Automation Tools In Support of Assessments: Intro to TADA

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TADA Vision (*Revisited)*

To develop a **Tools for Automated Data Assessment (TADA)** as an **R package** and **user-friendly web-based interface (R Shiny)**

❖ To save time, improve efficiency and accuracy in water quality assessments

❖ Using an open-source approach to both requirements gathering and development

❖ Standardized but flexible

❖ Community driven requirements

R Package

Data downloads
Data cleaning
Filtering
Normalizing

Analysis algorithms

- ◦ Focus on algorithms specific to WQP data

- ◦ Data is flagged but not automatically removed or modified

- ◦ Can be easily incorporated into existing tools or data processing methods

- ◦ Highly customizable

- ◦ Companion to **dataRetrieval** package

R Shiny User Interface

- Makes use of R package

- Developed independently

- Guides user through process

- Interactive
  - data exploring
  - cleaning
  - graphing
  - etc.

- Web based

- EPA Shiny hosting options

Requirements Gathering

◦ Extensive discussions and follow ups with stakeholders

◦ Documented requirements

◦ Will revisit periodically

◦ Built a community

◦ User stories
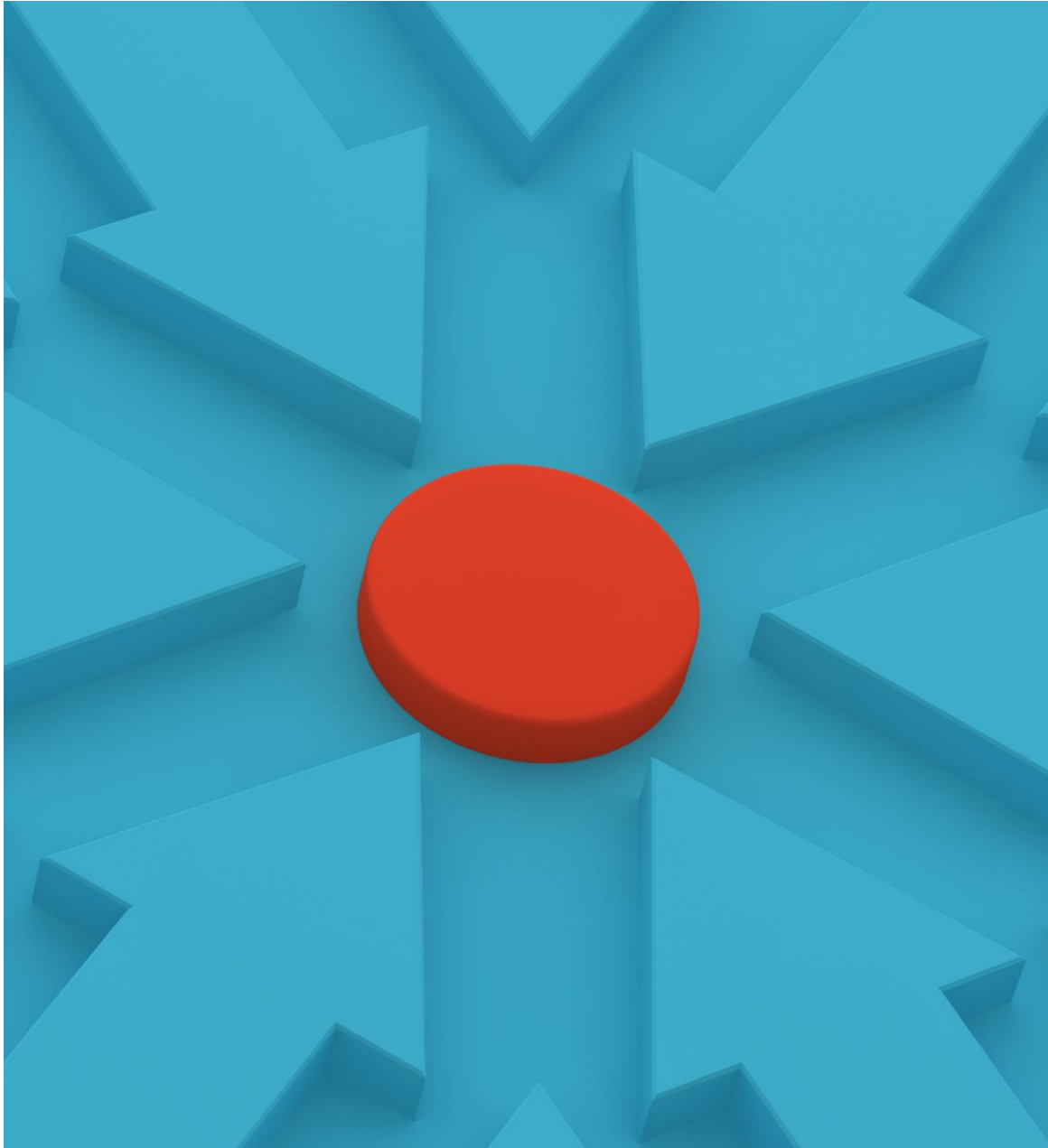
Contractor Support

Technical expertise

Guidance through development process

Mock-ups

GitHub Activities

◦ New EPA GitHub environment

  ◦ Enterprise license

  ◦ Standards and governance policies

◦ Brand new EPA/TADA team

  ◦ *2 public repositories**

  ◦ Can serve as community forum/hub

Community Development

◦ Community can be anyone

◦ Contract to support subject experts with varying R skills

◦ EPA/ORISE initial development

◦ Github: setting stage for community participation

◦ Personnel changes