BY THE NUMBERS: TRANSITIONING FROM A HOME-GROWN REGISTRY TO A COMMERCIAL SYSTEM

Colorado Immunization Information System
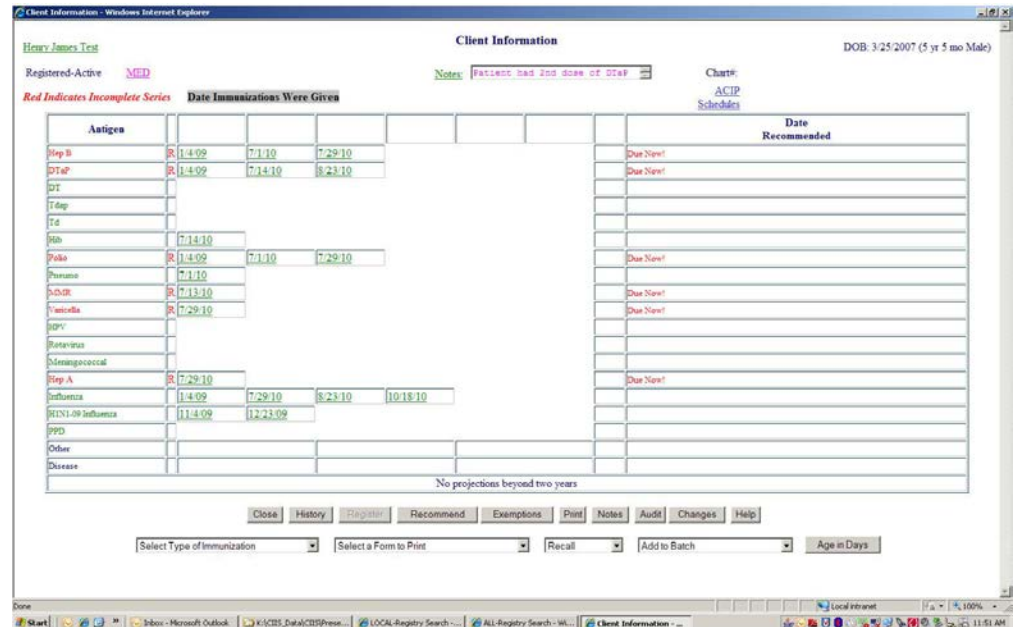
Outline

- Problem Definition

- Goals and Objectives

- Roadmap and Plans

- Workstreams

- Challenges to Overcome

- Factors Critical to Success

- Lessons Learned

Problem Definition

- Homegrown registry created/maintained by a single developer

- Lack of depth in technical support

- Limited functionality

- Limited reports

- Out-dated user interface

Goals and Objectives

- [ ] Select and implement a new immunization registry solution that includes:
  - [ ] *Improved functionality and performance*
  - [ ] *Integrates with overall CDPHE architecture and complies with OIT standards*
  - [ ] *Allows for a more sustainable operations and support model*

  > 3 Goals
  > 5 Objectives

  1. Sustain operations and maintenance for existing registry
  2. Sustain and migrate existing interfaces
  3. Convert all data from existing registry to new registry
  4. Train all existing CIIS participants on new registry to facilitate readiness and system adoption
  5. Sunset the existing registry upon completion of new registry implementation and data conversion

