discussion through an online survey.

Methodology
Participants (online and in-person) were asked to reflect on two questions:
1) In the next 5 - 10 years, where do you see the priorities and opportunities in water research?
2) How can GIWS help you further your work and research?

The online survey included 10 questions focusing on demographic information on current participation in water research at the University of Saskatchewan as well as questions that mirror the in-person consultation.

Results
Moving forward, the opportunity for GIWS to serve the campus community by:

- GIWS will be a Water Research Hub on the USask Campus open to the entire campus community, accessible as both a physical space and a community.
- GIWS will enable a collective membership gathered and supported by a staff bringing professional expertise, an international reputation, and a transdisciplinary approach.



My Mission Statement

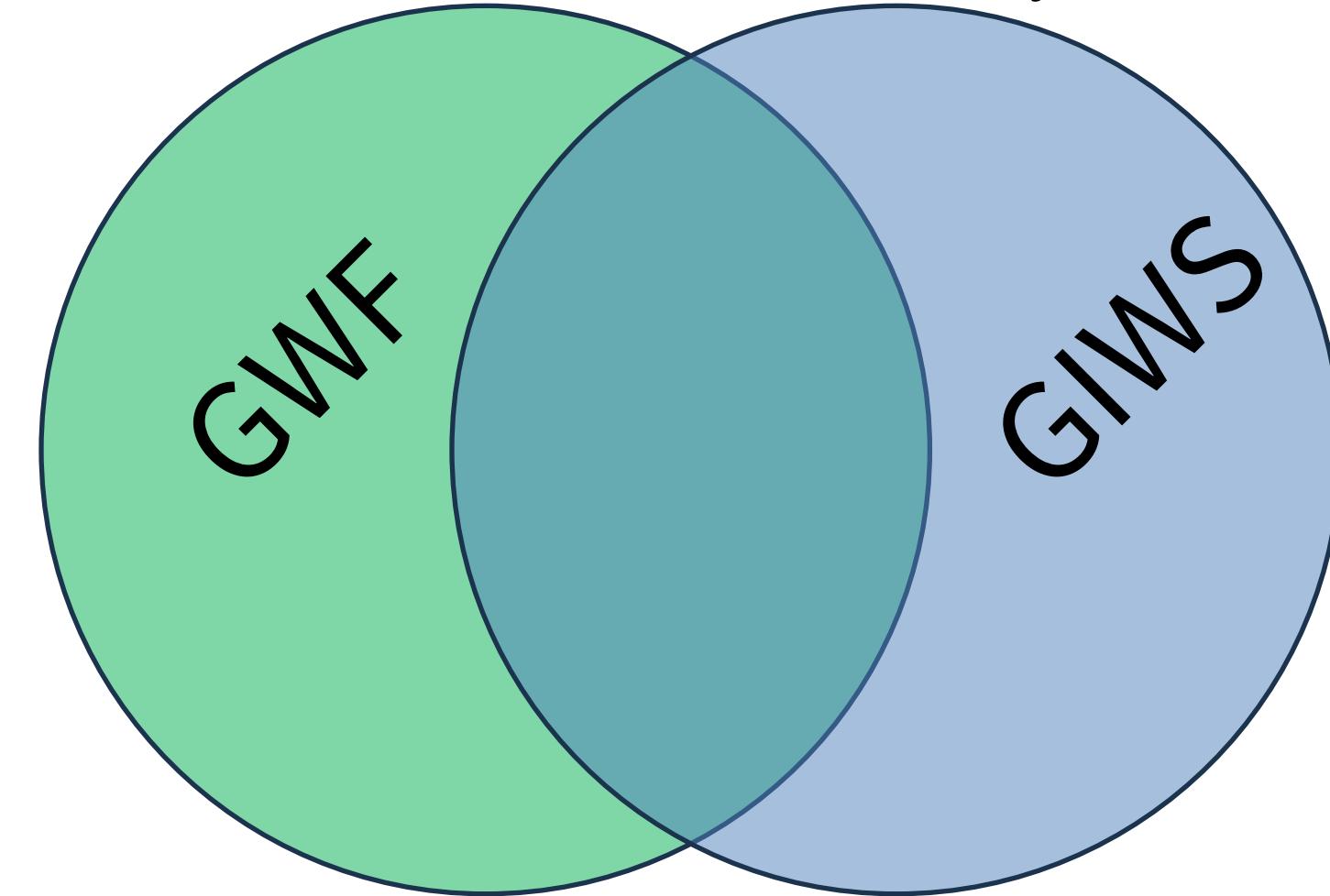
We must support USASK's plan to **be the university the world needs**

GIWS exists to bring the USASK community together in order to:

- work on **problems** related to **water security** that are **important** and **interesting**
- provide **solutions** that make the world a better place
- find ways to slow, halt and reverse the patterns of **environmental collapse**
- help secure access to resources in a **sustainable, equitable** and **economic** manner

