

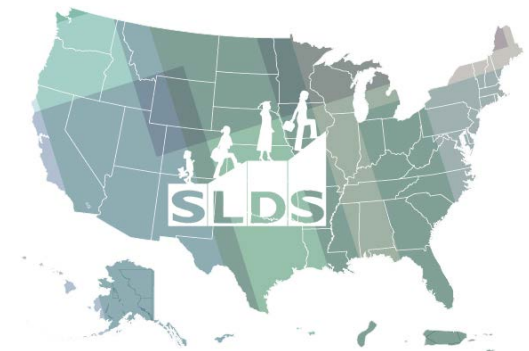
# MOVING FROM DEVELOPING TO USING ANALYTICS WITHIN AN ECIDS

## **SLDS Best Practices Conference February 13-15, 2017**

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Bill Hurwitch, SLDS State Support Team

Lauren Wise, SLDS Program Analyst



# WELCOME!



# OBJECTIVES

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- Learn how other states are developing analytic capacity within their ECIDSs.
- Discuss the process for developing tools and products from the ECIDS and receive feedback on current product ideas.
- Understand the critical data literacy skills that are essential based on research and how to build the capacity of state teams to use the data.
- Discuss strategies for evaluating the effectiveness of the products from the ECIDS.



# GETTING TO KNOW YOU

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- **Name**
- **State**
- **Role/Agency**
- **One accomplishment from your ECIDS work in the last year**



# SST: GETTING TO KNOW US

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## **What is the State Support Team (SST)?**

- An initiative of the Statewide Longitudinal Data Systems (SLDS) Grant Program
- Composed of experienced state data systems experts whose primary objective is the direct support of all states in their development and use of SLDSs

## **What types of assistance can the SST provide my state?**

- Provide remote and/or on-site technical assistance to individual states
- Connect you with other states working on similar issues
- Facilitate webinars on specific topics
- Host topical working groups for states

## **How do I request assistance from the SST?**

- Contact your state's primary SST member
- Submit a request under the "Technical Assistance" tab of GRADS360 (<https://slds.grads360.org>)