- [ ] Implement real-time HL7 messaging and automate flat file processing
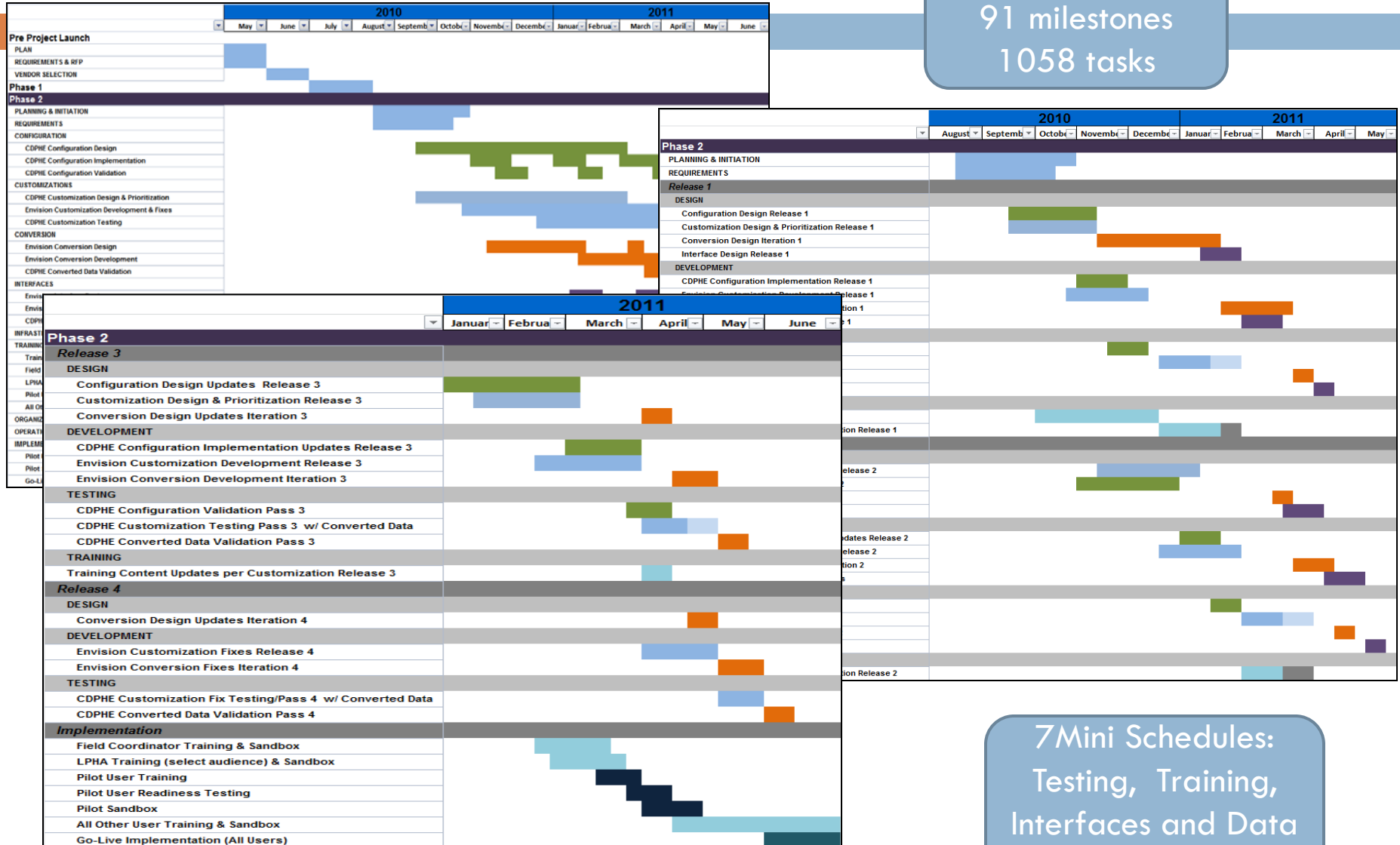- [ ] Implement a more robust