The Center for IDEA
Early Childhood Data Systems

Where to Start: Planning for a New Data System or System Enhancement

Robin Nelson, DaSy Center

Amy Nicholas, DaSy Center

Noah Feldman, MA Part C

Susan Franck, WA Part C

Improving Data, Improving Outcomes Conference
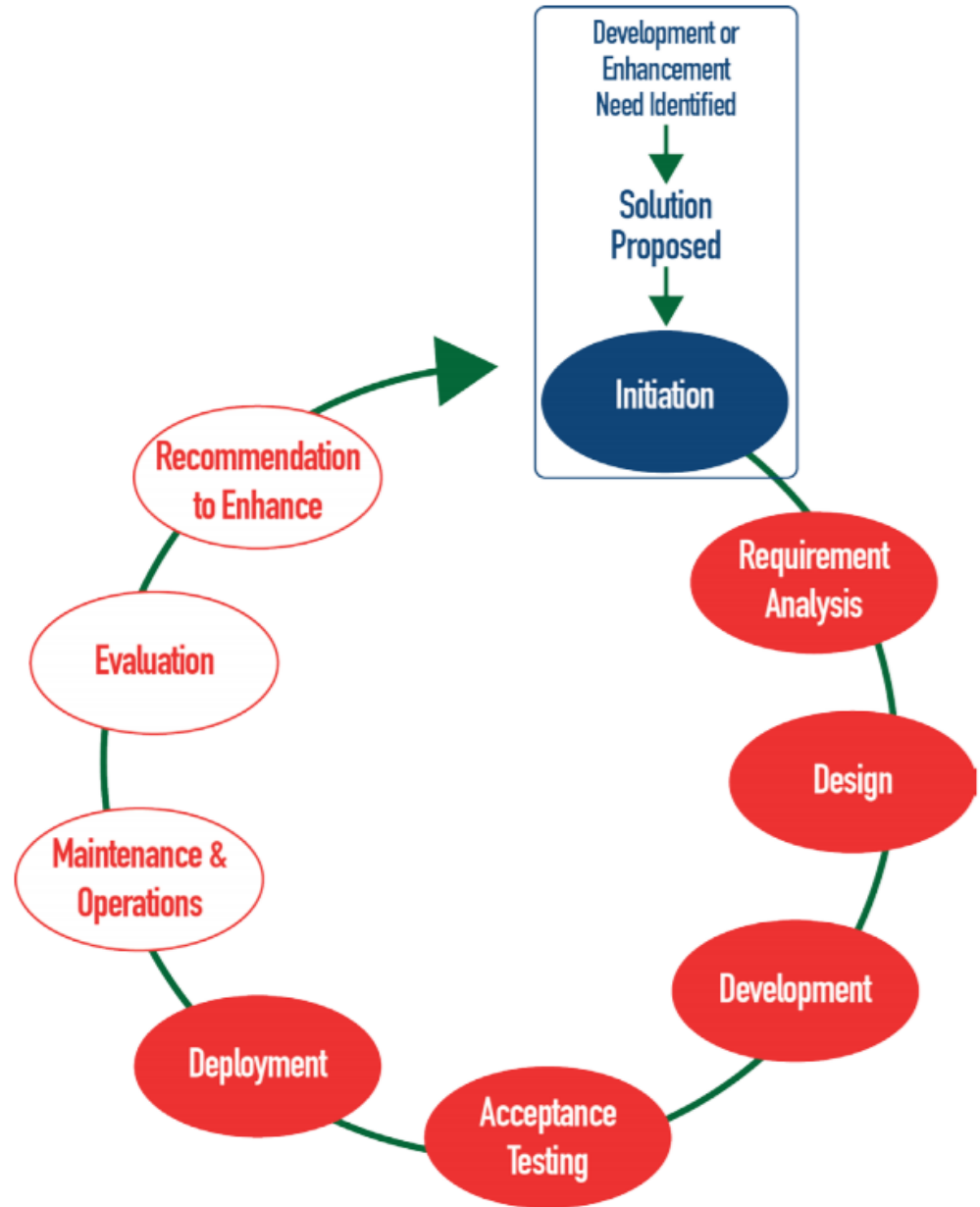
Arlington, VA

August 2018

Session Overview

✳ This session is intended to identify key considerations for states before working through the action phases of developing or enhancing a Part C or Part B 619 data system.

✳ We will describe data system features that states are using to improve the IFSP and IEP processes, facilitate date entry/workflow, and strengthen communication and collaboration.

✳ State presenters will share experiences and learnings from managing their data system development projects.

