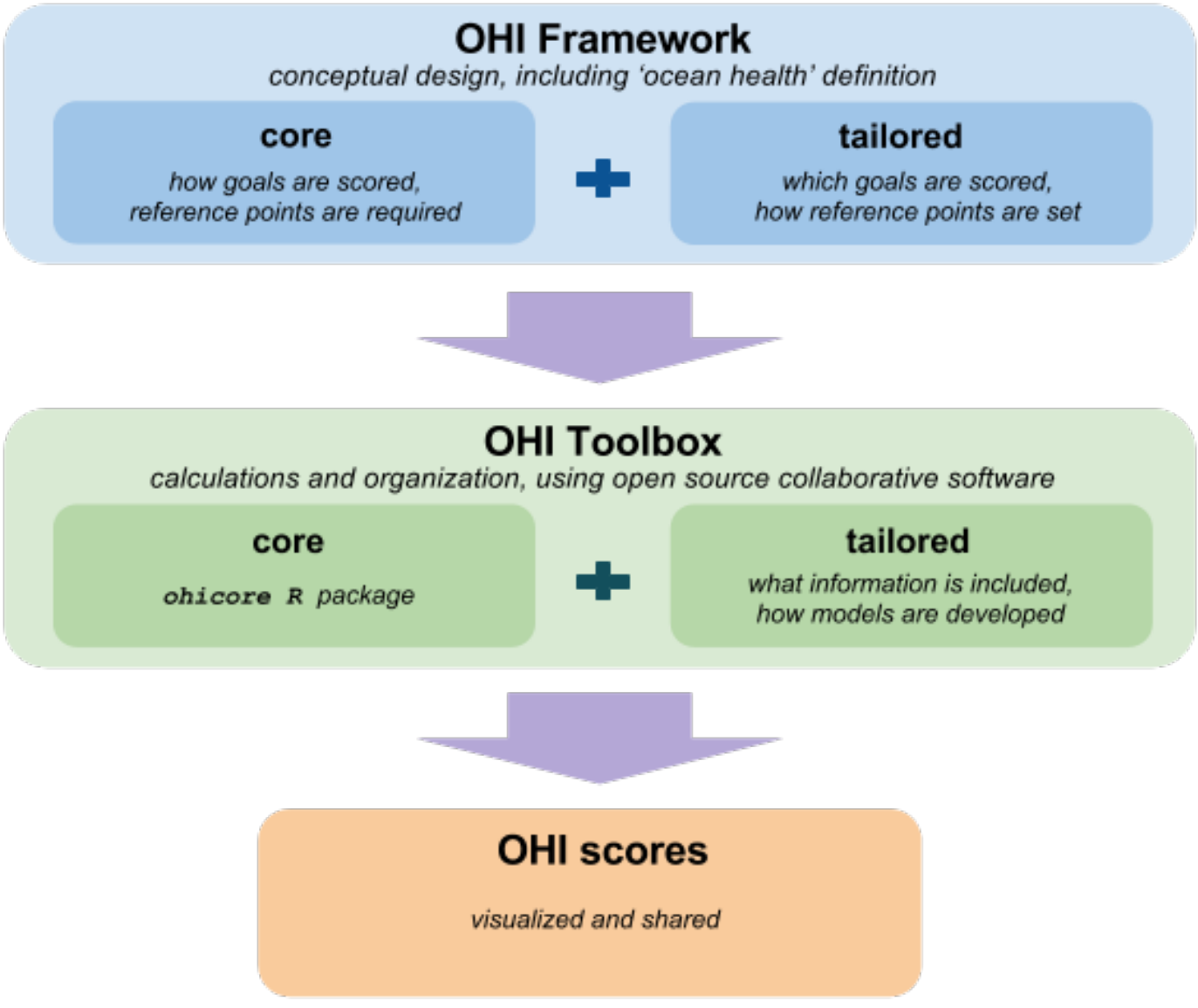
Introduction to Conduct Phase

Ocean Health Index

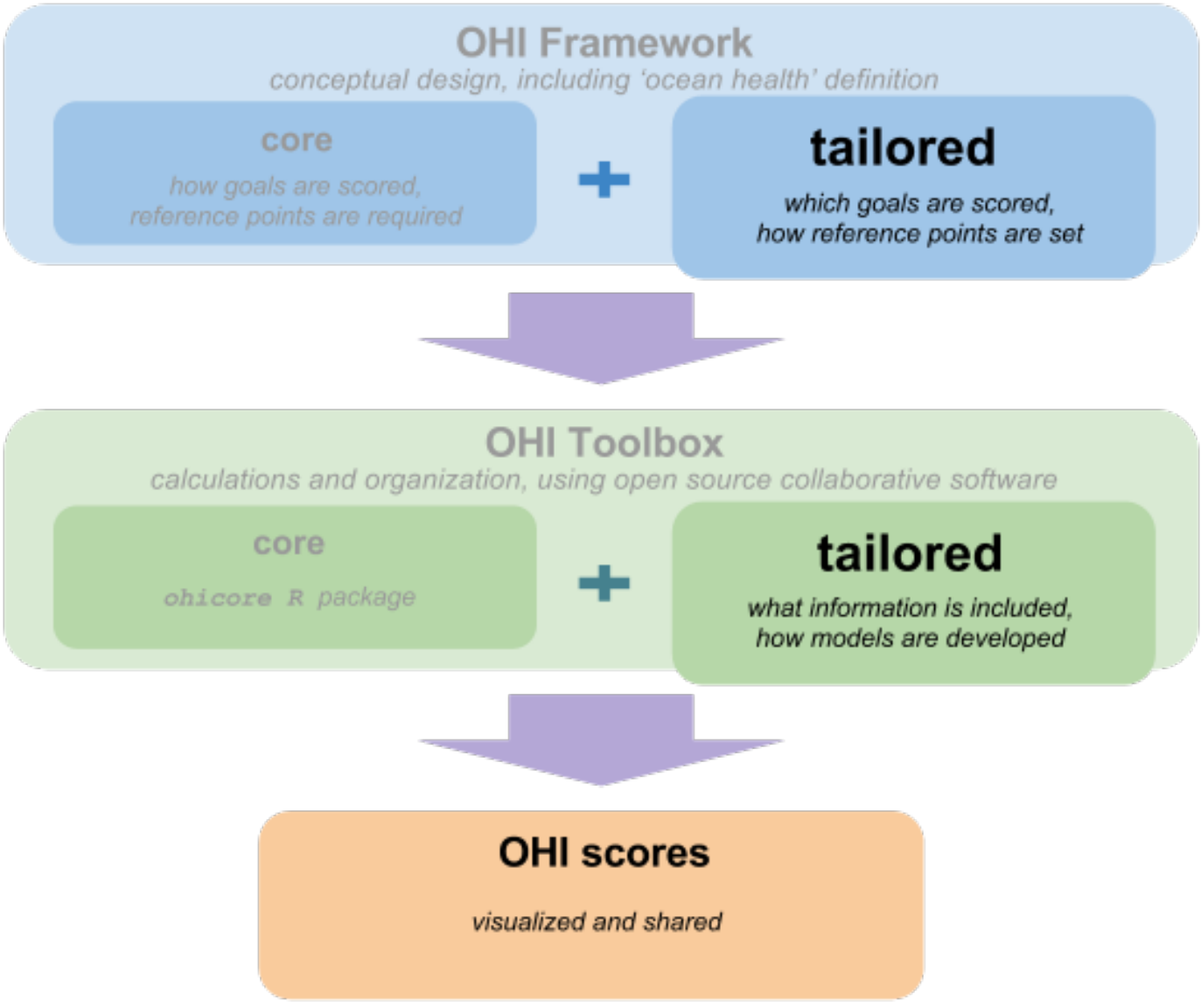
OHI-Science Team

January, 2016

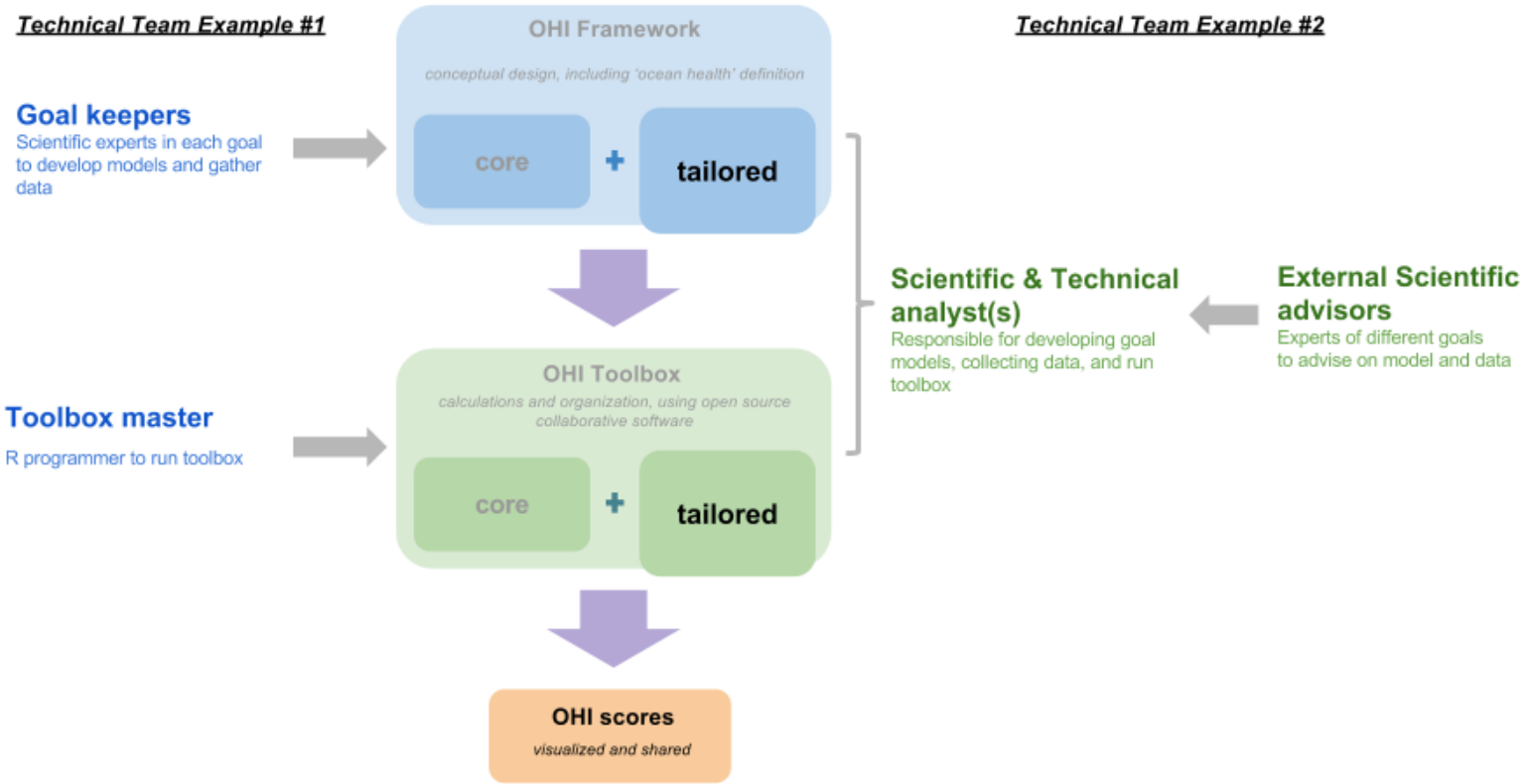
OHI Framework



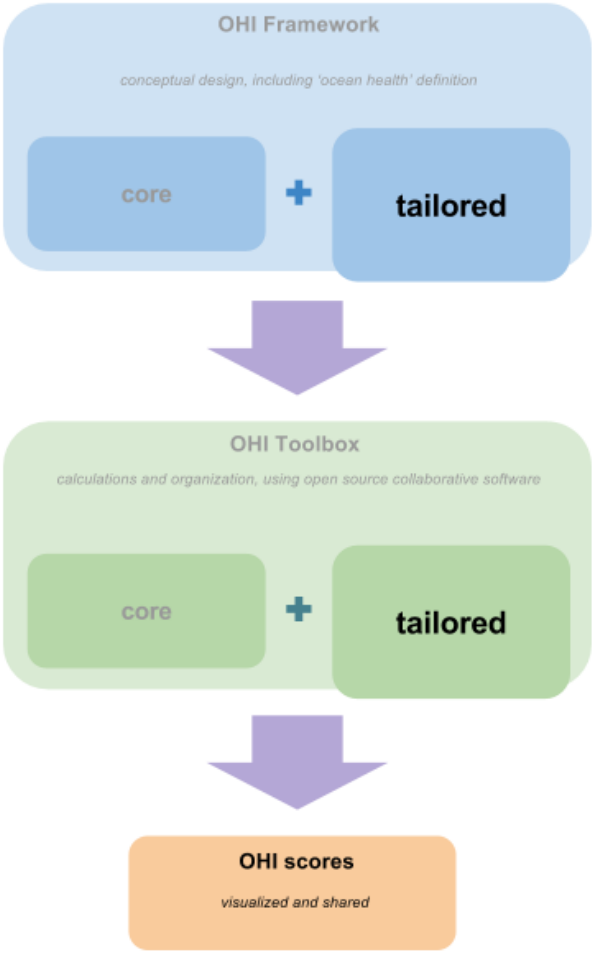
