Analyzing and Using Data

*Implementing the ROMA Cycle in the
"Next Generation" Performance Management Framework*

Learning Objectives for This Workshop

Participants will:

- Understand the role that data analysis plays in the ROMA Cycle:
  - Discuss the difference between data, information, and knowledge
  - Recognize the complexity of the data analysis process
  - Identify data elements that are found throughout the ROMA Cycle
- Identify key data analysis techniques and how analysis can be used to turn data into information
- Recognize the uses of information to create knowledge for improvement of agency capacity and results
- Recognize the need to identify steps to establish data collection processes

How do you know if your agency is on track?

Community Action and the Overall Human Services Environment

- Focus on Outcomes, Outcomes, Outcomes
- Data collection, use, and analysis
- Innovation and ability to measure success/failure
- Intentionality

ROMA Next Generation

National Theory of Change (TOC)

Local TOCs

CSBG Annual Report

Increased focus on community level work

Increased focus on analysis and use of data

Emphasis on the integration of all phases of the ROMA cycle

Using Data is Critical for the National Theory of Change

Performance Management
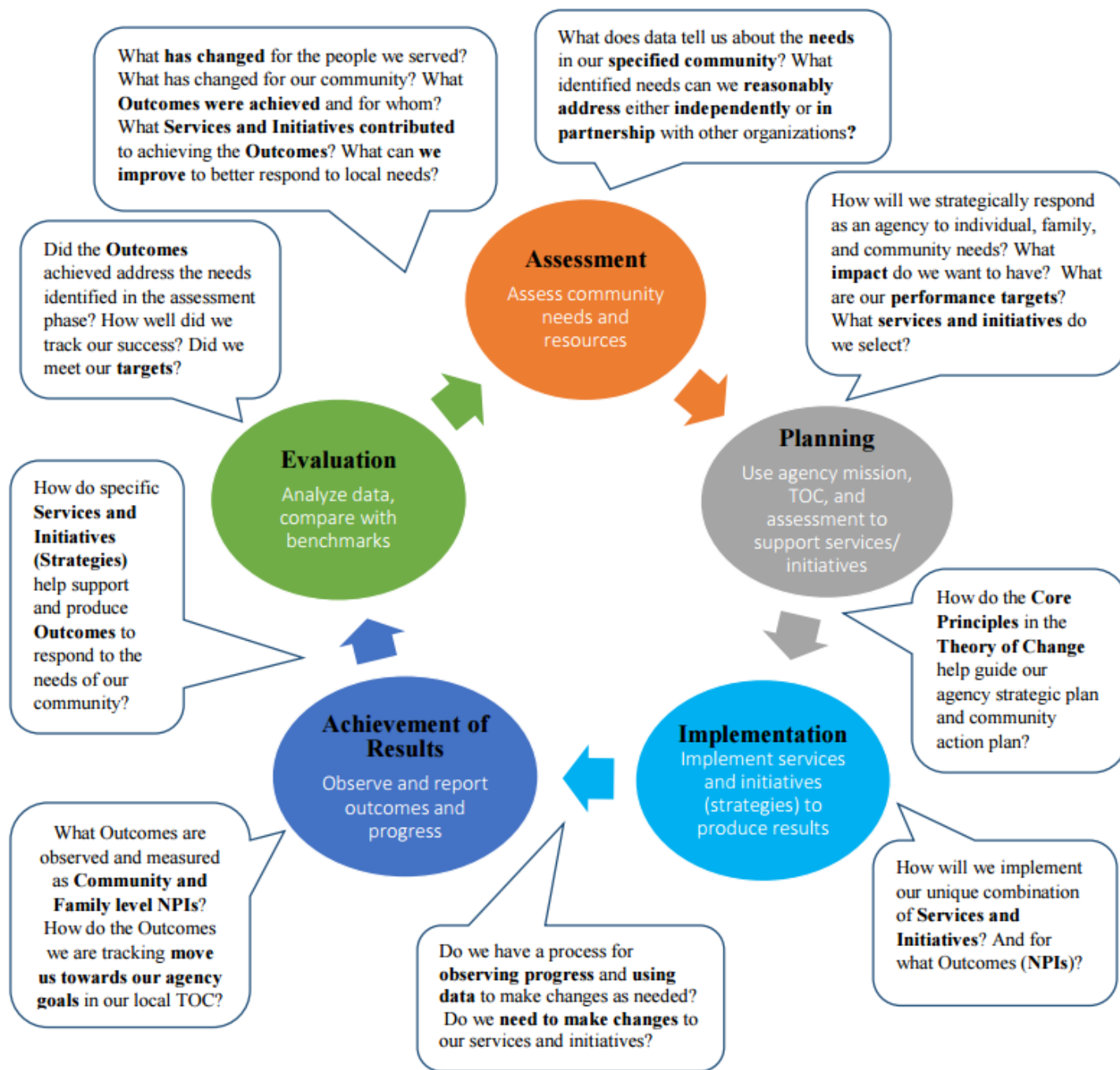
How well does the network operate? ← → **What difference does the network make?**

- Local Organizational Standards
- State and Federal Accountability Measures
- Results Oriented Management and Accountability System

- Individual and Family National Performance Indicators
- Community National Performance Indicators

What **has changed** for the people we served? What has changed for our community? What **Outcomes were achieved** and for whom? What **Services and Initiatives contributed** to achieving the **Outcomes**? What can **we improve** to better respond to local needs?

What does data tell us about the **needs** in our **specified community**? What identified needs can we **reasonably address** either **independently** or **in partnership** with other organizations**?**

Did the **Outcomes** achieved address the needs identified in the assessment phase? How well did we track our success? Did we meet our **targets**?