Typical Barriers and Pitfalls

* Lack of shared vision
* Needs of stakeholders not aligned with vision and scope
* Insufficient project/contract management
* Taking shortcuts in development and deployment processes
* Architecture unsuitable for scale/scope/context

Phases of System Development Life Cycle

Development or Enhancement Need Identified

Solution Proposed

Initiation

Requirement Analysis

Design

Development

Acceptance Testing

Deployment

Maintenance & Operations

Evaluation

Recommendation to Enhance

DaSy

Key Considerations for Initiating and Planning a New Data System or Major Data System Enhancement

Available as

standard pdf

and

fillable worksheet

Big Picture Issues

Vision
- Outcomes
- Scope

Communication
- Identify and engage stakeholders
- Develop strategies

Management of
- Development
- Implementation
- Risk

6

Form Your Team

Governance — Management — Development — Deployment — Operations
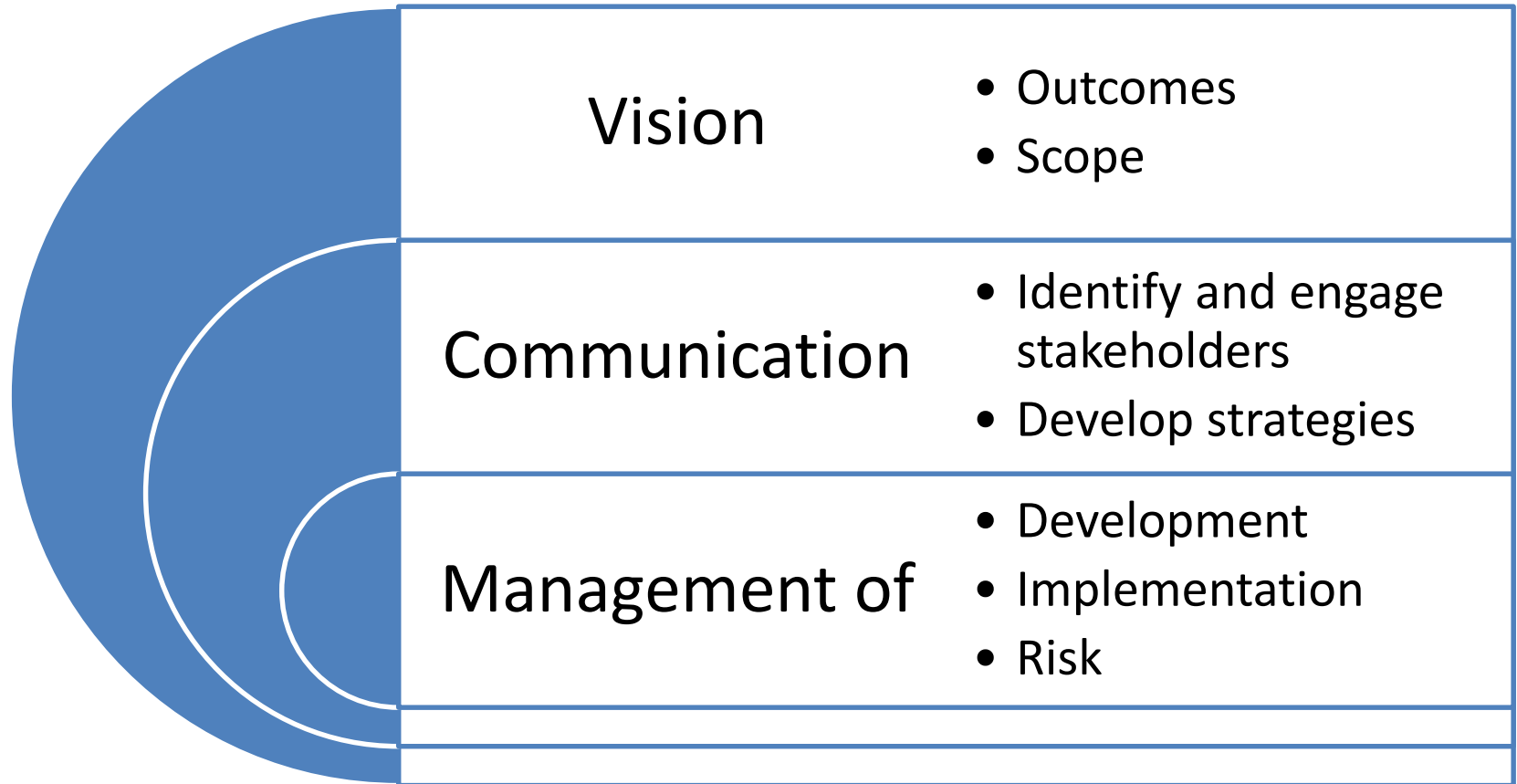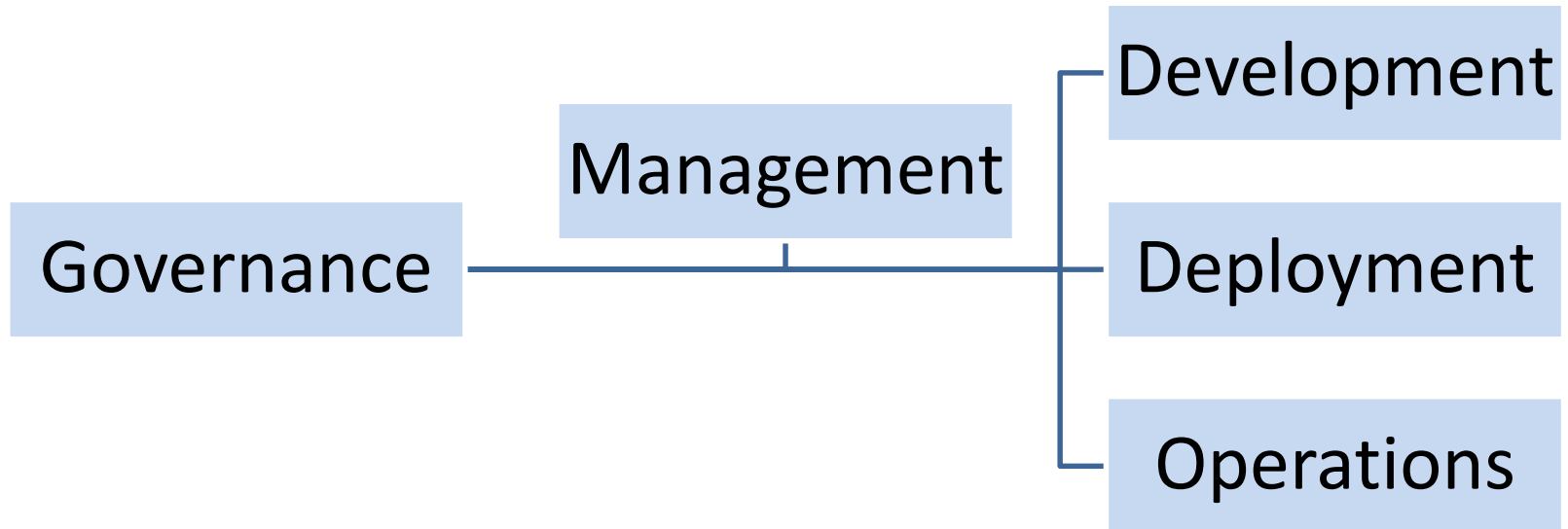
Project Team
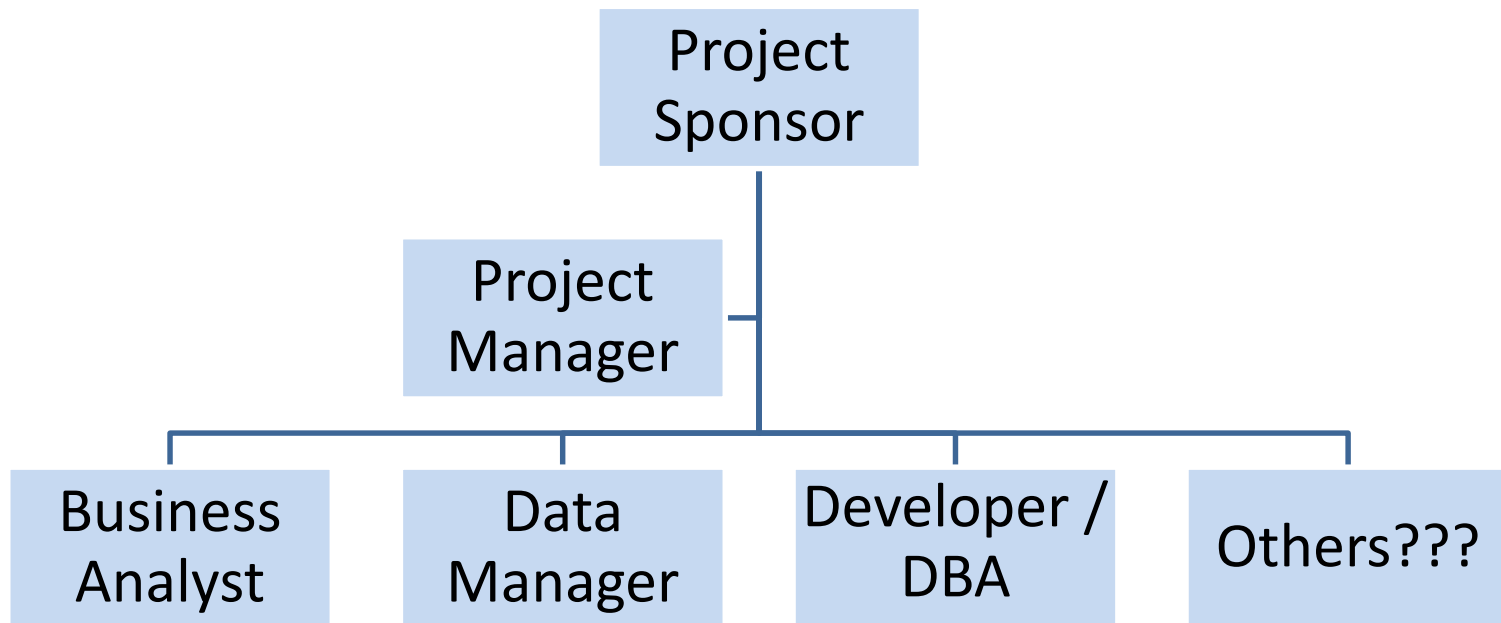
Define what your system needs to do