Relationships: GIWS and GWF

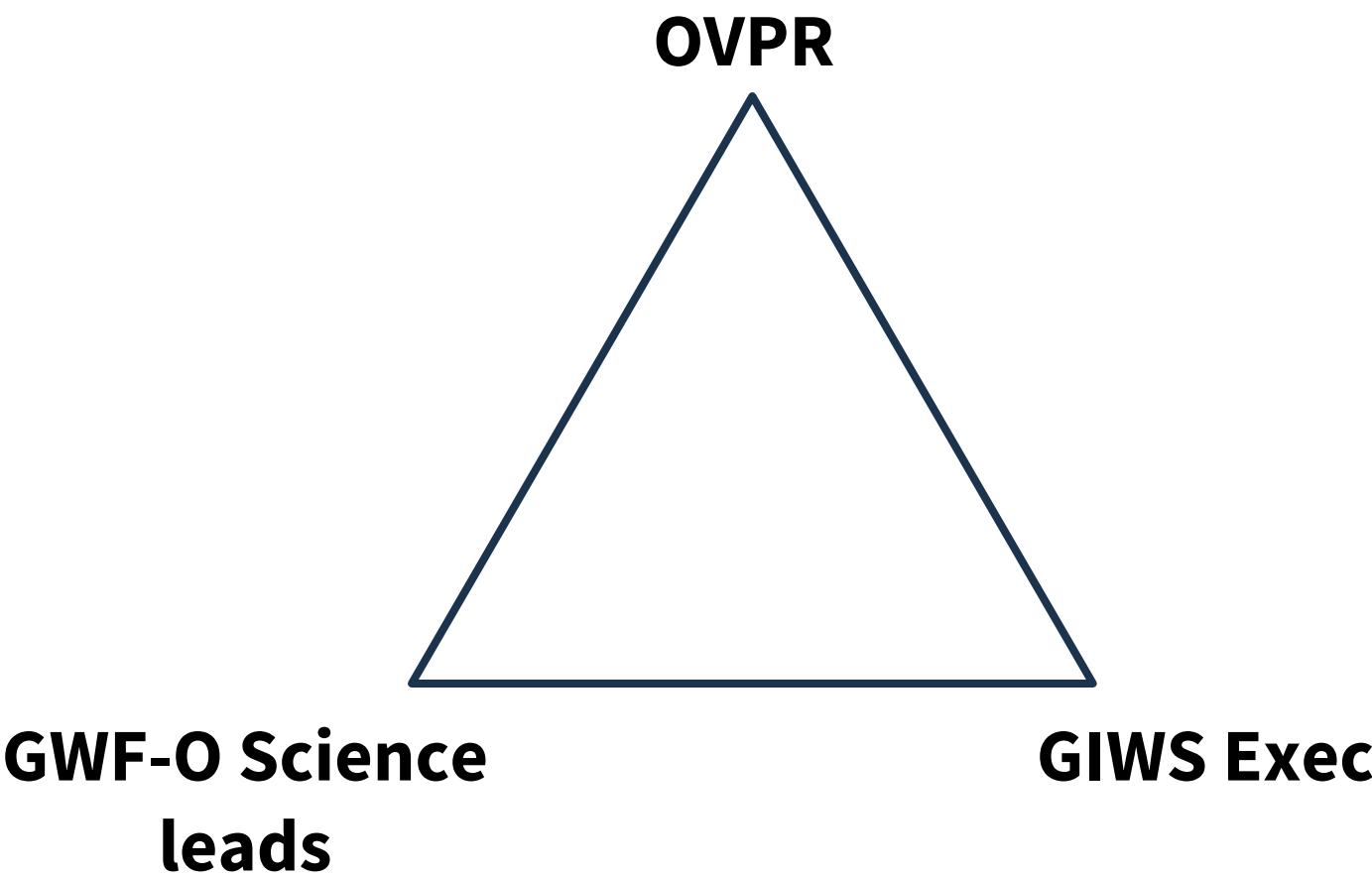
Staff, facilities, money



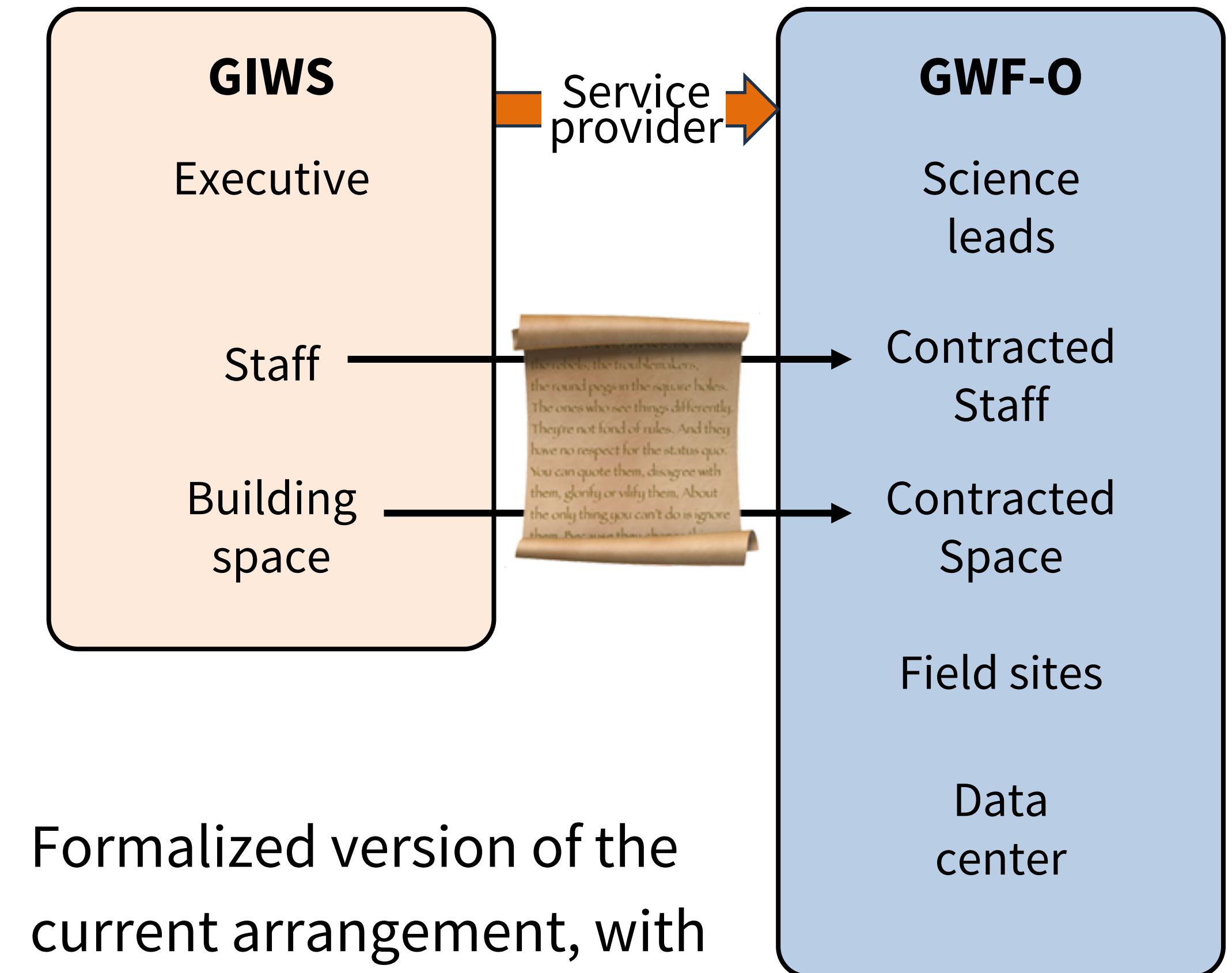
- GWF project has been the almost sole funder of GIWS since 2017
- Delineation of ownership/responsibility between GIWS and GWF has not been at all clear