# **MOVING FROM DEVELOPING TO USING ANALYTICS WITHIN AN ECIDS**



# WHAT IS AN ECIDS?

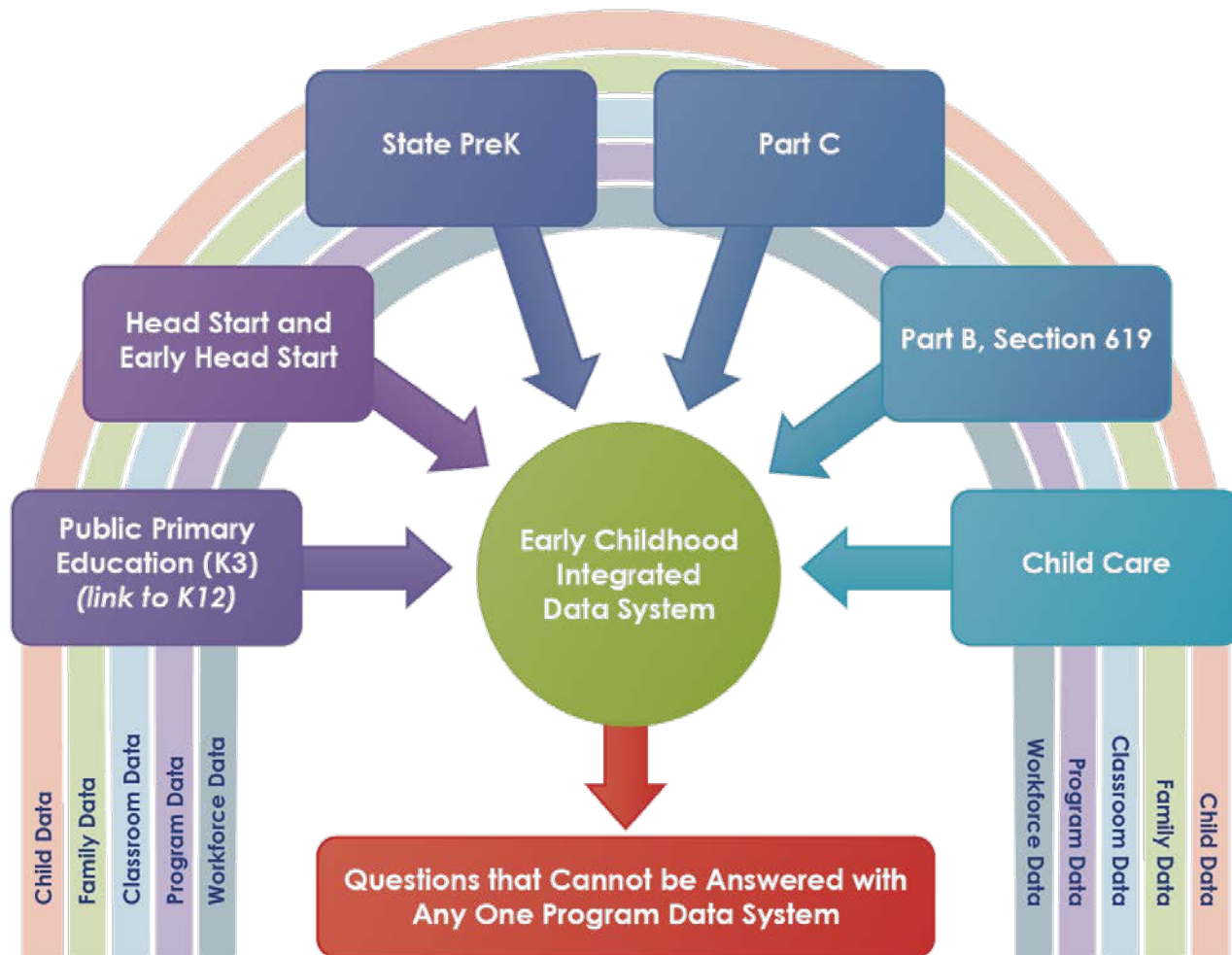
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- Collects, integrates, maintains, stores, and reports information from early childhood programs
- Crosses multiple agencies within a state that serve children and families from birth to age 8
- Includes data on the individual child, the child's family, the classroom, the program/providers, and other services that provide comprehensive care and education for young children

*(What is an ECIDS, NCES 2014)*



# WHAT IS AN ECIDS?





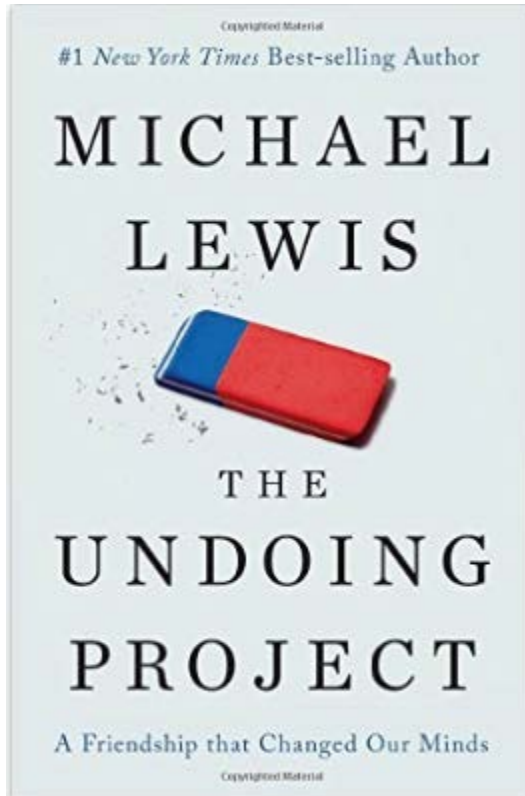
# WHY DO WE NEED TO TALK ABOUT THIS NOW?

