REDCap for databasing

Biomedical Informatics
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• Web-based data capture application linked to a flexible open source data management system (MySQL)
• Developed and deployed at Vanderbilt University
  o REDCap Consortium is now worldwide entity
• Users build and manage their own online surveys and forms (instruments) quickly and securely with minimal support
  o Enables collaborations
  o Mobile compliant
  o Portable interface
  o Flexible design
Architecture

• Frontend – User Interface
  o A suite of web-based tools built in PHP + JavaScript
  o Provides a flexible and customizable web-interface
  o Intuitive layout and interactive graphics

• Backend – Database. MySQL database engine
  o Metadata: data field types and naming, form presentations, validations and security levels
  o Logging: information all data changes
  o Docs: Store uploaded or generated files
  o Rights: User Rights and expiration dates
  o Data (flat data): All data stored for the different projects
Project initiation workflow

- **Initial Meeting**
  - Rsch team defines metadata

- **Conversion to REDCap project**
  - Study DB tables

- **Prototype**
  - Test
  - Revision?
    - YES
    - NO → Production

**Requirements Development**
- Informatics + Research team

**Prototype Testing**
- Informatics team
- Research team

**Deployment**
- Research team
REDCap worldwide use

REDCap has entered a period of exponential growth since 2011 as the critical mass of users at multiple sites.

For example, Partners Healthcare (Boston, MA) now has more than 2,300 Production projects, more than 1,500 Development projects and almost 6000 users.
From 2009...
828 Collaborating institutions
> 86000 projects
> 113000 Users
In our community

• 5 Production projects
  • MED Burn Center
  • LeBonheur pediatrics
• 14 Development projects
  • Campbell clinic
  • Shea clinic
• 35 Total users
• Projects with more than:
  • 37,000 records
  • 500 fields
  • 30 Forms
  • 3 Surveys
• The REDCap cup contest (quarterly)
• Annual REDCap conference
  o The Children's Hospital of Philadelphia & Penn University of Pennsylvania
  o 165 Attendees
• Offline version of REDCap
• REDLOC
• Mobile App development
References

1. www.project-redcap.org

Thank you

Questions

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