OHI Framework - Tailored



Technical Team Structure



Workflow



Workflow

Define Boundaries

Select and develop goal models

Gather data, pressures & resilience

Set reference points

Request an OHI+ repository

Format, store, and register data

Modify goal models

Calculate scores

Make flower plots

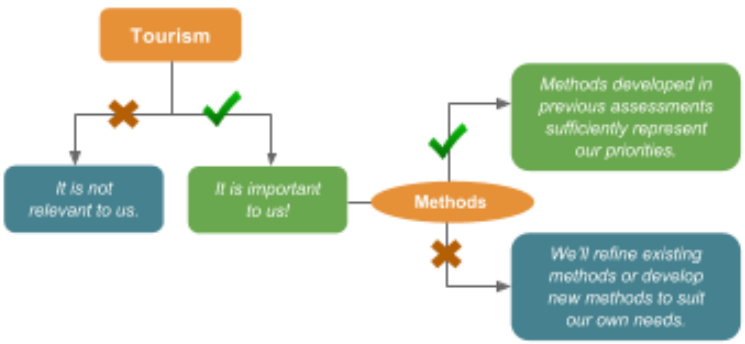
Report results

Framework

- Conceptual planning, model building, and data gathering
- Keep in mind at all times these **Best Practices** (see publication or Manual)

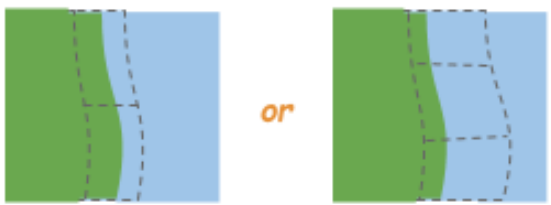
Build the conceptual framework

Which benefits does the ocean provide in your local area? What are key ecological, social, and economic characteristics and priorities? Identify these and build a conceptual framework before gathering existing information.