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- States are considering how their ECIDS will support the users
- States are creating tools and products from an ECIDS to meet the needs of the intended audiences
- States want to be confident that the tools and products will be used to inform policy and practice
- States want to share ideas that are similar across states (e.g. community profiles, EL feedback reports, school readiness reports)



# RESEARCH ON DECISIONMAKING

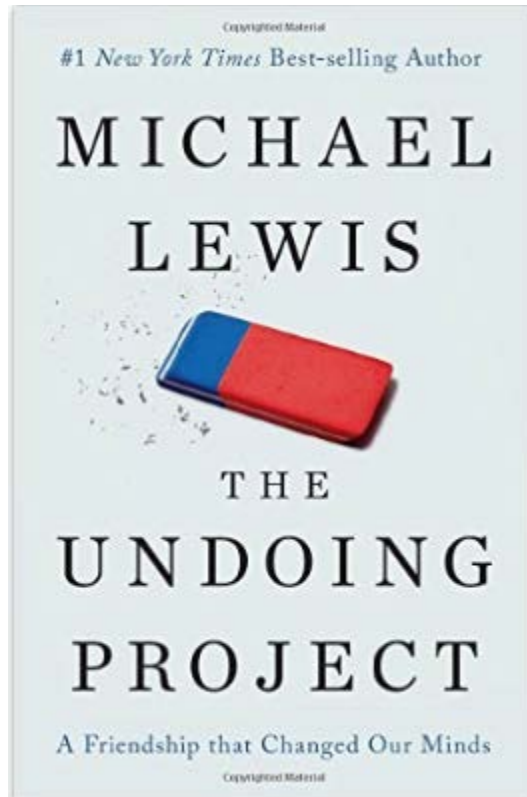


## Behavioral Decision Theory

- Ward Edwards (University of Michigan): How people in decisionmaking roles respond to new information. Found that receiving new information doesn't always change decisions/action.
- Hoffman/Goldberg (Oregon Research Institute): What do experts do when they render judgments? How people took pieces of information to make decisions (doctors). Found that the algorithm outperformed the doctors' diagnosis.



# RESEARCH ON DECISIONMAKING

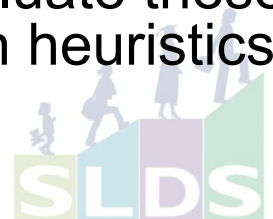


## Decision Theory

- Normative decision theory, which gives advice on how to make the best decisions, given a set of uncertain beliefs and a set of values.
- Descriptive decision theory, which analyzes how existing, possibly irrational agents actually make decisions.

## Prospect Theory (Kahneman/Tversky)

- The theory states that people make decisions based on the potential value of losses and gains rather than the final outcome, and that people evaluate these losses and gains using certain heuristics.



# SO WHAT?

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- There are people who have studied the process of decisionmaking
- Use that information to help inform our work and create tools and products that inform behavioral decisions
- Understand that you are working with humans, not computers, to decide what and how programs and services will be delivered to children and families



# HOT OFF THE PRESS!

## New Early Learning IPB Report on Integrated Data [Check it out!](#)

- HSS

[https://www.acf.hhs.gov/sites/default/files/ece/intergration\\_of\\_early\\_childhood\\_data\\_final.pdf](https://www.acf.hhs.gov/sites/default/files/ece/intergration_of_early_childhood_data_final.pdf)

- Education

[http://www2.ed.gov/about/inits/ed/earlylearning/index.html?src=rn&utm\\_content=&utm\\_medium=email&utm\\_name=&utm\\_source=govdelivery&utm\\_term=](http://www2.ed.gov/about/inits/ed/earlylearning/index.html?src=rn&utm_content=&utm_medium=email&utm_name=&utm_source=govdelivery&utm_term=)

## Released in November!

- Highlights ECIDS progress in 8 states
- Discusses key considerations for early childhood data integration
- Links to related federal resources and technical assistance



# TELLING A STORY ... USING DATA

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## What does that mean?

- Translating raw data into action for the intended users

## Why do we need a story?

- Data alone do not tell the story for most users in education; narrative makes the data actionable

## How do we get started?

- Create clearly defined use cases
- Create products and tools that respond directly to the use case and provide narrative message points for the users



# ECDataWorks

Advancing Early Childhood Policy and Programs  
through Strategic Use of Integrated Data

- ▶ What is a use case?

A **use case** is a tool used in product development to capture a description of a feature from an end-**user** perspective. The **use case** describes the type of **user**, what they want, and why.