patient matching and de-duplication solution
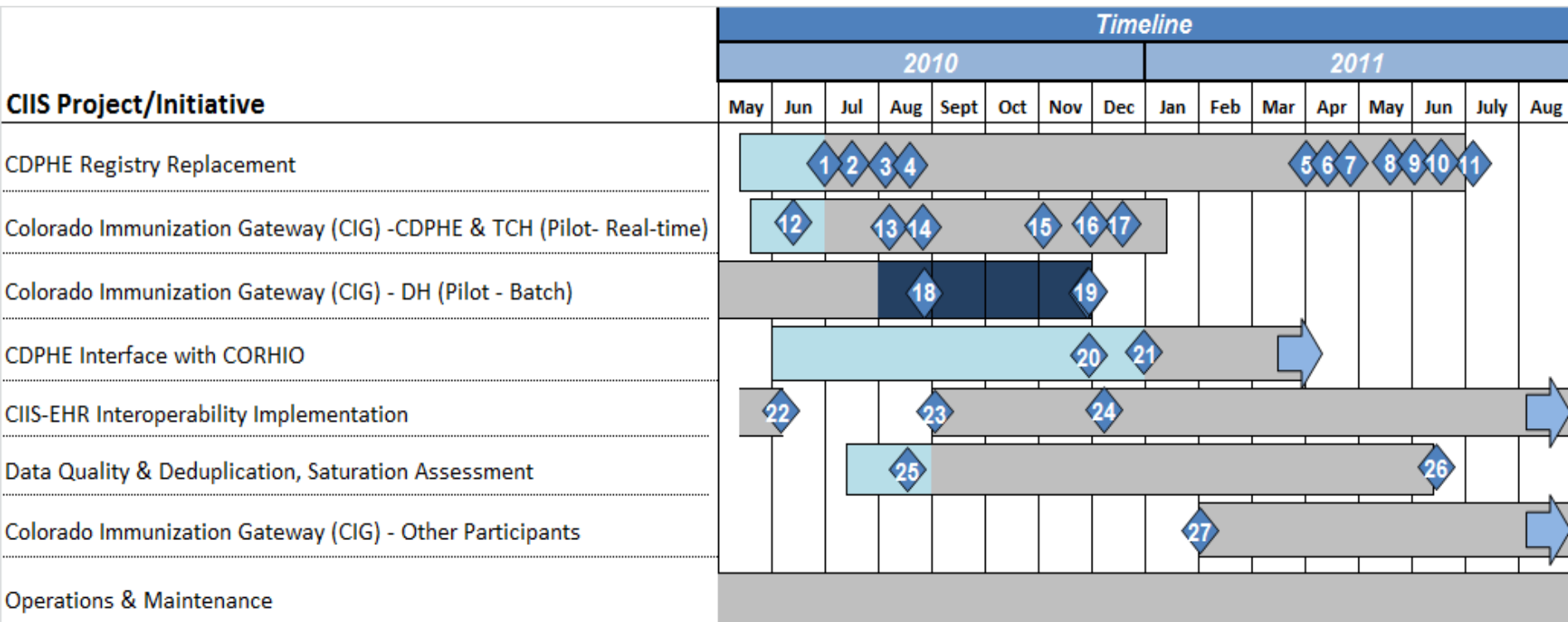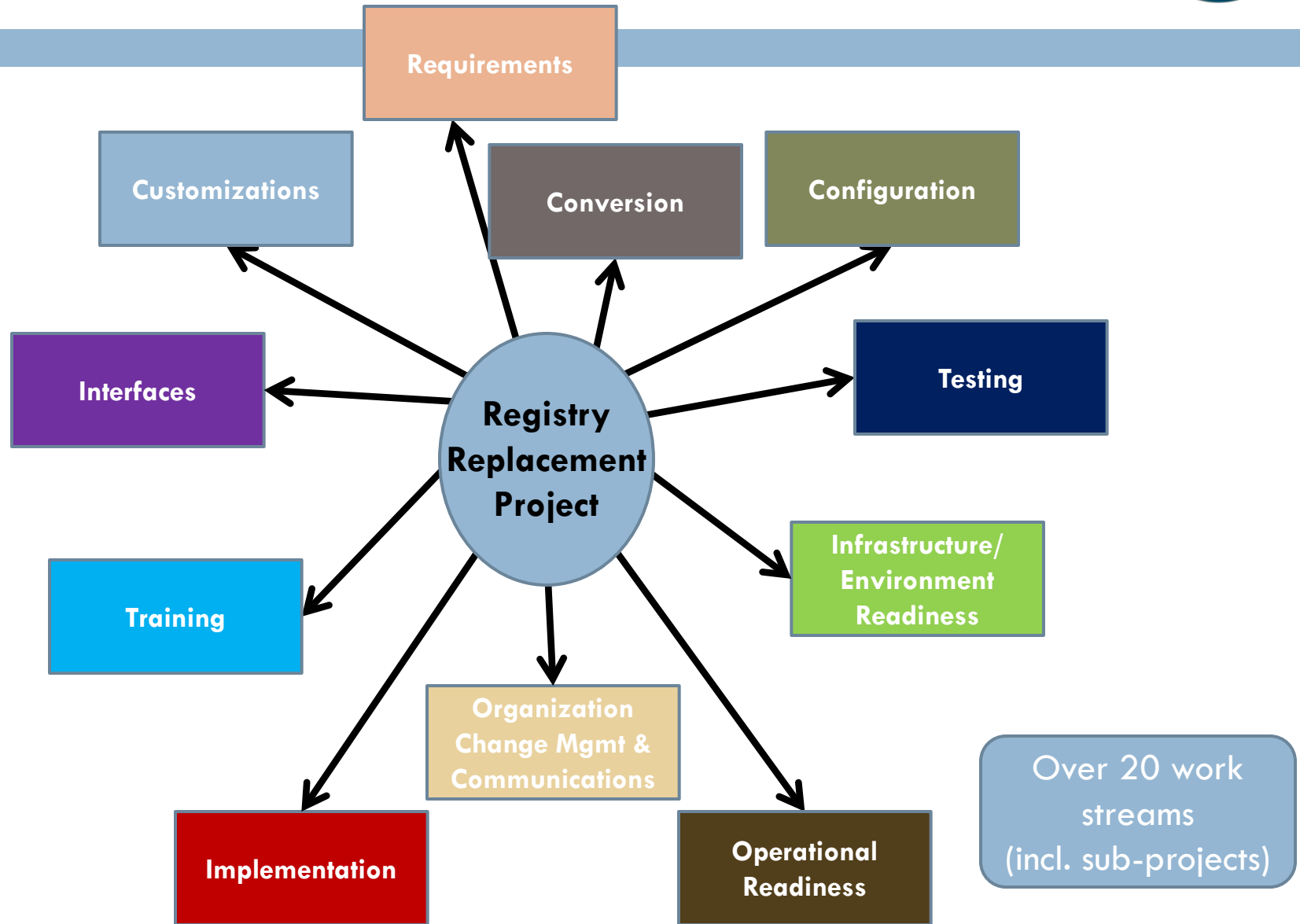
Project Roadmap