How will we strategically respond as an agency to individual, family, and community needs? What **impact** do we want to have? What are our **performance targets**? What **services and initiatives** do we select?

Assessment
Assess community needs and resources

Planning
Use agency mission, TOC, and assessment to support services/ initiatives

Evaluation
Analyze data, compare with benchmarks

How do specific **Services and Initiatives (Strategies)** help support and produce **Outcomes** to respond to the needs of our community?

How do the **Core Principles** in the **Theory of Change** help guide our agency strategic plan and community action plan?

Achievement of Results
Observe and report outcomes and progress

Implementation
Implement services and initiatives (strategies) to produce results

What Outcomes are observed and measured as **Community and Family level NPIs**? How do the Outcomes we are tracking **move us towards our agency goals** in our local TOC?

Do we have a process for **observing progress** and **using data** to make changes as needed? Do we **need to make changes** to our services and initiatives?

How will we implement our unique combination of **Services and Initiatives**? And for what Outcomes (**NPIs**)?

Helping People
Act
con
P A R T N E R
AMERICA'S POVERTY FIGHTIN

Results-Oriented Management and Accountability
Family Agency
Community

Collecting Data

- "What we measure and how we measure it determines what will be considered relevant and thereby determines not just what we see but what we –and others—do."

Peter F. Drucker-The Drucker Foundation Self-Assessment Tool, 1999

Changing The Way We
Think About Collecting Data

It is important to change the mindset

from

"we collect data for reporting purposes"

to

"we collect data to help manage and support the agency's programs and services and determine if we make a difference in our client's lives and in their communities."

Your CAA's Story

Assumptions

What matters to you and to your CAA?

What Services and Strategies does your CAA do in your local community

What is different in your community because of this?

Data Analysis & Reflection: It is critical you put your data to work.

What is data? What is information?

- <u>Data</u> are facts that are observed, measured, collected and aggregated.

- Data only becomes <u>information</u> for decision making once it has been analyzed in some fashion.

- <u>Knowledge</u> is derived from the information and interaction with experience with a topic.

For Example

Data: 29,029 feet, location, climate, terrain.

Information: The combination of data elements to understand the conditions on the mountain.

Knowledge: Understanding how the information is related to the task of climbing and survival of the climber.

Analysis of Raw Data

Facts

Figures

Stories

Useful Information

Four Data Quality Attributes

Complete

Accurate

Timely

Reliable

Is the Data Accurate and Complete?

Remember that flawed data characterized as incomplete, inaccurate, not timely, etc. will lead to faulty decisions.

What Do You Want to Know?

There must be a purpose for the data.

In Analysis of Data, You Must Know What You Want to Know

- Establish **what you want to know**
  - Is this driven by internal or external reporting requirements?
  - Is this driven by Local Theory of Change validation?
- Identify **who has the data** and **where the data** is located, necessary to tell you what you want to know.
  - Agency programs? Input from customers?
  - Community statistics? Input from the general public?
- Consider what "**buckets**" or different data classifications we need to examine.

Data Analysis

Data Analysis is the **process of exploring data and reports** in order to extract **meaningful insights**, to better understand and **improve agency performance.**

- **Tasks:** Analysis focuses on tasks including questioning, examining, interpreting, comparing, confirming, and testing with the goal of **discovering useful information, conclusions, and supporting decision making.**
- **Outputs (purpose is to provide insights):** ad hoc responses and analysis presentations (infographics, annual reports, strategic plans, CAP plans, community needs assessments)
- **Context:** Context is critical to good analysis. In order to tell a meaningful story with the data to drive specific actions, context becomes an essential component of the storyline. It emphasizes data points that are significant, unique, or special – and explain why they are important to the agency.

The goal of analysis is to answer questions by **interpreting the data at a deeper level, identifying findings, and providing actionable recommendations.**

Asking the Right Questions

The most important first step in making meaning from the data

A Series of Questions You Want To Answer With Your Data

- Did we do what we thought we would do?
- Did we serve the population we thought we would serve?
- Did we make an impact on the identified needs?
- Can we tell what services (or set of services) produced the best opportunity for results?
- Are some populations achieving outcomes at different rates than others?
- Did we recruit and enroll sufficient numbers to allow us to achieve our target outcomes?
- Do we need additional resources?
- Was there something unexpected that influenced the outcomes?

Defining Performance

- You can't "manage" performance if you can't define and measure it.

- There are many data elements that the local CAA does (or could) collect to help to define and measure performance.

- The analysis of these data elements must be based on your expectations for performance

  o   what you will do and

  o   what will be accomplished/changed

Targeting

- Establish Outcomes

- Identify your services

- Select Outcome Indicators that will show progress

- Establish your targets

- Collect Data over time

- Analyze that data

- Assess where you stand compared to your target

- Make changes based on data

Community Action and CSBG
Outcome Setting

TARGETING

Do we know our business model?

What Data Do You Collect?

Can you answer the Carter Questions?

The Carter Questions: Do you know?

- **How many** customers are you serving?
- **Who** are they?
- What **services** do you give them?
- What does it **cost**?
- What does it **cost per service** delivered?
- What **happens to the customer** as a result of the services?
- What does it **cost per result**?

Adapted from The <u>Accountable Agency</u>, Reginald Carter, Sage Human Services Guide 34, 1983.