- ▶ Template

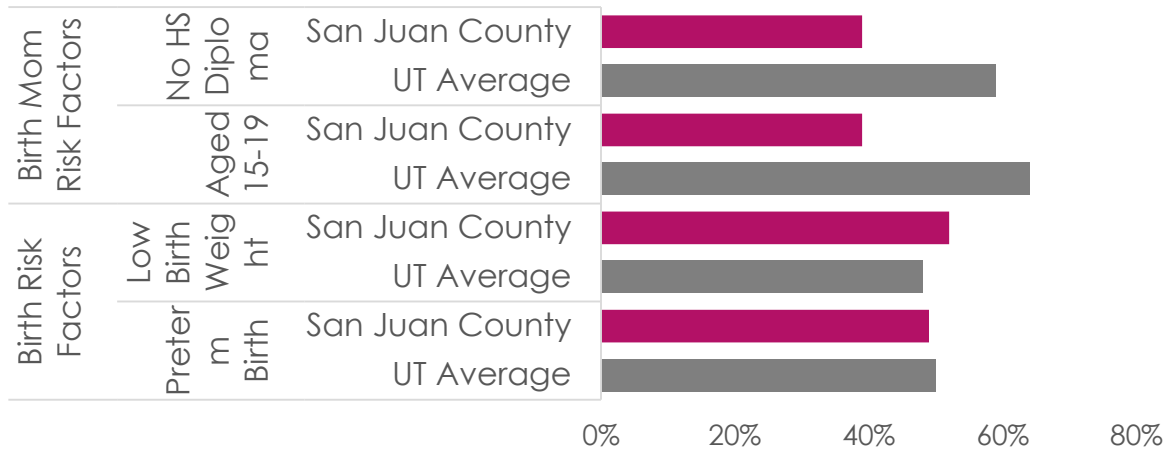
As a stakeholder, I want to use the UT ECIDS Community Profile so that <some reason> and <some action>.

Name or description of a product or tool from the ECIDS <specific report>	What do you or your users need a specific report for? <some reason>	<some action>	<to inform some decision>
Community profile	To improve services	Use the report during annual leadership team strategic planning meeting	To modify services option for a local community (provide additional resources to fill a gap as seen in the data- increase access)
	To look at information that is not readily available elsewhere		
	To look across communities		
	"To understand the fabric of the health of our communities"		
	To support the _____ state initiative		



## How prevalent are risk factors of births in each region of Utah?

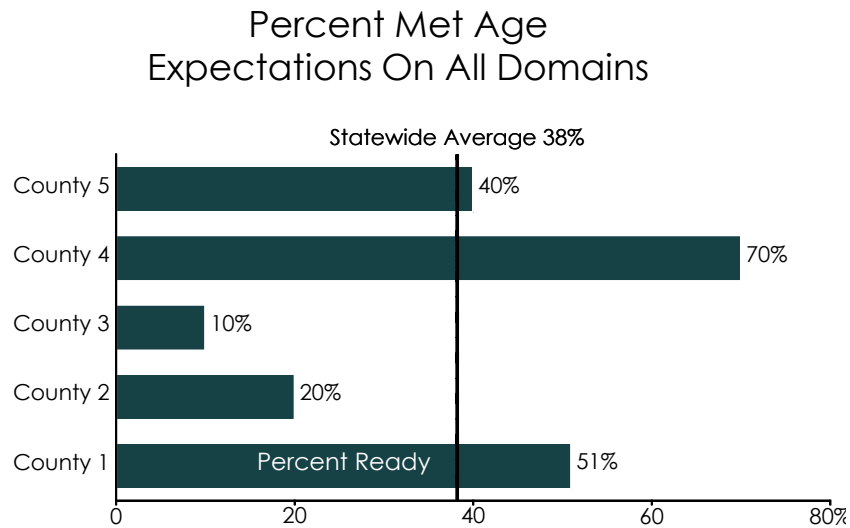
Birth Risk Factor for San Juan County, Utah Average



As a <type of user>, I want to <know which birth risk factors are most prevalent in each county> so that <some reason> and <some action>.

Data contained in this mockup is for illustrative purposes only and not based on any real trends or expected values.