Project Plans

Master Schedule:
91 milestones
1058 tasks

7Mini Schedules:
Testing, Training,
Interfaces and Data
Conversion

Project Workstreams

Challenges to Overcome

☐ Lack of personnel resources

- ▪ *Typically, a project has SMEs and IT team.*
- ▪ *Only the SMEs (CIIS team), who also performed the IT team work and they had commitments to regular work as well.*
- ▪ *Recruited volunteers to fill out the team.*

10 Team Members

☐ System implementation activities new to CIIS

- ▪ *Project management, testing, data validation, configuration & customizations*

3 rounds of data validation

430 customizations

Challenges to Overcome (cont.)

- Aggressive timeline
  - *Typically, a project like this takes up to 2 years.*
  - *Grant deadlines limited time to implement*

Completed in 1 year

- Implementation while maintaining existing system
  - *Technical Assistance to Users*
  - *Maintain current system/address issues*
  - *Data files to import*

Over 3500 active users

58 existing Interfaces

Challenges to Overcome (cont.)

- **Data Conversion**
  - *Massive amount of data to convert*
  - *Data fields in old CIIS didn't correspond to new CIIS*
  - *Data clean-up*

- *Process Improvement Needed*
  - *Retrain over 3500 active users*
  - *Meaningful Use = increased demand for interfaces*

37.8 million immunization services

3.5 million patients

98,000 notes

2 CBTs
8 trainers
60+ webinars

Factors Critical to Success

- **Dedicated Team, Partners and Vendors**
  - *Met due dates and delivered quality work*
  - *Were collaborative, available and responsive*
  - *Took constructive criticism well and happily fixed defects!*

- **Decisiveness and flexibility**
  - *Team made decisions quickly allowing us to move to new issues for resolution*
  - *Adapted to unexpected challenges*

- **Set Business Requirements early**
  - *Consistent direction, ability to define customizations quicker, and greater chance for system stability and meeting deadlines*

120 Volunteers from 25+ partners

353 requirements

Factors Critical to Success (cont.)

- Built off COTS registry already in production
  - *Expertise & lessons learned! Most bugs are worked out.*
  - *Time savings and quality are gained with an already built product.*
  - *Able to customize and configure the system to meet user needs*

- Used a combination of project management techniques
  - *Progressive Elaboration*
  - *Waterfall technique externally with Agile methodology internally*

75 – 80% requirements met

Factors Critical to Success (cont.)

- Repeatable Processes & Process Improvement

  - *Testing and data validation*

- Planning, planning and more planning

  - *Project plans, sub-plans, test runs, call-down lists*

- Org. Change Management & Communication

  - *Consistently communicated new processes and progress*

  - *Garnered feedback pre-deployment*

4 rounds of testing
110 test scripts

18 Monthly newsletters

Lessons Learned

Project-Specific

- Fully test all functionality early in project
  - *Recommender issues would've been brought to light*
  - *Earlier prioritization of customizations*
  - *Identification of the true work and time commitment required of the team*
- Establish staff calendar to identify planned time away from project
- Dedicate larger team and IT staff

General

- Don't be afraid to maximize opportunities and utilize your connections
- Managers - Be ready to be the cheerleader, punching bag and advocate for your staff!

Problem Resolution

- Generates official immunization records and historical documentation

- Generates vaccination coverage, data quality, etc. reports

- Generates more-specific reminders/recalls

- Manages and tracks inventory (vaccine, treatments, etc.)

- Provides separate functionality for education users

- Supports emergency preparedness and outbreak activities

- Provides customizable displays

- Professional user interface

Questions?

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