Relationships: GIWS and GWF

- **GWF-O** will continue to fund infrastructure until 2029
- GWF-O still has a funding deficit that needs to be addressed
- Going forward we need clear lines of responsibility and ownership



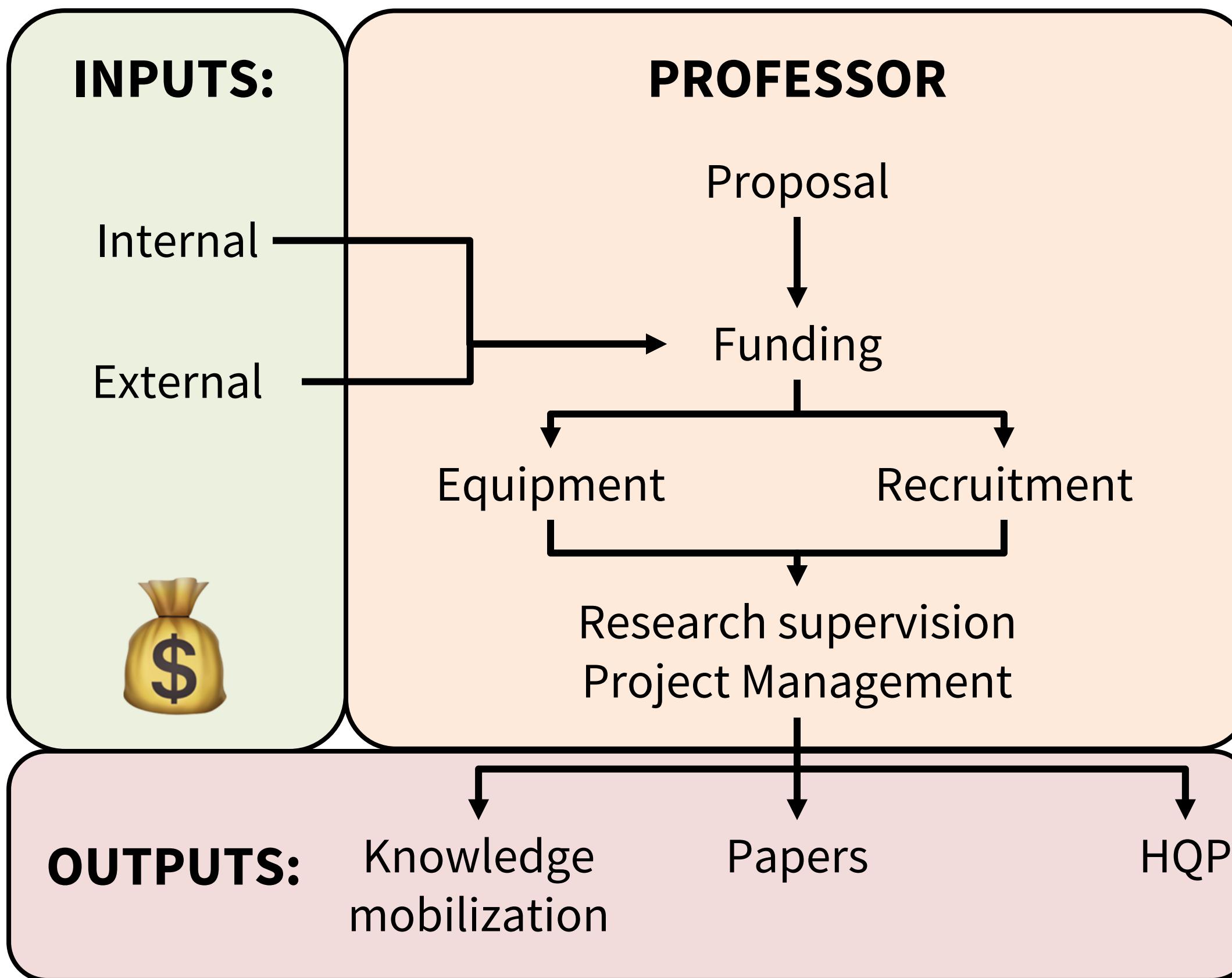
GIWS as a service institution



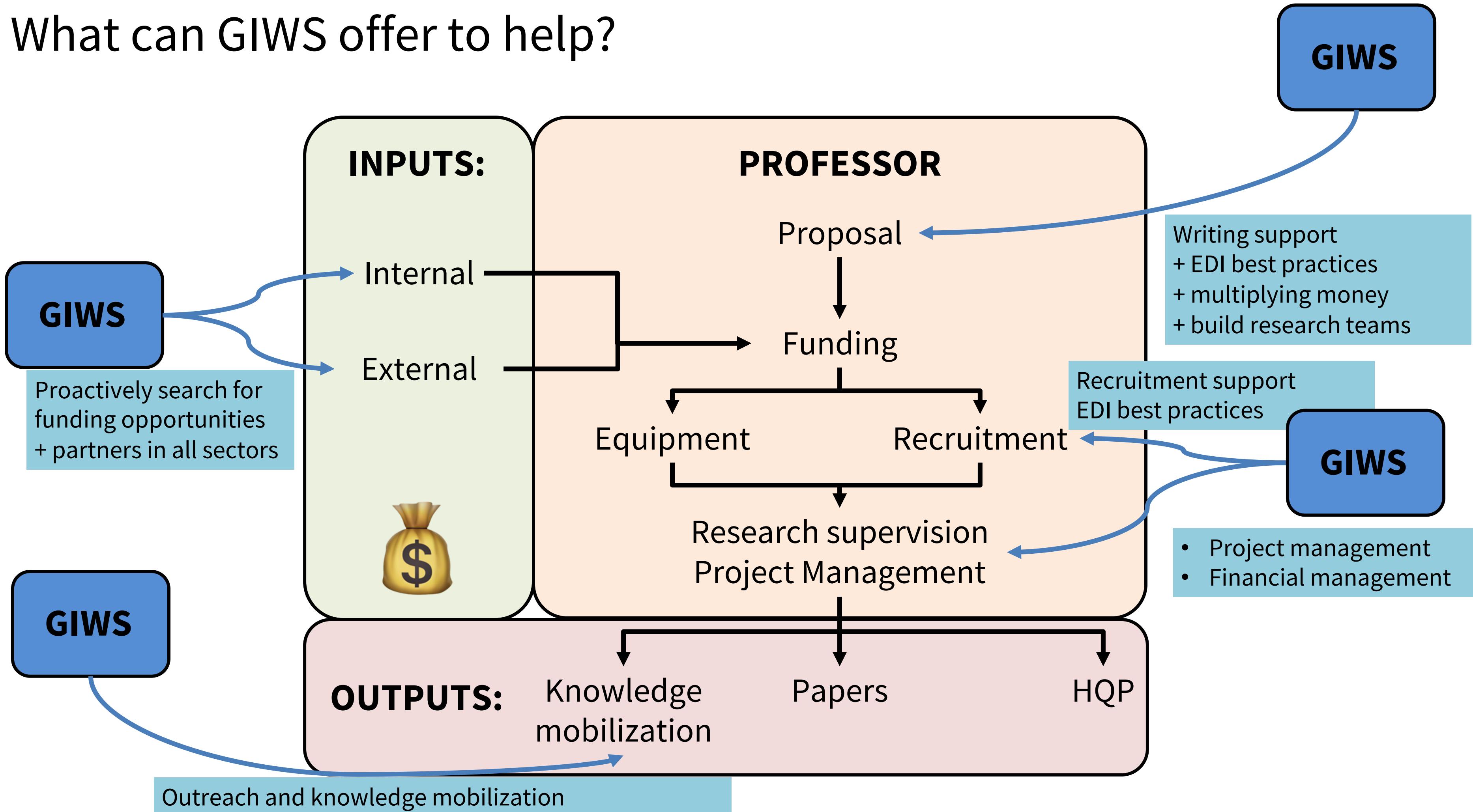
Formalized version of the current arrangement, with full transparency upfront



The life of a typical professor



What can GIWS offer to help?



GIWS can help you



Find funding opportunities; maximize funds; write excellent proposals



Manage your projects and people



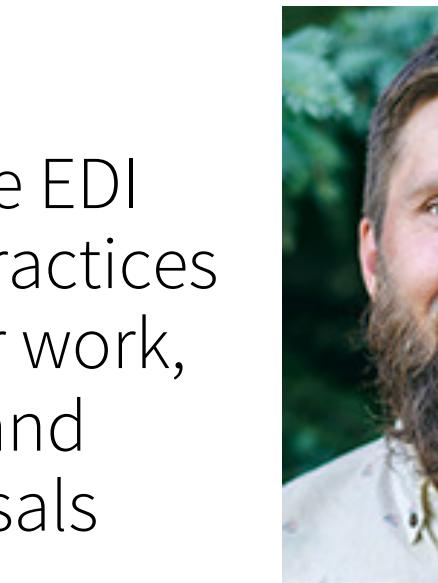
Store your data and make it accessible to the world



Promote your work to a broad audience with excellent pictures, videos, websites and graphics