## How does school readiness vary by county?



As a <type of user>, I want to <know how counties are doing compared to the statewide average on school readiness> so that <some reason> and <some action>.

Data contained in this mockup is for illustrative purposes only and not based on any real trends or expected values.

# PANEL DISCUSSION: WHAT DOES EFFECTIVE DATA USE LOOK LIKE FOR POLICYMAKERS, ADMINISTRATORS, EDUCATORS, AND OTHER RELEVANT STAKEHOLDERS?

Sarah Argue (AR)

Karin Garver (NJ)

Colleen Murphy (AEM)

Phil Sirinides (ECDataWorks, University of Pennsylvania)

Greg Welch (NE, Buffet Institute)

Avisia Whiteman (MN)



# ACTIVITY: CREATING A STORY USING DATA

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Use the provided report to create a story using data for a:

- Policymaker
- State administrator
- Local program or teacher
- Public or family

Example reports

- WA EL Feedback
- KY Community Profiles
- One of your own state products/tools

1. **As a <type of user>, I want to <know how counties are doing compared to the statewide average on school readiness> so that <some reason> and <some action>.**
2. **Create a narrative response (the story) that would come out of your product or tool for your identified user.**



WHAT WOULD YOU AND YOUR  
TEAMS NEED TO IMPLEMENT/USE  
THE IDENTIFIED TOOL OR  
PRODUCT EFFECTIVELY?



# ASSESSING ORGANIZATIONAL CAPACITY FOR ANALYTICS AND USE

**Human**

**Organizational**

**Human:** What human capacity might be needed to support the goal?

**Organizational:** What organizational capacity might be needed to support the goal?

**Structural:** What structural capacity might be needed to support the goal?

**Material:** What material capacity might be needed to support the goal?

**Structural**

**Material**



# ASSESSING ORGANIZATIONAL CAPACITY FOR ANALYTICS AND USE

## Human

*What human capacity might be needed to support the goal?*

## Organizational

*What organizational capacity might be needed to support the goal?*

- ▶ Which capacity area do you think most relates to the needs for the identified tool or product?

## Structural

*What structural capacity might be needed to support the goal?*

## Material

*What material capacity might be needed to support the goal?*

- ▶ In what capacity area do you think the key audience faces the most challenges?



# ACTIVITY: UNDERSTAND THE NEEDS

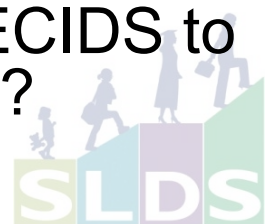
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## **Identify your key user group:**

- Policymakers
- State administrators
- Educators/Local program and service providers
- Public/Families

## **In small groups by users, answer the following questions:**

1. What decisions and/or actions do/could they make using data?
2. What knowledge and skills do they need?
3. What organizational supports will they need?
4. How will you know when they have used the ECIDS to successfully use data to inform their decisions?





# ACTIVITY: UNDERSTANDING THE NEEDS

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**Walk around the room and review the key decisions that were identified.**

## **Gallery Walk:**

- Which are the most relevant across states?
- What are a few report/tool ideas that could meet the needs of a few decisions?



# ACTIVITY REPORT OUT

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- What were the challenges?
- Did you have all the expertise you felt you needed to complete the activity?
- Are there particular areas you wish you knew more about?
- What questions would you have about developing analytics?



# PANEL DISCUSSION: WHAT DOES IT MEAN TO DEVELOP ANALYTIC CAPACITY?

Melissa Beard (WA)

Jessica Cunningham (KY)

Michael Hawes (United States Department of Education)

Ruth Lett (ECDataWorks)

Colleen Murphy (DaSy)



# TELLING YOUR STORY WITH DATA—REVISITED

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- What would you change after hearing the panelists?
- What questions do you have for your state teams when you go home about how you are telling your data story?
- How would you measure how effective you have been at having your stakeholders use the data?



# STATE ACTION PLANNING



# HELPFUL RESOURCES

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## Resources:

- [ECIDS Toolkit](#)
- [CEDS](#)
- [DaSy Visualization Toolkit](#)

## Relevant TA Centers

- [DaSy Center](#)
- [ECDataWorks](#)



# CONTACTS

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