Modified Carter Questions

- Before you start a program

  1. How many people do you expect to serve?

  2. What services will you give them?

  3. What do you expect to happen to them?

  4. How many will achieve the expected goal?

- At end of program

  1. How many did you actually serve?

  2. How many achieved the expected goal?

Sources of Data in Your Organization

Annual Report Data

Needs Assessment Data

Customer Satisfaction Data

Financial Data

HR Data

Program Data (HUD, Head Start, TANF, LIHEAP)

Organizational Standards Assessment

Techniques for Analysis

Applying a Few Techniques to Agency Data

A Quick Review of Data Analysis Techniques

- Count
- Compare
- Identify the factors
- Consider the trends

One Technique Is To Count

- Counts
  - How many did something?
  - How many of a certain characteristic?
  - How many were successful?
  - How many responded in a certain way?

Comparative Analysis

Program data from year to year
- Quantity of service, outcome, cost of program

Your program with national trends

Target and actual

Compare with Needs Assessment

Differences within groups or between groups

Comparing with other providers

Comparing data from another program

Example

National Performance Indicator 1.1

Employment

The number and percentage of low-income participants who get a job or become self-employed, as a result of Community Action Assistance, as measured by one or more of the following:

	2016 Number of Participants Achieving Outcome in	2017 Number of Participants Achieving Outcome in Reporting Period	Achievement Data Comparison % Chang	Change from FY16 - FY17
A. Unemployed and obtained a job	50	77	54%	27
B. Employed and maintained a job for at least 90 days	22	43	95%	21
C. Employed and obtained an increase in employment income and/or benefits	15	25	67%	10
D. Achieved "living wage" employment and/or benefits	17	61	259%	44

Example

	2016 NUMBER OF PERSONS*	2017	% Change	Change from FY16-FY17
7. Gender				
a. Male	3,597	4,475	24%	878
b. Female	4,309	4,040	-6%	-269
TOTAL*	7,906	8,515	8%	609
8. Age	NUMBER OF PERSONS*			
a. 0 - 5	1,800	2,188	22%	388
b. 6 - 11	504	1,097	118%	593
c. 12 - 17	376	473	26%	97
d. 18 - 23	381	411	8%	30
e. 24 - 44	1,120	1,982	77%	862
f. 45 - 54	292	354	21%	62
g. 55 - 69	1,641	785	-52%	-856
h. 70 +	1,788	1,225	-31%	-563
TOTAL*	7,902	8,515	8%	613
9. Ethnicity/Race				
I. Ethnicity	NUMBER OF PERSONS*			
a. Hispanic, Latino or Spanish Origin	711	1,150	62%	439
b. Not Hispanic, Latino, or Spanish Origin	7,195	7,365	2%	170

Comparing with Other Providers

Consider: If we <u>assisted</u> 100 people in getting a job, is that good?

- What do we mean by "assisted"?

- What do other agencies who have employment as an outcome achieve? How is employment defined?

- Are our populations similar?

- How might differences in population impact differences in outcomes?

Factor Analysis

What is behind the causes and conditions?

Factor Analysis

Tool for investigating relationships for complex concepts.

Examine elements to determine how or if they are related.

Multiple variables are tracked and observed for patterns.

For example: How are income, education and occupation associated with socioeconomic status? Which factors most influence socioeconomic status?

Learning from Factor Analysis

- Examine the influence of underlying causes and conditions.

- Patterns are identified.

- Relationship among the effects are likely the result of the same factors.

- Unrelated factors can discount them as the root cause of the effect.

Example:

If people in your employment program aren't obtaining the living wage jobs that you are trying to help them obtain, then why?

- Is it that they don't have the education or skills needed for the available living wage jobs? Is it that the community changed? Are the jobs no longer available? Is it that the program is missing components that impact the outcome?

What is the influence of a factor?

Increase
desired result
(contributing
factor)

Decrease
desired result
(restrictive
factor)

Trend Analysis

Analyzing longer term trends and identifying patterns

Trend Analysis

Collecting information and attempting to spot a pattern, or *trend*, in the information:

- Although trend analysis is often used to predict or forecast future events, it is also used to explain and understand events in the past.

- Trend analysis provides evidence to inform your decision making.

- Trend analysis together with annual or point in time data provides both a short and long term perspective.

Looking at the trends

Using Trend Data for Targeting

- Identifying the projection of how many people will be served next year can be based on the analysis of the trend you have seen in the past few years.

- Did the number of people served remain the same over the past few years or are there annual fluctuations? If there are differences what caused them? (changes in funding, changes in circumstances in the community, new population in need)

- Of the number of people served in prior years, how many achieved the expected outcome? How stable is that number over time?

Using Trend Data for Targeting

# of People Obtaining a GED

ACTIVITY

- Take a look at the example provided
- Look at the NPIs. What do you notice? Targeting?
- Look at the services compared to the NPIs and the demographics compared to both.
- Look at the data over the course of the three years, make a note of any trends you notice over the years.
- What could potentially cause those trends? What are other pieces of data you would need to see?
- Discuss how those trends would impact assessment and planning for the next year.

Report the Data

Assessing your existing management reports

Activity

Results-Oriented Management
and Accountability

Family   Agency

Community

Assessing your existing management reports

- <u>Quality</u> of the data -- Accuracy, completeness and timeliness of the data included in the report

- <u>Presentation</u> of the data in the report – it is easy for the reader to find data that is important to him/her?

- <u>Usefulness</u> of the data – is it relevant to the task of managing the program/service? Do I have access to the data when I want/need it?