Balance your books, help you budget and complete your financial reporting



Include EDI best practices in your work, team and proposals



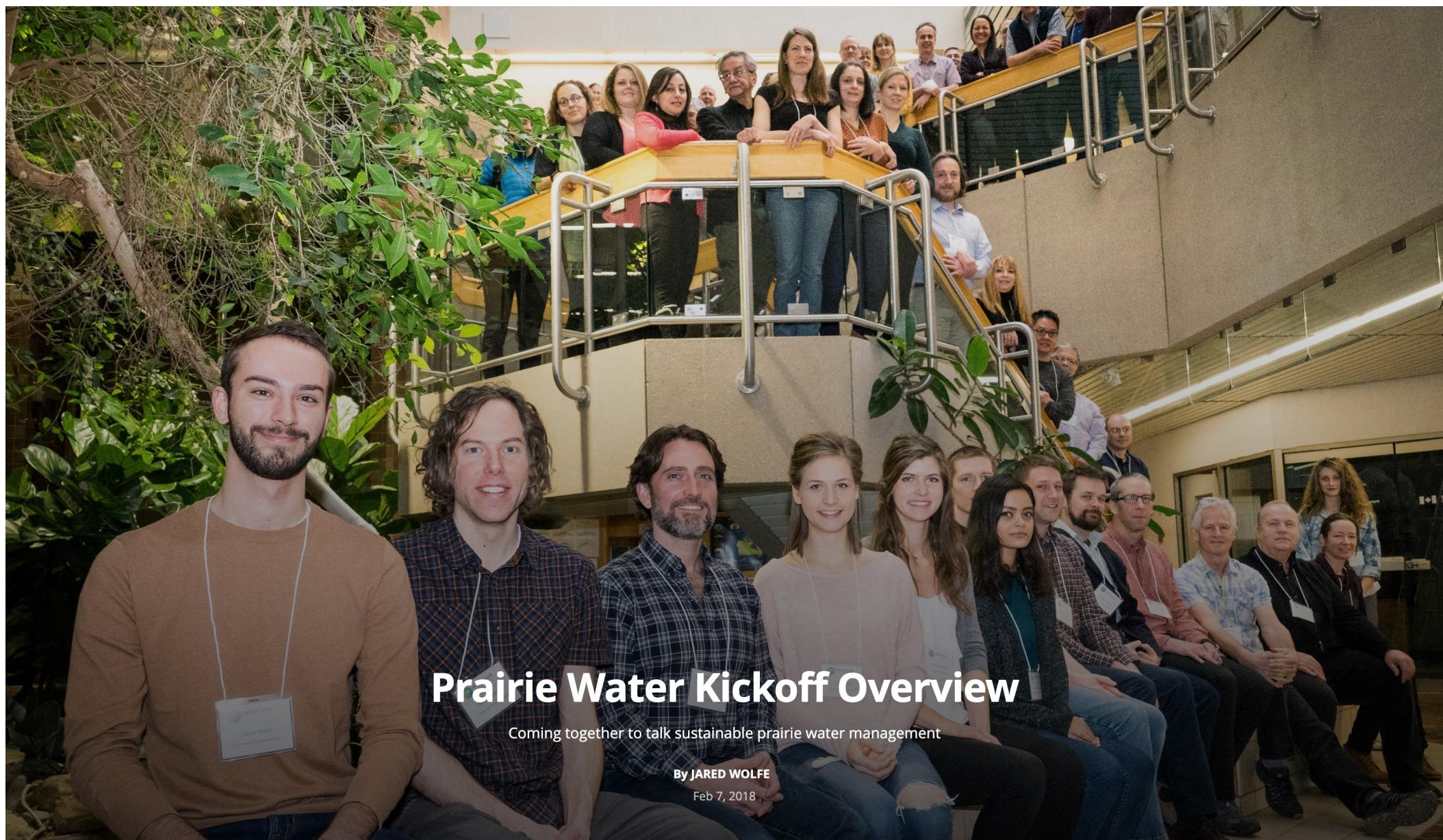
Run your field site, advise on instrumentation and maintenance

All these services and more need to be advertised to departments and faculty across campus

We can do more together

Real world problems require inter/trans-disciplinary teams to solve.

We have an outstanding record/capacity in this area



<https://gwf.usask.ca/prairiewater/news--events/news1/prairie-water-kickoff-overview.php>

Research team

Nature of collaboration:

- Multidisciplinary
- Inter/trans-disciplinary
- Place based
- Partner based

GIWS

Catalyze
+ coordinate

ENG

Prof. x

GEOG

Prof. y

POLICY

Prof. z

GIWS Technical capacity

- GIWS has invested in training highly talented scientists over many years
- We have high levels capacity in computational modelling of water futures that presents an enormous opportunity
- We need to re-invigorate our efforts to provide decision support tools for government and industry (ag and mining sectors)





Equity Diversity and Inclusion

“Never about us without us”

[USASK Indigenous Strategy]

- Diverse voices improve innovation
- Diversity in our people at all levels increases the sense of belonging
- There is a strong case to be made for a targeted hire of an indigenous faculty member focused on water
- GIWS should lead with EDI education efforts for students, staff and faculty
- We should continue to support an EDI specialist to help us with best practices

