Presenters

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What to Expect Today

- Overview of the value of high-quality data

- Discussion of how business rules can support data quality

- An introduction to IDC's *Business Rules Documentation Protocol*

- Sharing of state experiences with business rules

- Interactive communication about business rules and state practices

The Growing Importance of High-Quality Data

- Shift from monitoring to Results Driven Accountability
- Support increasing data use and building data culture
- Critical for informed decisionmaking
- Organizational asset

High-Quality Data Definition

- Timely
  - Current, submitted on time, and still relevant

- Accurate
  - Reliable and consistent across time, locations, and methods

- Complete
  - Entire population represented; no missing records

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Data Quality Quick Fix

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The weed killer approach

- Cleaning the data at the SEA level after the LEA submissions are finalized

- No feedback loop back to those submitting the data

- The same types of errors happen year after year

Addressing Data Quality at the Roots

Getting to the root of the problem by preventing errors before they happen through

- Data system edit checks

- LEA data validation and review

- Training of LEAs on data requirements and data quality review

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Risks of Poor-Quality Data

- Undermine credibility and breed organizational mistrust
- Make it harder to identify areas for focused effort for improvement
- Inhibit good data-driven decisionmaking

Strategies for Improving Data Quality

- **Prevent**
  - At time of data entry
  - Restrict values
- **Detect**
  - During the data quality review process
- **Repair**
  - Discovered after data are used
  - Find source of error and implement strategies to prevent in the future

High-Quality Data and Business Rules

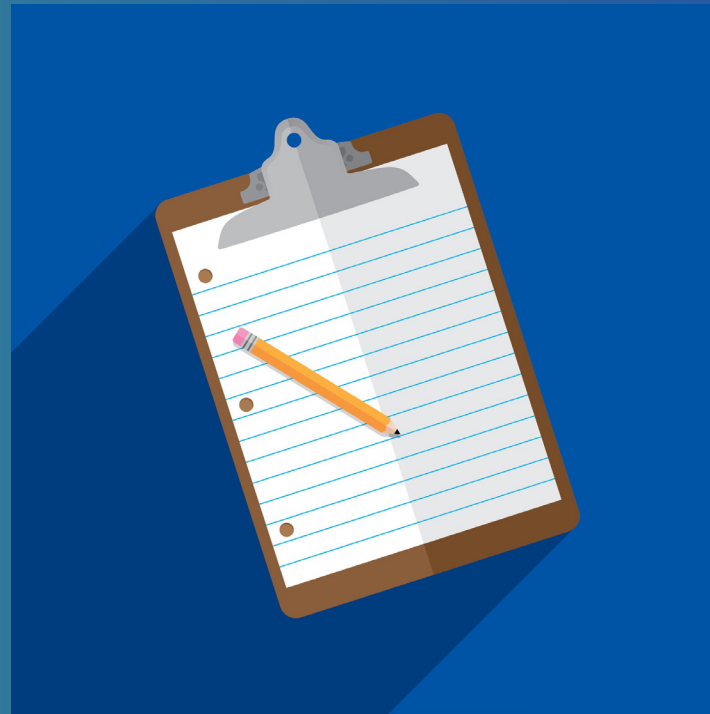Relationship between high-quality data and business rules

- Business rules, or edit checks, prevent errors at the point of data entry
- Using edit checks is not a foolproof way to obtain high-quality data, but edit checks are part of a data cleaning process
- Program staff and those responsible for the data system edit checks must work together

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Documenting Business Rules

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Why Document Business Rules?