- <u>Performance Focus</u> – includes data on outcomes and performance

Dashboards

Wayne Metro - Dashboards - FY'19

Communications & Development - Metrics Dashboard (FY'19)

	Metric	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Proj.	Total	RAG Threshold	Trendline
CONNECT / Social Media (Facebook & Twitter)	# of Facebook Likes (New)	58	41	26	111	50	58	46	41	52	26	49		600	558	Red = Below Projection Amber = At Projection Green = Above Projection	
	# of Facebook Likes (Total)	2,597	2,582	2,598	2,674	2,724	2,782	2,828	2,869	2,921	2,947	2,996		24,000	30,518	Red = Below Projection Amber = At Projection Green = Above Projection	
	# of People Engaged on Facebook	690	690	583	818	464	464	467	388	388	942	942		25,000	6,836	Red = Below Projection Amber = At Projection Green = Above Projection	
	# of Twitter Followers (New)	8	1	4	150	5	2	6	5	2	1	2		100	186	Red = Below Projection Amber = At Projection Green = Above Projection	
	# of Twitter Followers (Total)	746	738	746	896	750	755	757	763	765	778	778		840	770	Red = Below Projection Amber = At Projection Green = Above Projection	
	# of Twitter Mentions	12	10	8	24	1	7	6	8	26	8	11		75	121	Red = Below Projection Amber = At Projection Green = Above Projection	
Wayne Metro Website	# of Website Visits	1,249	816	599	1,590	32,488	30,539	30,502	31,717	31,640	35,384	38,370		400,000	234,894	Red = Below Projection Amber = At Projection Green = Above Projection	
	# of Unique Visitors	8,612	7,559	5,903	1,345	8,676	8,491	8,671	7,808	8,052	8,984	9,800		80,000	83,901	Red = Below Projection Amber = At Projection Green = Above Projection	
	# of Pages per Session	2	3	2	2	2	2	2	3	3	3	3		35	27	Red = Below Projection Amber = At Projection Green = Above Projection	

Dashboards

WAYNE METRO BALANCE SCORECARD			
STRATEGY	**GOALS**	**TARGET**	**ACTIONS**
Client Engagement & Satisfaction	Develop a systematic means to capture and analyze client satisfaction with agency experience.	• 100% of clients receive a survey • 15% response rate to surveys • 90% of responses are positive	• Develop a client satisfaction survey protocol. • Analyze results of client satisfaction surveys and use for continuous improvement for programs/services and staff.
Drive Integrated Service Delivery	Develop an agency-wide bundled-service process.	• 100% of clients are screened for multiple services • 15% of clients receive more than one service • 5% of YFS families enrolled in pilot initiative	• Create bundled service task force. • Design internal integrated services protocol. • Create universal intake assessment strategy that screens for multiple services. • Pilot a two-generational integrated service model for Youth and Family Services.
Equip Staff with Skills & Tools	Increase knowledge of programs/services and client engagement.	• 85% of participants reported increased knowledge of agency programs/services • 85% of participants reported an increased capacity to engage clients • Host 6 learning sessions	• Create learning and development task force to establish protocols. • Design and implement educational sessions around programs/services. • Conduct training sessions (online and in-class) on best practices for client engagement. • Leverage staff knowledge through learning sessions focused on practical solutions to assist clients.

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community Action
PARTNERSHIP
AMERICA'S POVERTY FIGHTING NETWORK

Results-Oriented Management and Accountability
Family   Agency
Community

SERVING	$20.3M INVESTED IN BASIC NEEDS SERVICES	FUNDING SOURCES
9,150 households	**Utility Payment assistance:** Payments to utility vendors via designated funding for utility and water assistance	MEAP, LIHEAP, Community Services Block Grant, Great Lakes Water Authority (GLWA), Detroit Water and Sewerage Department (DWSD
105 households	**Supportive Housing and Homeless Services:** • Rapid Re-housing (30 households) • Temporary Housing (55 households) • Transitional Housing (10 households) • Permanent Supportive Housing (10 households)	Department of Housing and Urban Development, Veterans Administration,
450 households	**Housing Payment Assistance:** Obtain and maintain adequate housing (300 households) and prevent eviction (150 households)	Department of Housing and Urban Development, Veterans Administration,
387 Clients	**Benefit Coordination and Advocacy:** One-on-one benefits navigation to access and apply online to MI Bridges and other state benefits.	Community Services Block Grant
1,875 clients	**Case Management Services:** A collaborative case management partnership with clients includes in-depth situational assessment; identifying and building on strengths and capacity; defining short- and long-term goals, developing an individual service plan: and coordinating appropriate internal and external resources and services for clients participating in various programs such as utility and water assistance and supportive housing and homeless services.	Department of Housing and Urban Development, Community Services Block Grant, Great Lakes Water Authority (GLWA), Detroit Water and Sewerage Department (DWSD), Veterans Administration, United Way of Southeastern Michigan
50 clients	**Employment Readiness:** Soft skills training, job search assistance, career counseling and post-employment supports for clients receiving Supportive Housing and Homeless Services.	Department of Housing and Urban Development, Community Services Block Grant

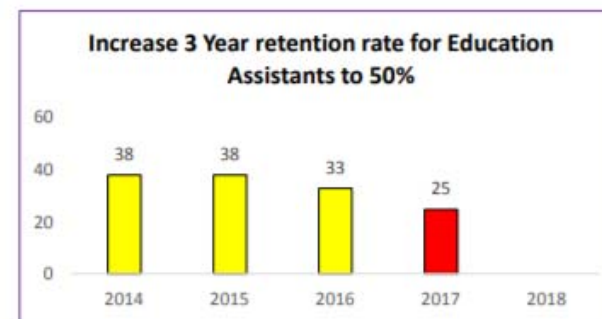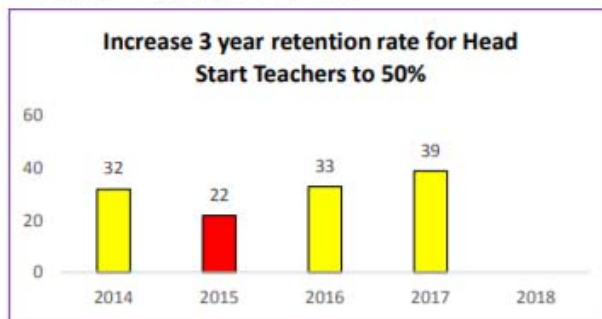Helping *Action* PARTNERSHIP
AMERICA'S POVERTY FIGHTING NETWORK