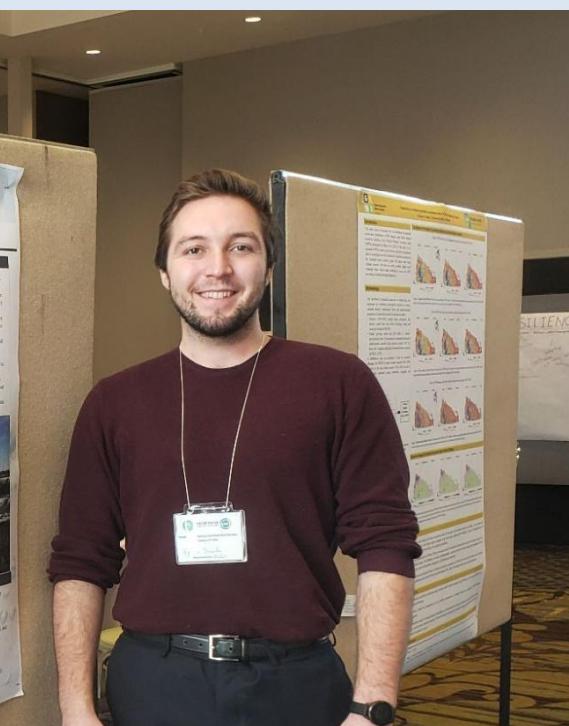
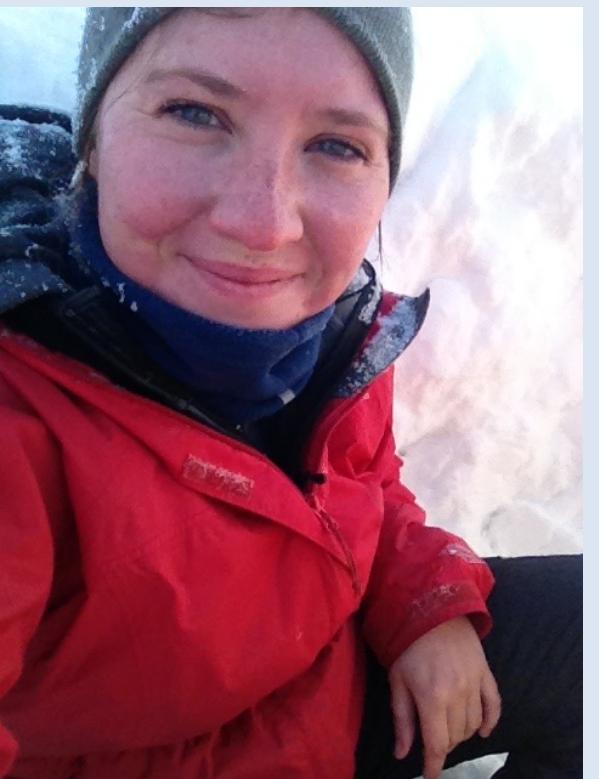
GIWS Funding landscape

- Need **diversified** sources of funding
- Funding will need to come from:
 - Service charges to research projects
 - Provincial support – offering a return on investment for the people of SK
 - Federal support for long term monitoring and modelling outputs
 - Industry support (ag and mining sectors)
 - Central support from the OVPR (ramping down over next 5 years)