❋ Describe business processes

❋ Identify and re-examine workflows

❋ Define requirements
  – Functional/business
  – Nonfunctional/technical

Find the Right Solution

In-house

- Internal agency
- External agency
- Contract

Procurement
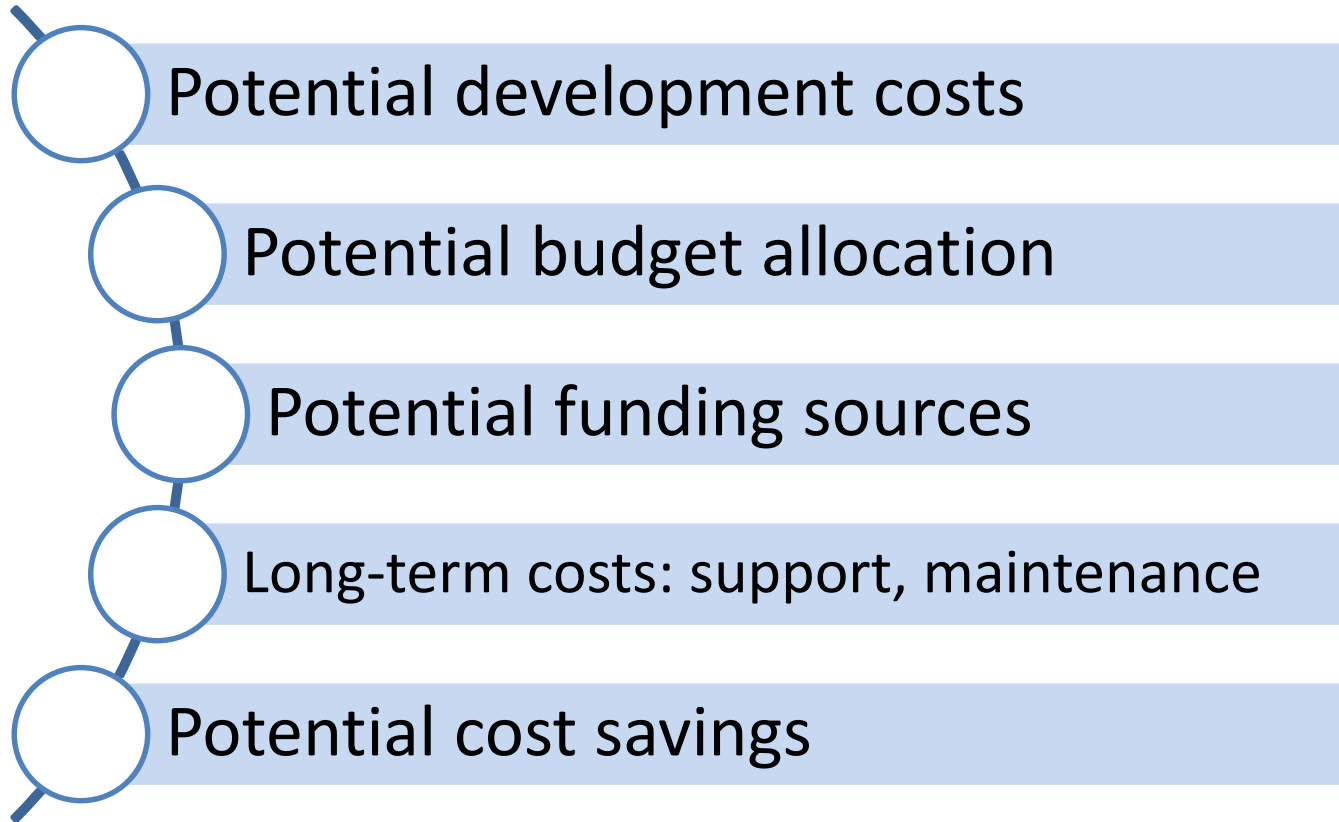
- Competitive RFP
- Sole source
- Off-the-shelf
- Custom build