Results-Oriented Management and Accountability
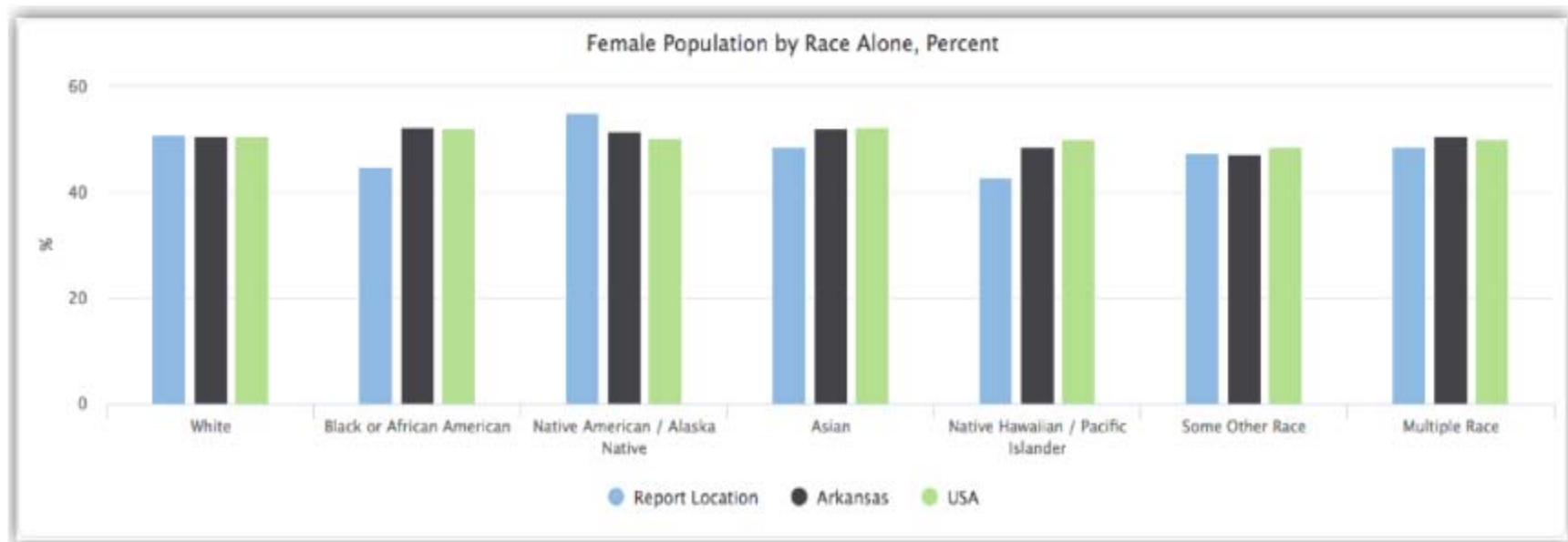
Family | Agency | Community

Dashboards

Dashboards

ENERGY ASSISTANCE

County	Households	Expenditure	Benefit/Family	People
Lewis	1,006	$417,057.00	$432.50	2,253
Mason	836	$364,468.00	$438.00	1,607
Thurston	2,266	$1,044,849.00	$483.00	5,071
TOTAL	**4,108**	**$1,826,374.00**	**$451.17**	**8,931**

(Note: Benefit/Family is the annual average; people served based in average household served)
OES Services (Minor heating repairs)

Dashboards

Over 15.3 million low-income individuals were served by the CSBG Network

By a total of **1018** CSBG funded organizations

Partnering with **197,666** local organizations to promote family and community outcomes

More than 1.4 million families, over 32% of those served, were living in severe poverty

For every $1 invested program, the network **$7.** From state, local,

Our Annual Impact

629,000 individuals obtained healthcare services for themselves or a family member

More than **8 million** people received food

487,000 children obtained age-appropriate immunizations, medical and dental care

The health-related benefits for each weatherized unit is valued at more than **$14,000** per home

...unityActionImpact

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AMERICA'S POVERTY FIGHTING NETWORK

THE CSBG Program in 2017

Employment

6.5 million participants gained employment or work supports

The number of individuals experiencing greater income from employment **increased by 13%** from FFY 2016.

Community

41 million volunteer hours donated to CAAs, valued over $1 billion of volunteers time

Over 300 thousand low income individuals were mobilized toward community empowerment through participating in decision-making and policy setting, business and home ownership, or other community involvement

Housing

180,515 low-income people obtained safe and affordable housing.

