OPTIMIZATION OF A REPORTING PROCESS WITH INPUT FROM MULTIPLE SYSTEMS

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Optimization of a Reporting Process with Input from Multiple Systems
* Due to the nature of this project some of the information in this version of the presentation has been made generic to prevent identification.
Optimization of a Reporting Process with Input from **Multiple Systems**

Child care resource and referral system of Oregon

- Parents (Clients) and guardians of children in need of care
- Child care (in-home, day care center, after-school program) providers and professionals
- Child care licensing and compliance specialists
- Child care referral specialists and resource specialists
- Professional development specialists for child care professionals
- Quality specialists at all system levels
- Research/program development specialists, councils, and committees
- Oversight and regulation authorities
- Community partners
Optimization of a Reporting Process with Input from **Multiple Systems**

And most importantly....Children!
Optimization of a Reporting Process with \textbf{Input} from Multiple Systems

- State Government Agency
- State Government Agency 2
- University 1
- University 2
- Local Agency Partners
- Call Center for referrals
Optimization of a Reporting Process with **Input** from Multiple Systems

**University 1 - Central Coordination**
- Referral data (Online Database)
- Quality Rating data (MS Database)
- Stipend data (Excel File)
- Report database (MS Database)

**Local Child Care Resource and Referral (CCRR)**
- Employer contact data
- Number of tests distributed

**University 2**
- Professional development data
- Training event data

**State Agency 2**
- Subsidy data

**State Agency 1**
- Licensing data
Optimization of a **Reporting Process** with Input from Multiple Systems

- Data Extraction
- Data Processing
- Report Creation
- Data Analysis
- Report Distribution
- Review and Feedback
- Incorporate Feedback (Training)
- Incorporate Feedback (Training)
Reporting Process Background

- Existing reporting process was in place
- Personnel change offered the opportunity for a review of the process
- Process review lead to possibilities for improvement
- Data sharing created need to focus on collaboration
- Resulting requirements helped to define the project
Optimization of a Reporting Process with Input from Multiple Systems

Selection and implementation of the most effective and efficient reporting process within the limitations of the system.
Motivation and Objectives

To optimize the overall reporting system by:

• focusing on improving the quality of data
• decreasing the amount of time from extraction to distribution of the data
• creating transparency into the reporting process for all partners
Statement of the Problem

Data Quality
- Manual processes
- Untimely training
- Repeat errors

Time
- Extraction to Distribution
- Delayed review
- Less analysis/trending

Transparency
- Unclear goals
- Lack of standardization
Solution Research and Selection

Data Management
- SQL
- R
- Online database
- Microsoft Access Database

Report Generation
- Online database
- Adobe PDF
- Microsoft MS Access
- Microsoft Word and Excel
Proposed Solution

- Data Extraction
- Data Processing
- Report Creation
- Report Distribution
- Data Analysis
- Response and Feedback
- Training
Solution – Data Extraction

Beginning:
• Single file generated by Naccrraware for a fee
• Required additional manually manipulation and coding

Ending:
• Multiple files generated manually by CCCCRR using Naccrraware
• Utilization of MS Access queries for manipulation and coding
Solution – Data Processing

Validation
• Beginning: Post-extraction cleanup
• Ending: Pre-extraction cleanup

Sorting
• Beginning: by each CCRR/SDA
• Ending: by Agency and CCRR/SDA

Summarization
• Beginning: Repeated data
• Ending: Combined data tables

Aggregation
• Beginning: Separate quarterly data
• Ending: Compiled annual data

Analysis
• Beginning: Minimum required
• Ending: Expanded capacity

Reporting
• Beginning: Manual process with MSWord
• Ending: Online process/mail merge
Solution – Report Creation

Beginning:

• Totals compiled by CCRR using filtered counts
• Totals manually transferred into single data sheet for all CCRR
• Raw data not distributed or available with report totals for partners
• Data manually transferred into separate MS Word files for each CCRR
• MS Word documents distributed to each CCRR for narrative entry

Ending:

• Totals compiled by queries, pivot tables, and formulas
• Totals in main data page and linked to individual data sheets for each CCRR’s report
• Raw data distributed and available with report totals
• Narratives collected via online form, exported, and mail merged into MS Word template
Solution – Analysis and Report Distribution

Analysis

• Beginning: Contractual analysis for each goal
• Ending: Additional analysis for some goals
  Internal analysis, not goal related, to identify other issues

Report Distribution

• Beginning: Manually via email only
• Ending: Automatic notification and draft submitted automatically
  Final report manually emailed
Solution – Response/Feedback and Training

Response and Feedback

• Beginning: Limited to data meetings and individual discussions
• Ending: Data meetings, documented and distributed notes from individual discussions, feedback field included in online narrative collection form

Training

• Beginning: Primarily for CCRR staff during data meetings
• Ending: Increased On-site trainings, inclusive of partners, addition of video training
Approach and Timeline

Project Management Approach
- Waterfall for tasks
- Agile for development
- Scope and costs unchanged

Timeline Interruptions
- Redefining of reporting period
- Addition of new partner
- Budget errors and cuts
Resources

Report Inputs
• Raw data
• Staff hours
• Knowledge

Report Outputs
• Consolidated data
• Reports
• Training
Challenges

• Data
• Training
• Requirements
• Coordination
• Communication
Criteria for Success

Objective:
To optimize the overall reporting system by:
• focusing on improving the quality of data
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• creating transparency into the reporting process for all partners

Results:
Quality report produced in a timely manner with visibility into the data and process for all partners.
Additional Outcomes

Improved communication
- All partners and internal departments
- Documentation
- Training videos
- Formula overview

Additional projects
- Data Dictionary
- API system development
- Tracker Revision
- Data Sharing
- Additional Formsite projects

Paradigm shift
- Changes can be made to process
- Systems have unused potential
Project Conclusion

Successful with the opportunity for future optimization

- Formatting issues/concerns of online form and final printable report
- Some clarification needed to complete the report documentation
- Additional automation of data processing needed
- Training still have ongoing needs related to transition
Thank you!