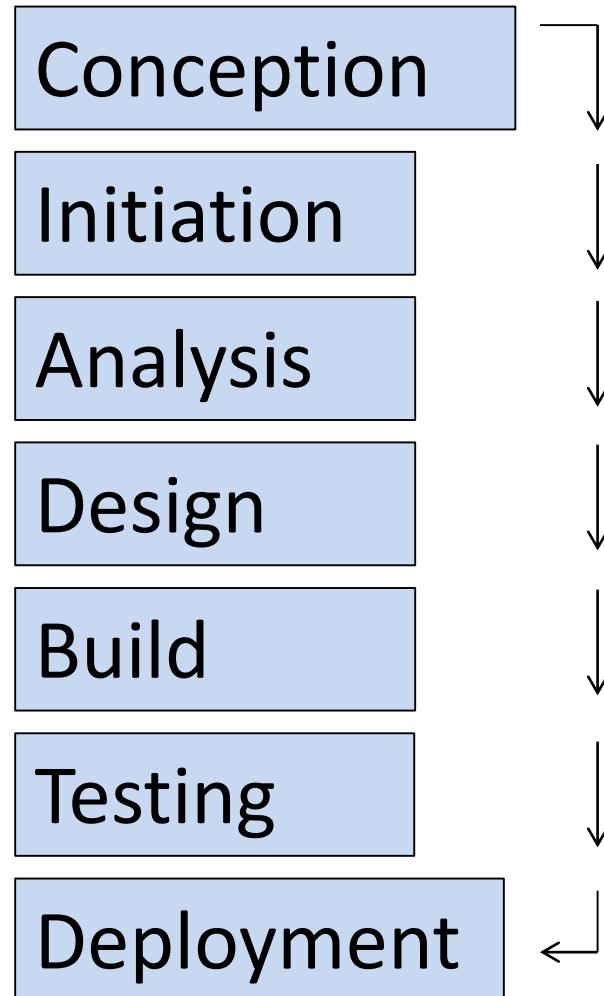### Options for

- Development
- Hosting
- Operations
- Maintenance

10

Financial Considerations

Potential development costs

Potential budget allocation

Potential funding sources

Long-term costs: support, maintenance

Potential cost savings

11

Software Development Approaches

Waterfall

Conception
Initiation
Analysis
Design
Build
Testing
Deployment

Agile

Conception
Initiation
Analysis
Design
Build
Testing
Deployment

12
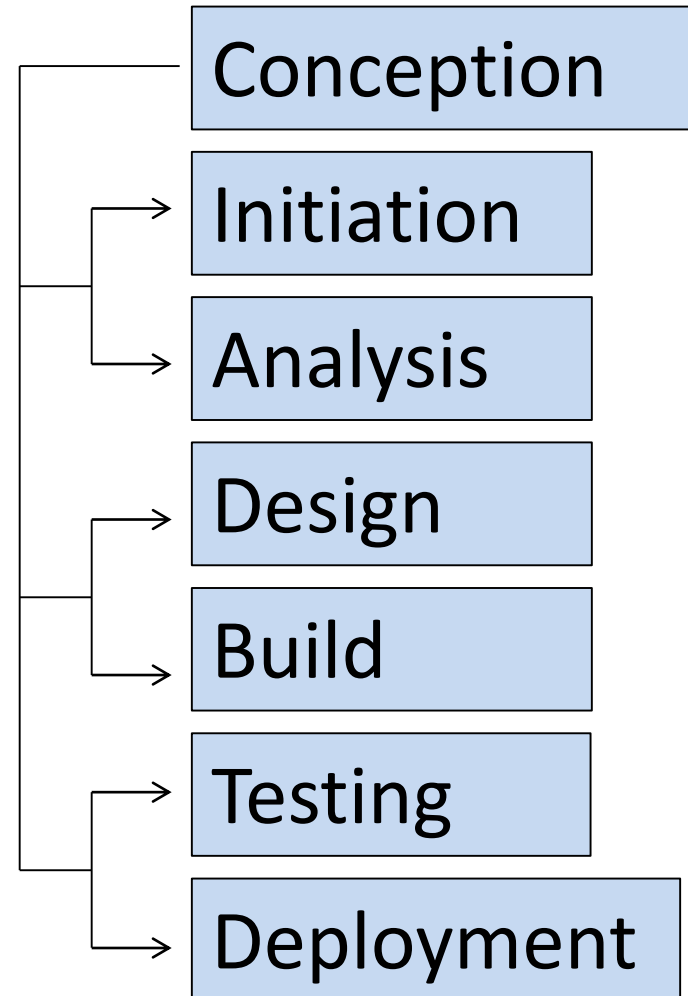
State Experiences with Data System Projects

System Development Life Cycle

- Initiation
- Requirement Analysis
- Design
- Development
- Acceptance Testing
- Deployment
- Maintenance & Operations
- Evaluation
- Recommendation to Enhance