128,339 existing housing units improved or preserved through construction, weatherization, or rehabilitation, and **18,509** safe and affordable housing units were created

Education

114,229 Educational and training placement opportunities for low-income people created, expanded, or saved from elimination

13,109 low-income people completed Adult Basic Education (ABE) or General Educational Development (GED) coursework

Health

National Need

of America's en live in poverty - er, **34%** of African ican children, of Native American en, and **28%** no children live erty

al counties ximately ¼ of en live in poverty

of 5-year-olds in low-income families are **school ready** compared to 75% of 5-year-olds in high income families

Our Reach

3.9 million children were served

Agencies served **6.2 million families**

4.2 million families participated in summer camps, sporting events, literacy programs, and other enrichment services

1.7 million children received healthy food to assist with healthy development

More than 500 agencies provide Head Start and/or Early Head Start

Our Annual Impact

4 million families reduced or eliminated barriers to stability through access to childcare, food assistance, after school programs, and more

241,000 youth experienced improved health and physical development

246,000 parents improved family functioning skills

153,000 youth improved social and emotional skills
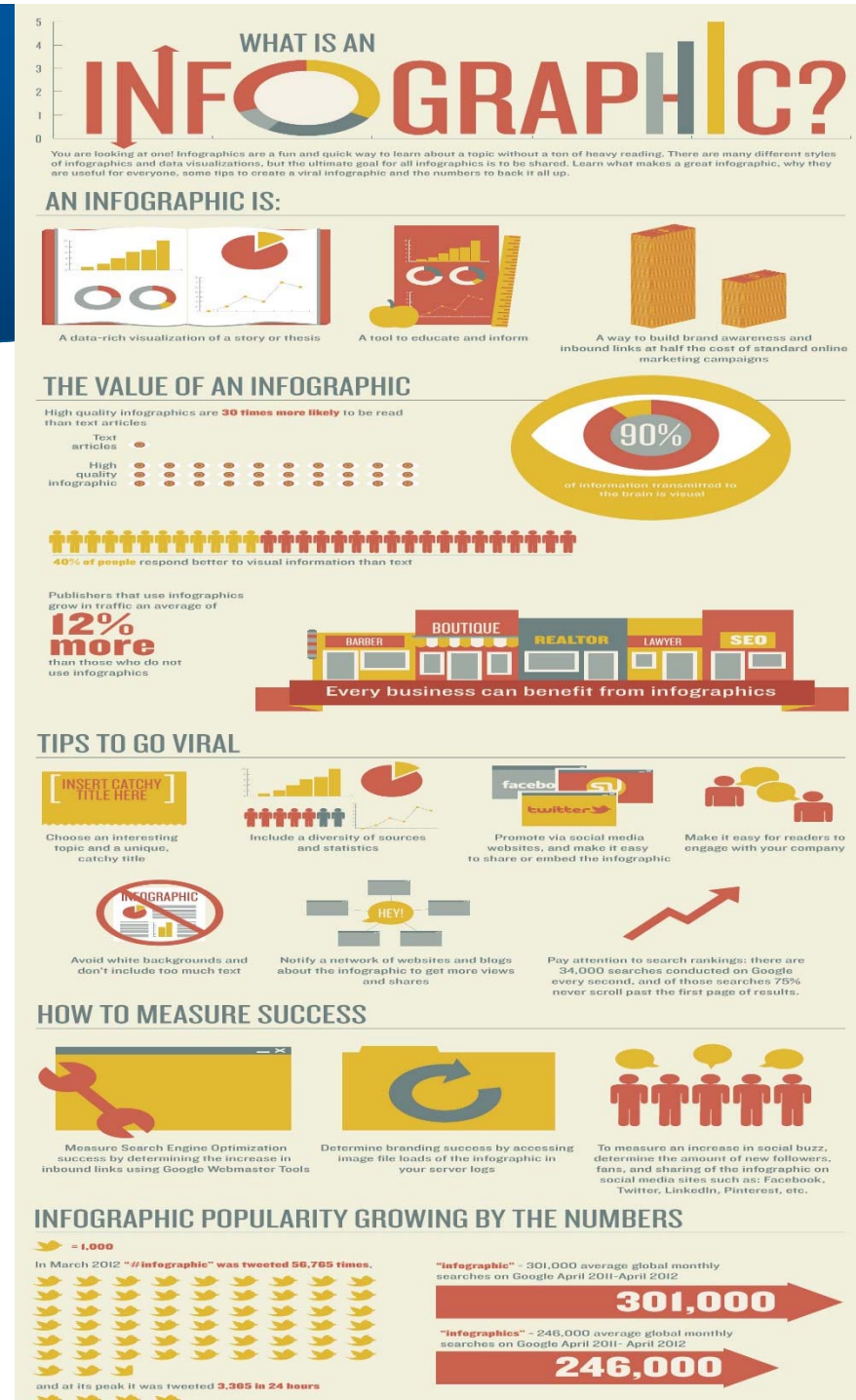
365,000 children became school ready