About me

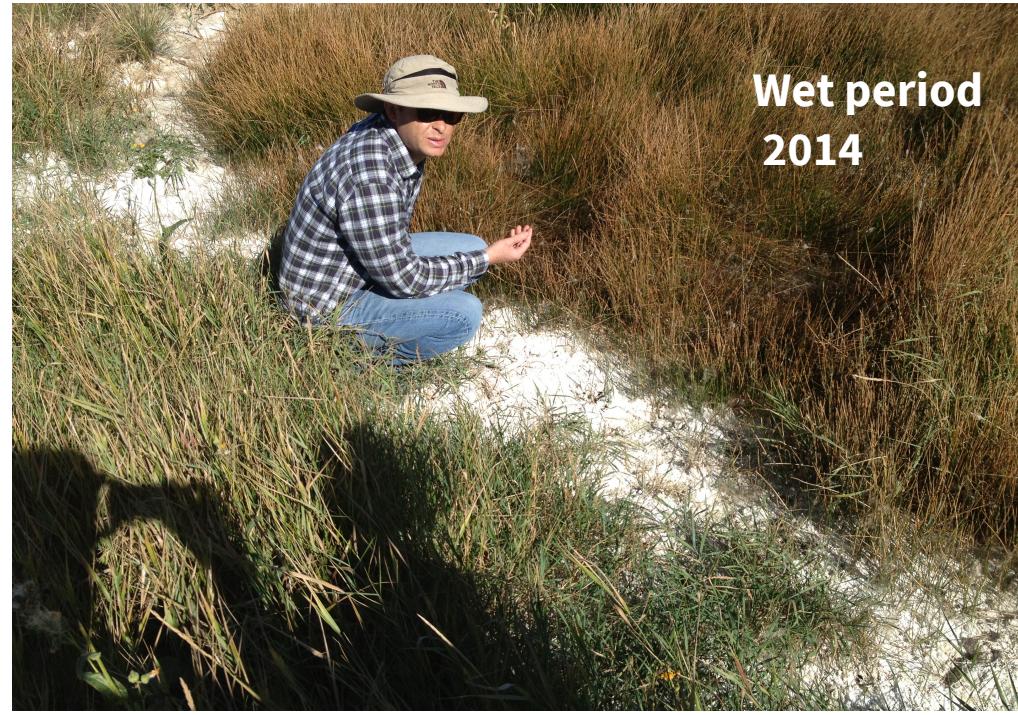


My team's research

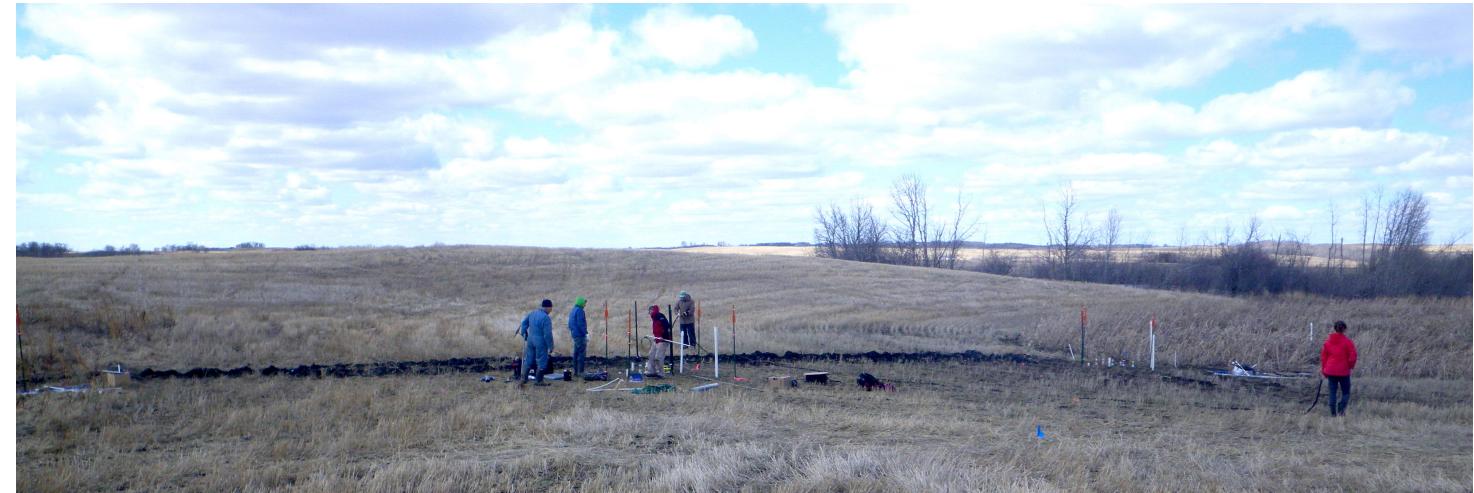


General nature of my team's research

My work focuses on hydrological process understanding



<https://shyr.ca>



Monitoring