13
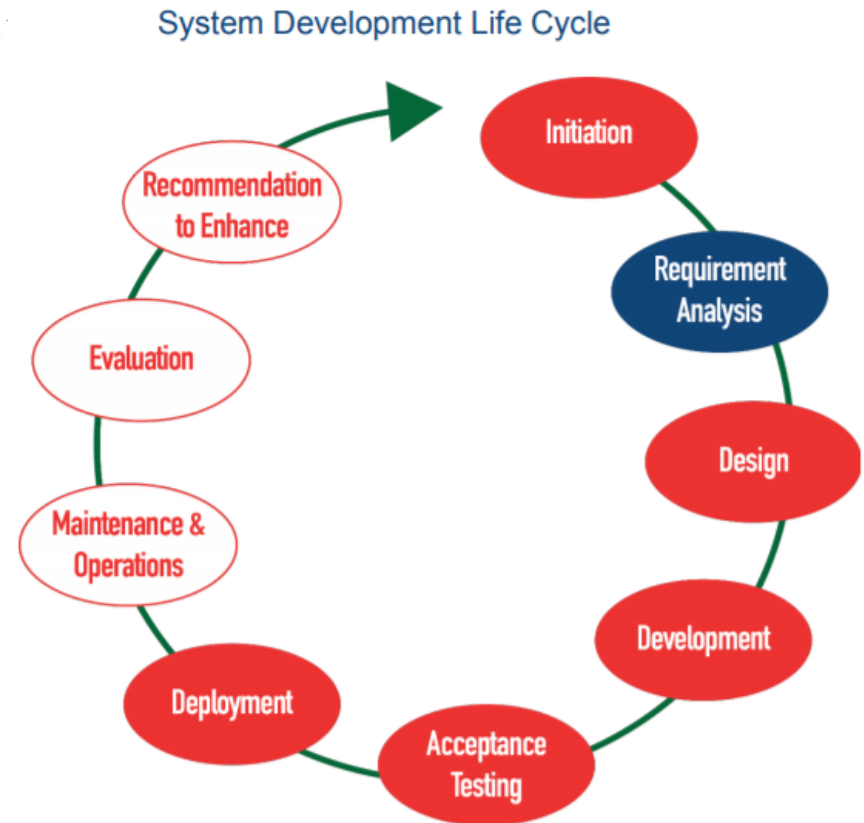
Washington Early Supports for Infants and Toddlers (ESIT)

✻ Data management system (DMS) background

- – Microsoft Silverlight application
- – Databased structure was built for one workflow for service coordination
- – Reports were built for reporting, not monitoring or measuring progress

✻ Data system enhancement project

- – Research
- – IT staff turnover
- – Implemented Agile
- – Developed a communication plan

Washington ESIT DMS

Current System

Built around the service coordinator

Data collection by geographic service areas

System has many "hard stops" which disrupts work flow

Limited administrative functions

New System

Built around the child

Data collection by early intervention programs

Limit the number of "hard stops" to ease work flow

Add administrative functions

DaSy

Washington ESIT DMS (cont.)