Infographics for Impact

An infographic should be visually engaging and contain a subject matter and data that is appealing to your target audience.
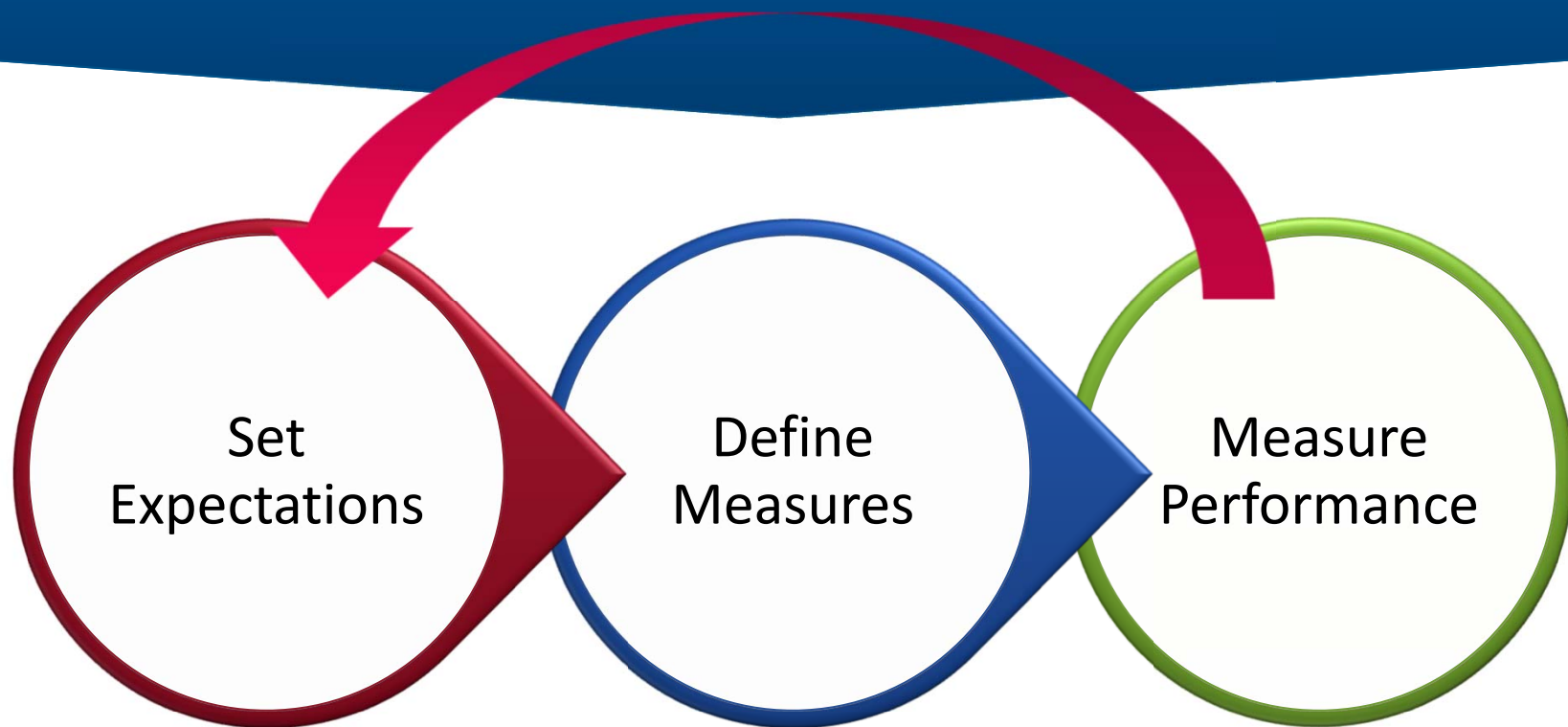
https://blog.bufferapp.com/infographic-makers

https://www.canva.com/create/infographics/

What Did We Learn?

Analyzing and applying data is essential to sustainability

Performance Management

Set Expectations

- Based on needs assessment, data, and experience
- What will success look like

Define Measures

- Use specific measures
- May have multiple
- Use NPIs
- Develop time-specific benchmarks

Measure Performance

- Collect and analyze data
- Compare to expectations
- Change if necessary

On-going Monitoring Is Essential

- Monitoring should be built in early, involve people at all levels of the organization, and give leadership the ability to quickly take corrective action or move to build on success.

- There must be systematic feedback—a way of self-control from events back to planning."

<div align="right">Peter F. Drucker-The Drucker Foundation Self-Assessment Tool, 1999</div>

Resource Planning

- Does the agency have the proper tools to engage in proper data collection, storage and analysis?
- An important aspect of agency capacity lies with the agency staff.
  - Are they properly informed, assigned and equipped?
  - Do they provide services of high quality that meet the needs of the customers?
- Do existing resources need to be realigned?
  - Move resources from underperforming programs or those with less strategic value to the organization to those that maximize investment

Applying the Techniques

Getting to the answers:

- **What happened?**
  - What did your NPIs say? Did you meet your targets?
- **Who changed?**
  - How many were served? How many will you serve next year? How many do you think will achieve an outcome?
- **What services or strategies produced the change?**
  - Who got the service? What happened because of certain services?
- **How do you know?**
  - What are the indicators you are using? Measurement tools?

What We May Not Know ... YET!!

- What services produced the outcomes/results?
  - One? More than one?
  - How can we track the multiple services connected to each customer?
- Who achieved the results?
  - What was the age, income level and income source of those who achieved? What about education level? etc.
- Did the individuals who achieved one outcome achieved any others? How many individuals achieved multiple outcomes?

Accountability Data

- Are we focused on "Changing Lives"?

- Are we following up to show the long term impact of our work?

- Once we are finished collecting our NPIs, can we compare the NPIs to the agency plans? Can we see what needs to be done next year to expand?

- Can we tell what set of services give the best opportunity for results?

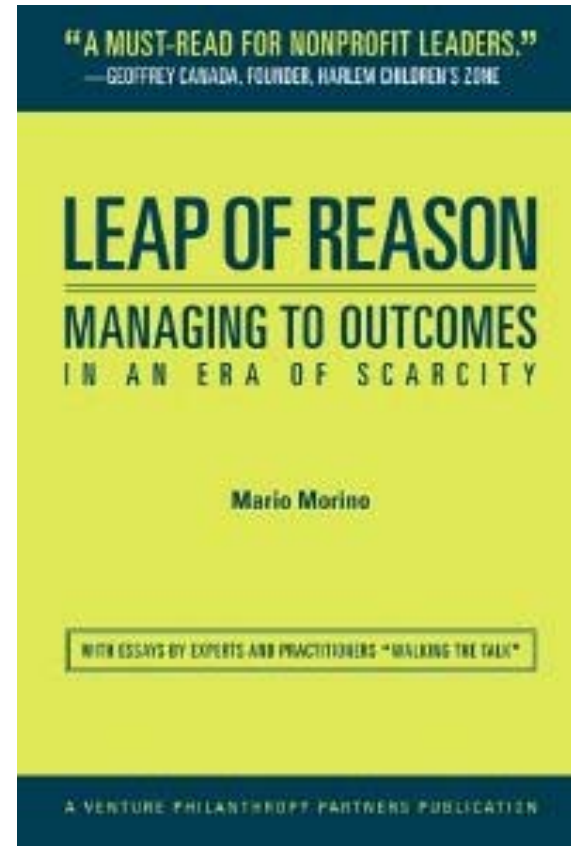# Go Back to Your
Local Theory of Change

- Does the information you have derived from your data support your assumptions?