Interpretation of field observations provide fundamental insights and information to validate models

Modelling

Test hypotheses
Corroborate observations
Make predictions (maybe)

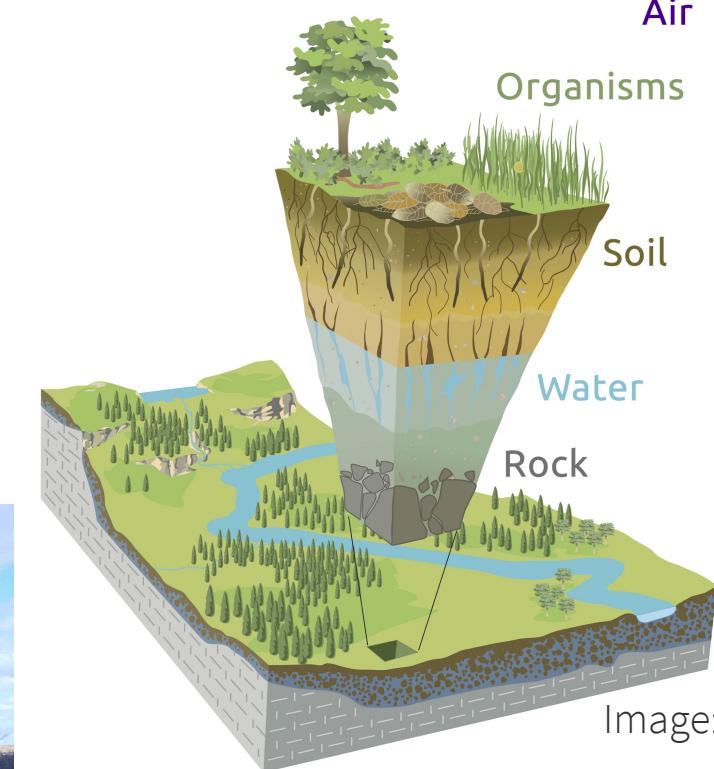
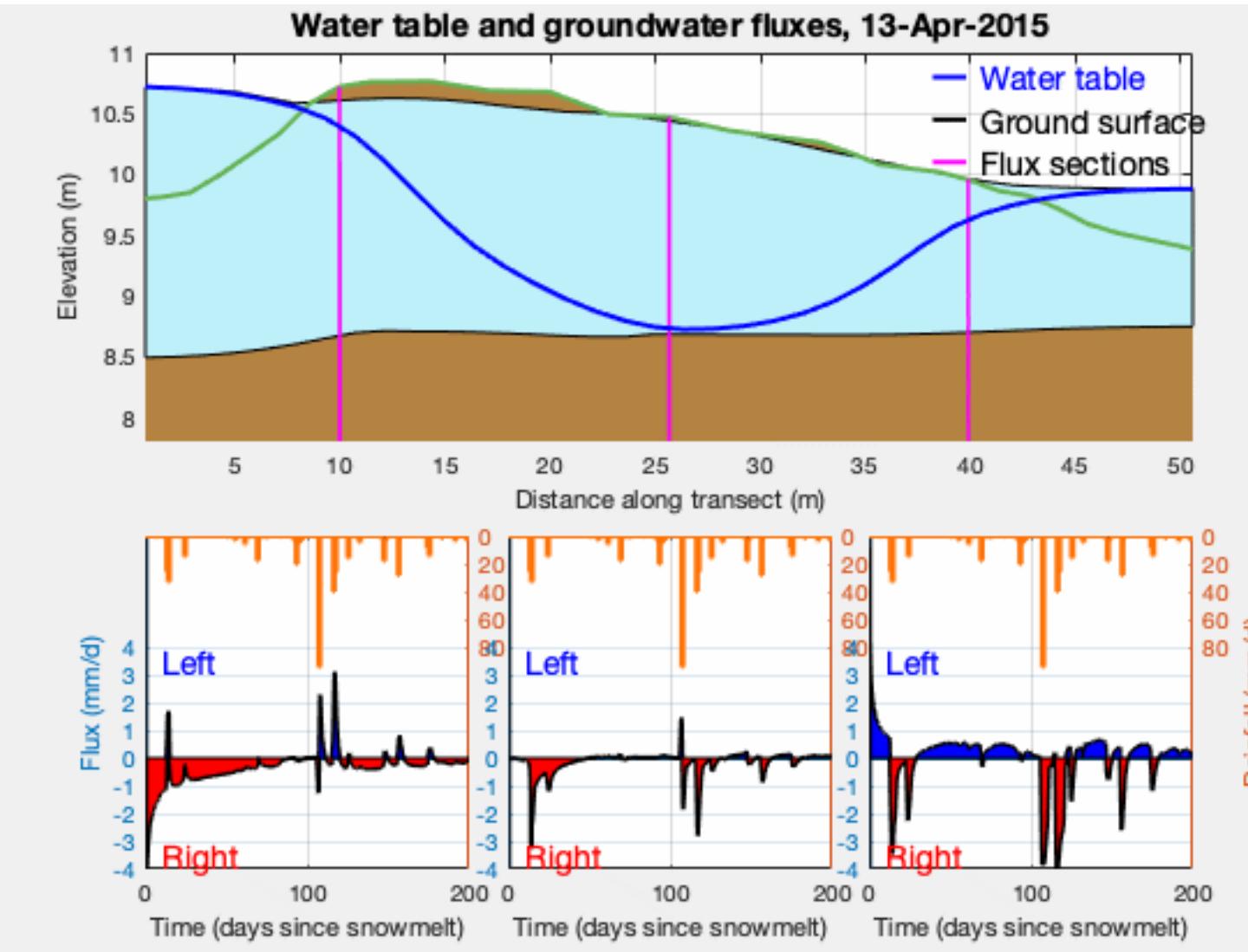