Current System

Multiple logins

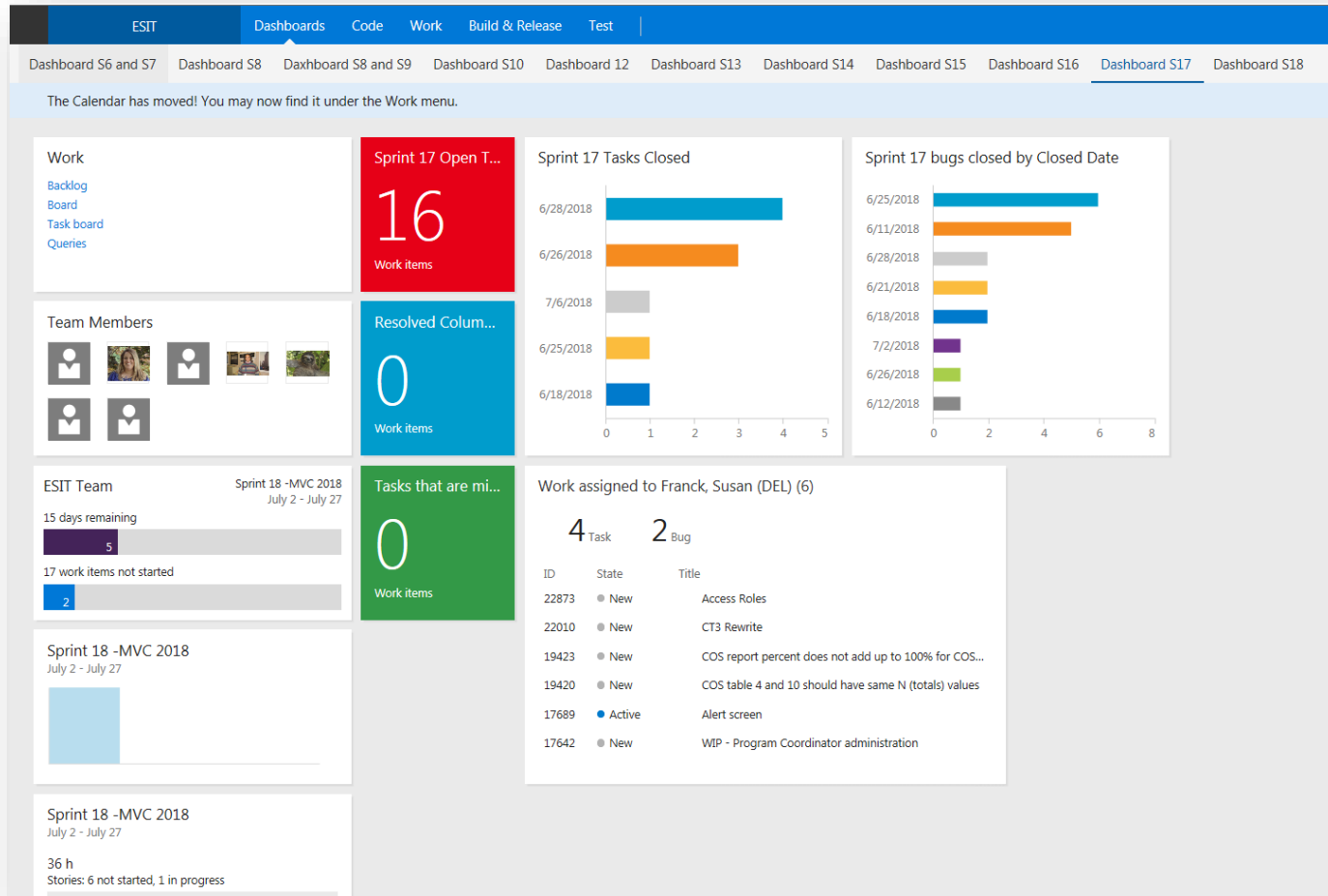Reports limited to reporting results

Records planned services

New System

Single login

Reports include monitoring progress

Records actual service delivery

Team Foundation Server (TFS)

TFS (cont.)

TFS (cont.)

Massachusetts Early Intervention

✳ Developing: New web-based client and fiscal system
  – Full Client record
  – EMR upload capability
  – Full Reimbursement and payment processing

✳ Replacing: EI Information System (EIIS) and Fiscal System
  – 20+ years old systems
  – Access database and SQL

Massachusetts: Current EI Data Processes

Local Program Data Collection Process

DPH Databases:

EIIS Referral Form

EIIS

IFSP Form

EIIS Discharge Form

Human error

Redundant data entry

Local Client Database

Local EIIS

Local Billing System

Multiple steps for data transmission

EIIS

TVP Website

Manual Data Verification

Waiver (Request for Reimbursement)

Client Record, Progress notes, IFSP

Certification Tracking

Additional processes for data needs

Separate databases that are not connected

TSS

Database

DPH Claims System

Claim Support documentation

Email form

Email documents

Personnel Database

Payor System

Third Party Payor

21

Source: DPH EI Analysis & Provider Interviews

DaSy

Massachusetts: Future EI Data Processes

Local Program Data Collection Process

DPH Databases:

Option 1

Enrollment Data

Clinical Data

EI Personnel Data

DPH Client System

Local Billing System

DPH Claims System

Payor System

Third Party Payor

22

DaSy

Massachusetts: EMR Integration Becoming Reality

50% of EI agencies currently own EMR

New EIIS as primary software

- EI DPH will develop extract for EMR upload

EMR as primary software (EIIS secondary)

- EI DPH will develop integration function for upload to EIIS

- EI agencies will develop extract for EIIS upload

Massachusetts: Future EI Data Processes

Local Program Data Collection Process

DPH Databases:

Option 2

Enrollment Data

Clinical Data

EI Personnel Data

Local Client Database (EMR)