- To ensure common understanding about data requirements

- To improve communication with those submitting data

- To confirm automated business rules are working properly

- To increase transparency with internal and external stakeholders

- To provide data users insight into the quality of the data

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Examples of Business Rules

- Ensure values are within a given range or set of permitted values
- Ensure the system provides mandatory data elements
- Determine if data are in the correct format
- Check that values are consistent across data elements
- Perform year-to-year comparisons

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Detect Missing Data or Null Values

Ensure system provides mandatory fields

- Disability status
- Birthdate or age
- Grade level
- Race/ethnicity
- Gender
- Enrollment date

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Prevent Invalid Formats

Enforce proper formatting of data

- Date format: *mm/dd/yyyy*
- Decimals, such as *#.##*

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Weed Out Invalid Combinations

- Verify educational environment is valid based on student's age

- Verify the age is between the state-defined range for students coded with a disability category of *developmental delay*

Enforce Proper Procedures

Rules can help LEAs and schools follow proper procedures, such as ensuring that a student cannot have a basis of exit of "return to regular education" if there is not an end date on the child's individualized education program (IEP) record.

Importance of Business Rules Documentation

- Communication tool for stakeholders, data submitters, and data users
- Support to develop common understanding
- Essential step in the process
- Reference for new and existing staff

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Sharing Business Rules Documentation

Sharing documentation by

- Posting on public website
- Responding to data requests
- Posting on internal shared drives

Sharing documentation to inform data users about

- The number and types of validity checks
- The rigor of data quality checks

This will result in the data users having more confidence in the data.

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Other Best Practices

- Create a business rules repository

- Conduct annual reviews and updates

- Create data flow diagrams

- Create process documentation

- Create documentation repositories with versioning (examples: SharePoint, Huddle, Box)

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IDC's *Business Rules Documentation Protocol*

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IDC's *Business Rules Documentation Protocol*

- Is an Excel template that states can modify to meet their needs
- Is used to document, record, and communicate business rules
- Includes a change log to track changes over time

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Business Rules Documentation Elements

- Rule ID
- Data elements
- Edit type or severity
- Error message
- Error definition or edit logic
- Topic or content area

- Data steward
- Date first implemented
- Approval required (Y/N)
- Notes

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Change Log Elements

- Rule ID
- Date revised
- Revised by
- Changed from
- Changed to
- Reason for change

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How IDC Can Help

IDC will help facilitate the business rules documentation process by

- Organizing in-person meetings

- Asking directed questions

- Serving as recorder to document the protocol

- Highlighting areas for further discussion

- Following up to maintain protocol

State Example: Business Rules Documentation in Illinois

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Determination of Need

- Data discrepancies among Report Card, 616 data, and 618 data
- Data ownership—review of data prior to submission
- Division of duties for data provisioning
- Risk management—business continuity desired
- Data consistency desired

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Approach

- Internal SEA resolution
- IDC resolution—Data Processes Toolkit/Business Rules
- SEA Special Education Data Governance (SEDG)
- SEDG monthly meeting—Issue Log and Accountability
- SEDG in place for 3 or more years—still going strong

Participants

- IDC resources (2–4 people)

- Special education executive director (SEA)

- Special education director (SEA)

- IDEA Part B State Performance Plan (SPP) and State Systemic Improvement Plan (SSIP) coordinator (SEA)

- IDEA Part B data manager (SEA)

- Information technology (IT) resources (employees and contractor) (SEA)

- SEA data governance resource

Outcome

- SPP Indicator Business Rules finalized in 2019
- ED*Facts*, E*MAPS*, and Significant Disproportionality Business Rules completed and under review
- Next step identified: Get technical specifications from IT
- Process for annual updates defined
- Data consistency and presubmission approval achieved

Questions?

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Group Chat

- If you were to start documenting business rules for a data collection, which data collection would it be and why?
  - Who should be at the table to document business rules for the data collection?
- How would documenting business rules complement or fit in with your data process documentation?

Where to Find the *Business Rules Documentation Protocol*

- Located on the *SEA Data Processes Toolkit* page of IDC's website: https://ideadata.org/sea-data-processes-toolkit

- Located as a single, resource download on the IDC website: https://ideadata.org/resources/resource/1979/business-rules-documentation-protocol

Contact Us

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