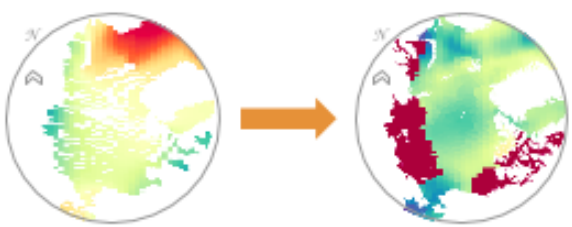
Define spatial boundaries

The boundaries of your assessment should be a driven by the boundaries where information is reported and policy decisions are made.



Remain true to the framework

Existing, available data can be limited or not ideal. But it is possible to fill gaps, use proxy data, or incorporate intermediate models. But stick to your conceptual framework and priorities to get a complete picture of ocean health.

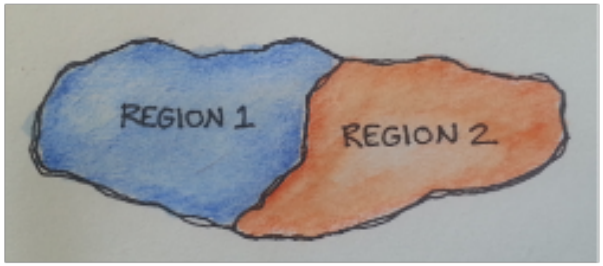


Document and share the process

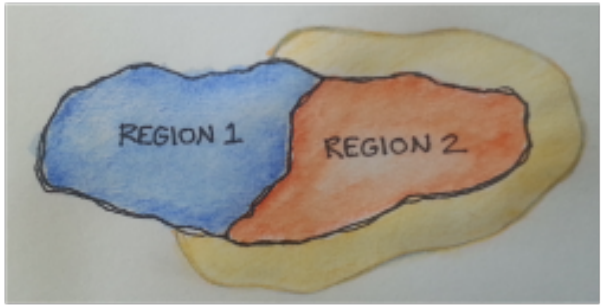
Methods developed and lessons learned through the assessment process should be shared with future assessments. Methods should be reproducible in one location through time and repeatable in different locations. This requires transparency and communication throughout the assessment.

Framework: Define Spatial Boundaries

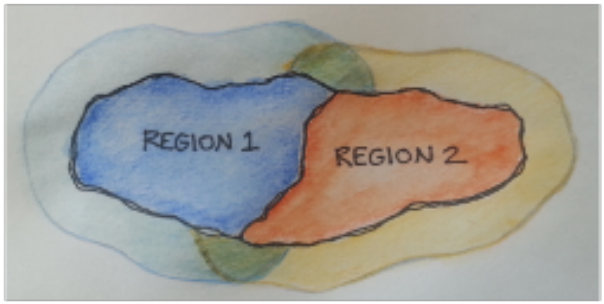
- Calculations happen at the region level
- Judicial boundaries at decision-making scales are preferred
- An example on how to turn land to marine boundaries:



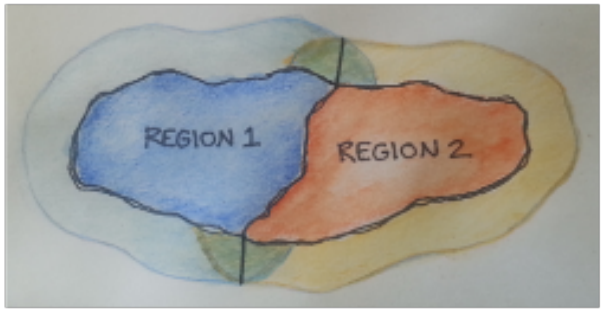
1. Start with land-based boundaries



2. Draw offshore buffers for each region



3. Offshore buffers overlap



4. With the Thiessen Polygon approach, the overlap is divided...

Framework: Select Goals and Develop Goal Models

- Select from *Ten commonly assessed goals*
- Conceptual and Practical guidance for each goal (Manual - Appendix 1)
- understand each goal, stick to the definition but think creatively how to represent each goal (Best Practice #1 and #3)
- how to work different goals together
- evaluate **reference point, pressures, resilience** while collecting data
- Send data and develop models using templates (Appendix 2 & 3)