Image: Chorover, J., R. et al., 2007. Soil biogeochemical processes in the critical zone. Elements 3, 321-326. (artwork by R. Kindlimann). Accessed from <http://criticalzone.org/>



Leadership: MWS program

Program Director

- Co-designed program – based on the program I went through at Imperial College London
- Graduated ~68 professional Masters students
- Designed for working professionals
- Pay-per-course was important innovation

Year	Students
2016/17	6
2017/18	6
2018/19	14
2019/20	11
2020/21	18
2021/22	26
2022/23	12
2023/24	41 Accepted

- Micro-credentials – three certificates which can ladder into MWS degree
- Online delivery during COVID – realized demand from Canada outside SK
- Hybrid format going forward – in-person or online
- Project partners in industry, government and NGOs

ENVS806 Field Class



Leadership: MWS program

Graduates from our program are working in:

- The Water Security Agency
- Consultancies (including Golder, Pinchin, TerraLogix solutions, Northwest Hydraulic Solutions, Ecofitt, ERM, MacDonald Hydrology)
- Environment and Climate Change Canada
- Parks Canada
- US Bureau of Reclamation
- GWF research programs
- City of Nanaimo (hydrogeologist)
- BC Government

Leadership: Canadian Geophysical Union

President



Global Institute for
Water Security
U S A S K

Since May I am the elected president of the CGU (2023-2025)

Organization of ~500 members dedicated to the advancement and dissemination of geophysical research

We have annual meetings; student and senior researchers awards; and journal special issues

Premier organization for scientific hydrology in Canada

<https://cgu-ugc.ca/>



Outreach: Community work

High school outreach

Aden Bowman / Tommy Douglas / Walter Murray



Outreach: Community work



Outreach: Community work

Nutana Collegiate Volunteering

Mature G10-12 program for “displaced students”

Saskatoon man finds joy as volunteer helping refugees



CBC's Maryam Masoomi helps connect us to the people in our communities



[Maryam Masoomi](#) · CBC Communications ·

Posted: Feb 12, 2023 11:59 PM CST | Last Updated: February 12



Outreach: Community work

Refugee Student Support Network

- I established this informal organization that exists to assist refugees in Saskatoon to gain access to USASK
- We have helped 3 Afghan students gain admission so far, and anticipate 10-20 more this fall
- We have built a large scholarship for refugee students, TBA shortly
- <https://rssn.org/>



Summary

GIWS as a service institution

- Build and support research teams across campus
- **Contract** out services to teams and individual researchers
- We run like a **business** and **advertise our services/people**
- Services are charged to grants as a line item ~8% of project budget (depending on needs)
- Invest in training in how to run a business for ED and others

Take home points

GIWS exists to promote the interests of the USASK water research community.

GIWS must be

- Open
- Collaborative
- Transparent
- Proactive
- Inclusive