- Is the information you have derived from your data consistent with your plans?

- Did you reach the goals you established? Were they right goals?

Think About Your
Next Community Needs Assessment

- What do you want to collect data about that you haven't before?

- Was anything missing from your previous data collection efforts?

Outcomes and Impact Resource

*"We must focus on **why to measure and on what to measure** - not just on how to measure."*-Mario Morino

Outcomes and Impact Resource

- Independent Sector: www.independentsector.org.

- At the heart of **Charting Impact** are five deceptively simple questions that require reflection, encourage learning, and promote communication about what really matters – results.

  1. What is your organization aiming to accomplish?
  2. What are your strategies for making this happen?
  3. What are your organization's capabilities for doing this?
  4. How will your organization know if you are making progress?
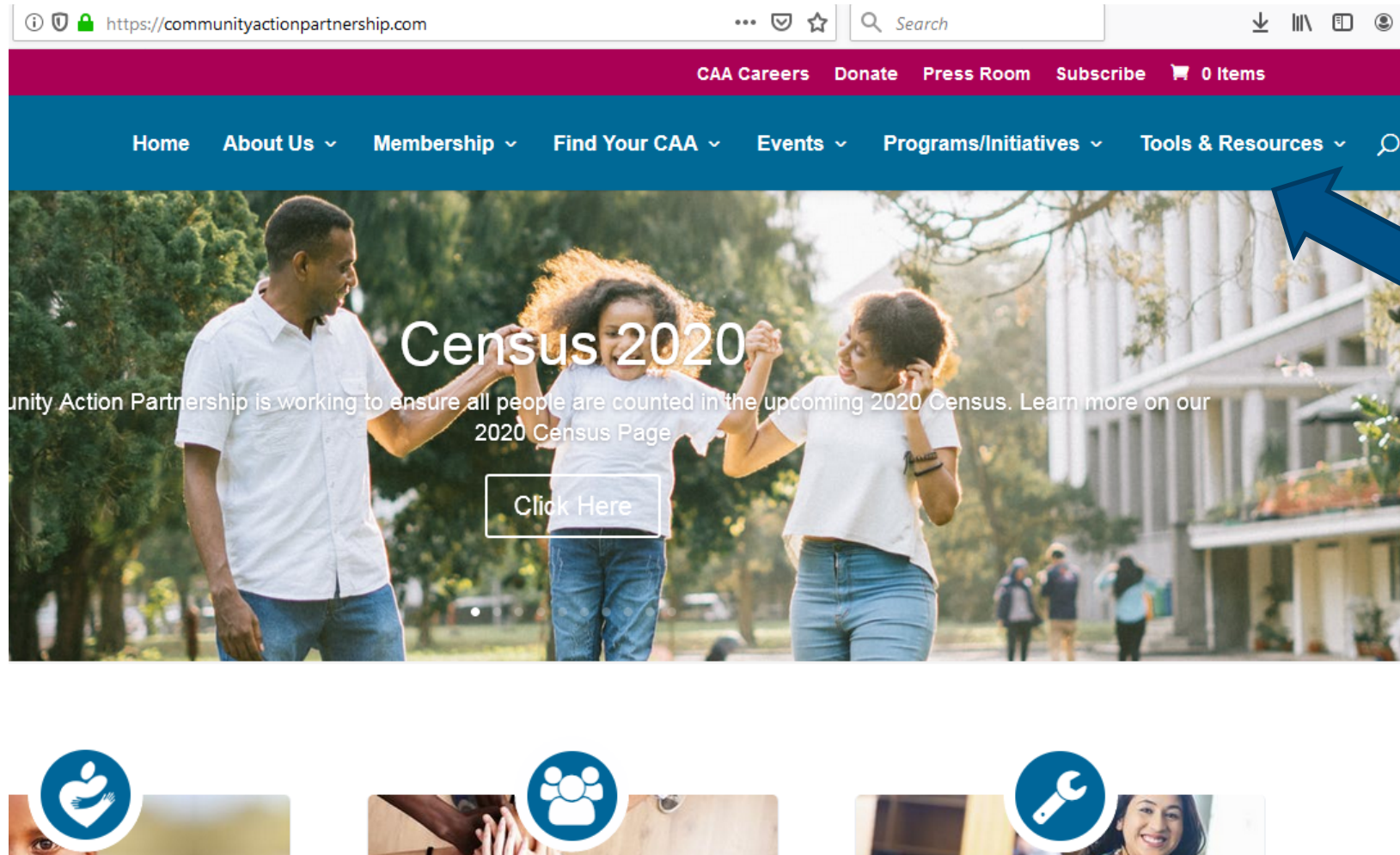 5. What have and haven't you accomplished so far?

An partnership of BBB Wise Giving Alliance, Guidestar, Independent Sector

NEXT STEPS

- Applying what you have learned
- What can you do when you go back to the office?
- New year-new opportunities
- Keep learning

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