Framework: Gather Data, Pressure, and Resilience

- Gather **open-access** data that will be **updated regularly**
- Data for **Status, Pressures, and Resilience** for each goal
- Use appropriate **temporal and spatial scales**
- High quality data collected by respected organizations under certain protocol
- If can't find ideal data, use **proxy data** or **gapfill**

Framework to Toolbox

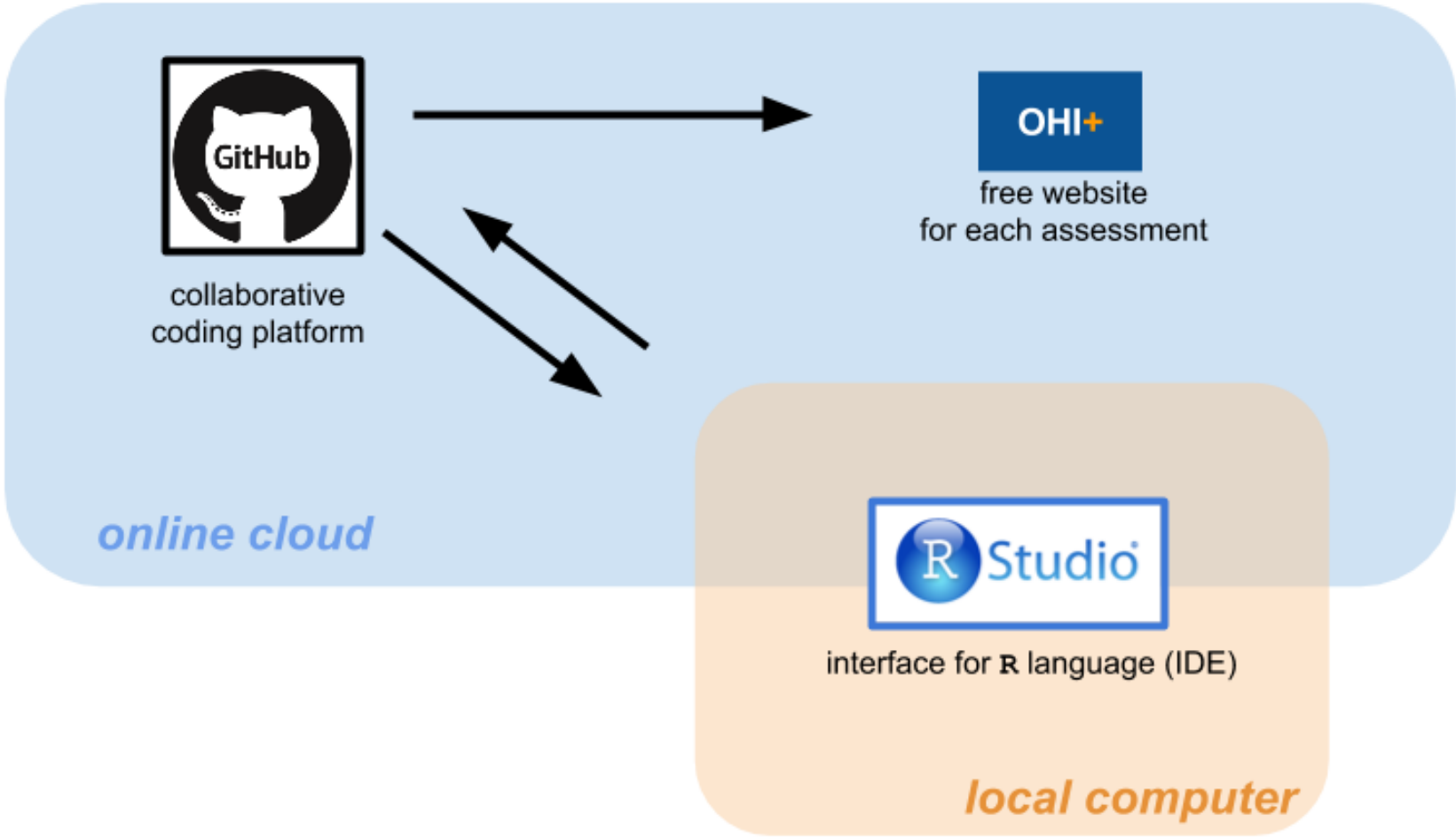
Now you have:

- defined spatial boundaries
- developed goal models
- collected data

You can request an **Assessment Repository** and start using the **Toolbox**

- *Repository* is where all the data are stored, managed, and calculations occur
- Github-based
- *Toolbox* is the software packages for calculations
- Github and R - based
- open-source

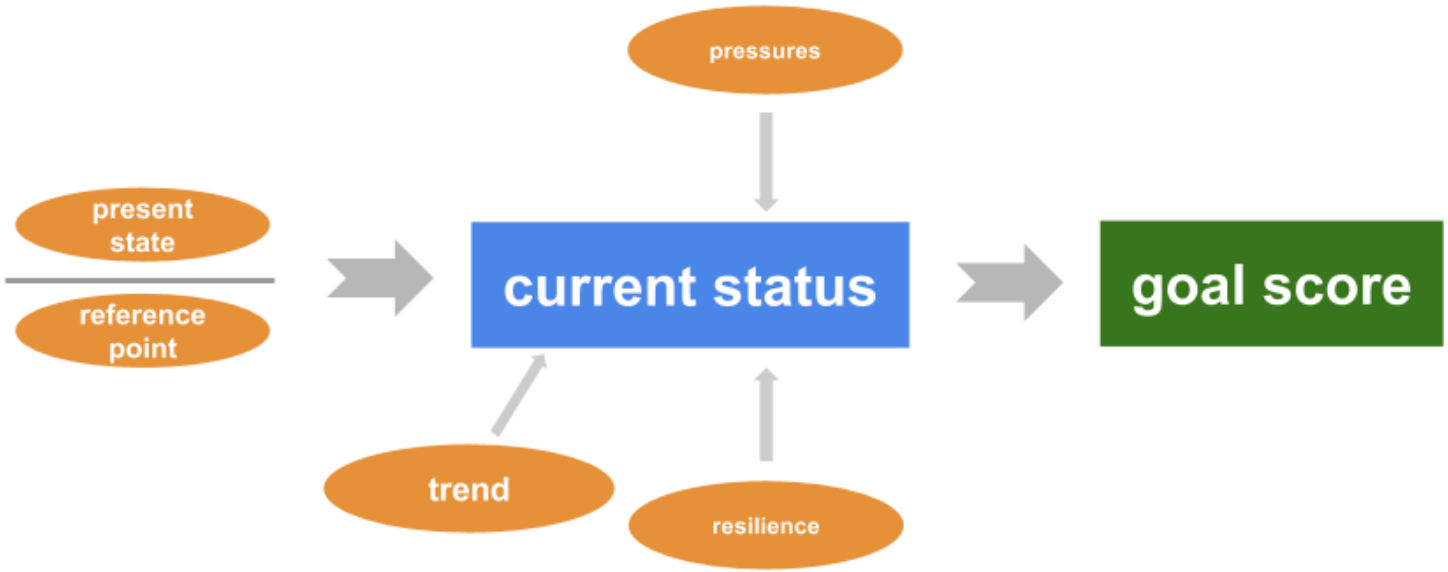
Toolbox: Github - R



Toolbox: Preparation of data for toolbox

- Format, Store, and Register Data
- tracking and sharing work, scripted as much as possible for future assessments
- Toolbox require specific formats
- long formats
- rescaled to 0-1
- Registered to be called upon during calculation

Toolbox: Modify Goal Models and Calculate Scores



Main Resources

- **ohi-science.org**: main site for all OHI+ related topics
- **Manual**: conceptual and technical guidance for each step
- **Forum**: on-line community for OHI+ practitioners to connect and learn from each other
- **Turorials**: presentations
- Contact our team: `info@ohi-science.org`