DPH Client System

Local Billing System

DPH Claims System

Payor System

Third Party Payor

24
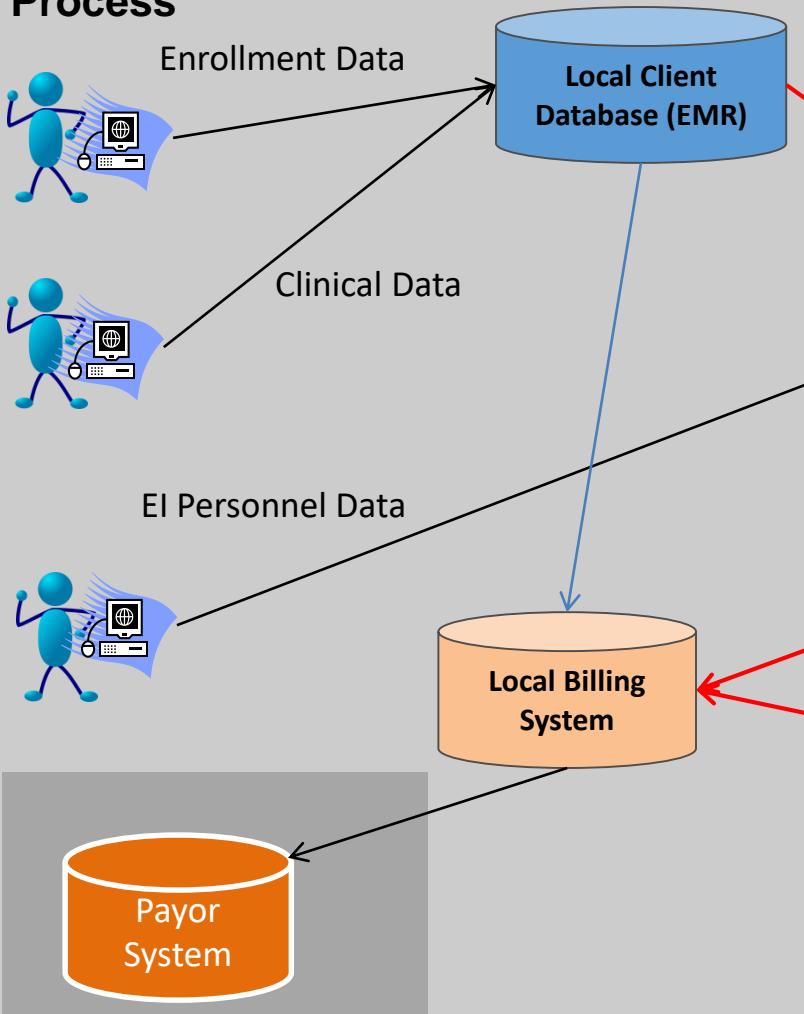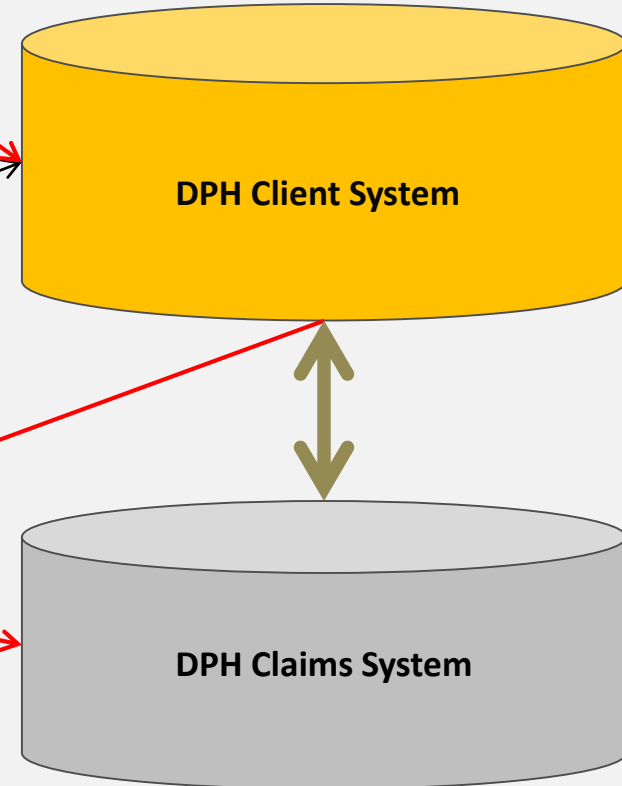
Data System Features

Deciding on Features

✳ States can benefit from exploring features other states are using to collect and facilitate the reporting and use of data, including IFSP and IEP data.

✳ For each feature, specific business requirements are needed to communicate and document (in writing) all potential uses to meet program needs.

  – [Developing and Sharing Your Business Requirements to Build a Better Data System](#)

DaSy Center Toolkit

Including IFSP Information in Your Part C Data System: Selected Features and Related

What You'll Find for Each Feature

* ❋ Connections to the **DaSy Data System Framework**;
* ❋ Potential data elements needed to develop various aspects of the feature;
* ❋ A list of functionality options that could be used to implement the feature;
* ❋ Key design considerations;
* ❋ State examples,* and
* ❋ Related technical assistance resources.

Group Sharing & Discussion

Related DaSy Resources

✳ [Key Considerations for Initiating and Planning a New Data System or Major Data System Enhancement](#)

  – Standard PDF and fillable worksheet

✳ [IFSP Toolkit - Including IFSP Information in Your Part C Data System](#)

✳ [DaSy Framework: System Design](#)

✳ [Developing and Sharing Your Business Requirements to Build a Better Data System](#)

✳ [Building a Better Data System: What are Process and Data Models?](#)

Find Us Online

✸ Visit the DaSy website at:
http://dasycenter.org/

✸ Like us on Facebook:
https://www.facebook.com/dasycenter

✸ Follow us on Twitter:
@DaSyCenter

Thank You

The contents of this presentation were developed under a grant from the U.S. Department of Education, # H373Z120002. However, those contents do not necessarily represent the policy of the U.S. Department of Education, and you should not assume endorsement by the Federal Government. Project Officers, Meredith Miceli and Richelle Davis.

IDEAs
that Work
U.S. Office of Special
Education Programs

DaSy