

Behavioral Health and Informatics: Improving Program Performance and Population Health Outcomes



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Background

In 2014, the WA State Legislature passed Senate Bill 6312 to integrate public funding for mental health and substance use disorder treatment services. In response to this integration, Whatcom County Health Department (WCHD) prioritized the need to enhance the current behavioral health data and information infrastructure to better support staff and community partners' needs and to improve program and population health outcomes. The current methods for data collection, analysis, and dissemination of the WCHD Human Services programs are fragmented and silo-based. In result, creating communication challenges among programs and inhibiting the demonstration of the comprehensive impact of interventions across behavioral health programs.

Methods

Capitalizing on being a Project SHINE Fellowship host site, the 2016-2017 Informatics-Training In Place (I-TIPP) Fellow project was dedicated to developing well-designed behavioral health data and information systems that support staff and community partner needs. WCHD staff and SHINE Fellow utilized the Collaborative Requirements Development Methodology to apply a practical application of the business process analysis to upgrade systems to provide actionable information as it relates to behavioral health promotion, substance use disorders, mental health, and homeless housing. Informatics tools such as context diagrams, business process matrix and issue management registers have served as planning tools, conversation starters, and engagement of staff in information and data management enhancements.

Results

The result of using informatics tools to examine program efficiency and data collection and usability has assisted in identifying significant gaps in data infrastructure, program disruptions, and possible solutions for program improvement and delivery of services. The need to increase efficiency in data analysis, program monitoring and evaluation was found across all programs. Application of the business process analysis and issue management register has been adopted by the WCHD's performance management system and is being utilized agency wide.

Collaborative Requirements Development Methodology | Whatcom County, WA

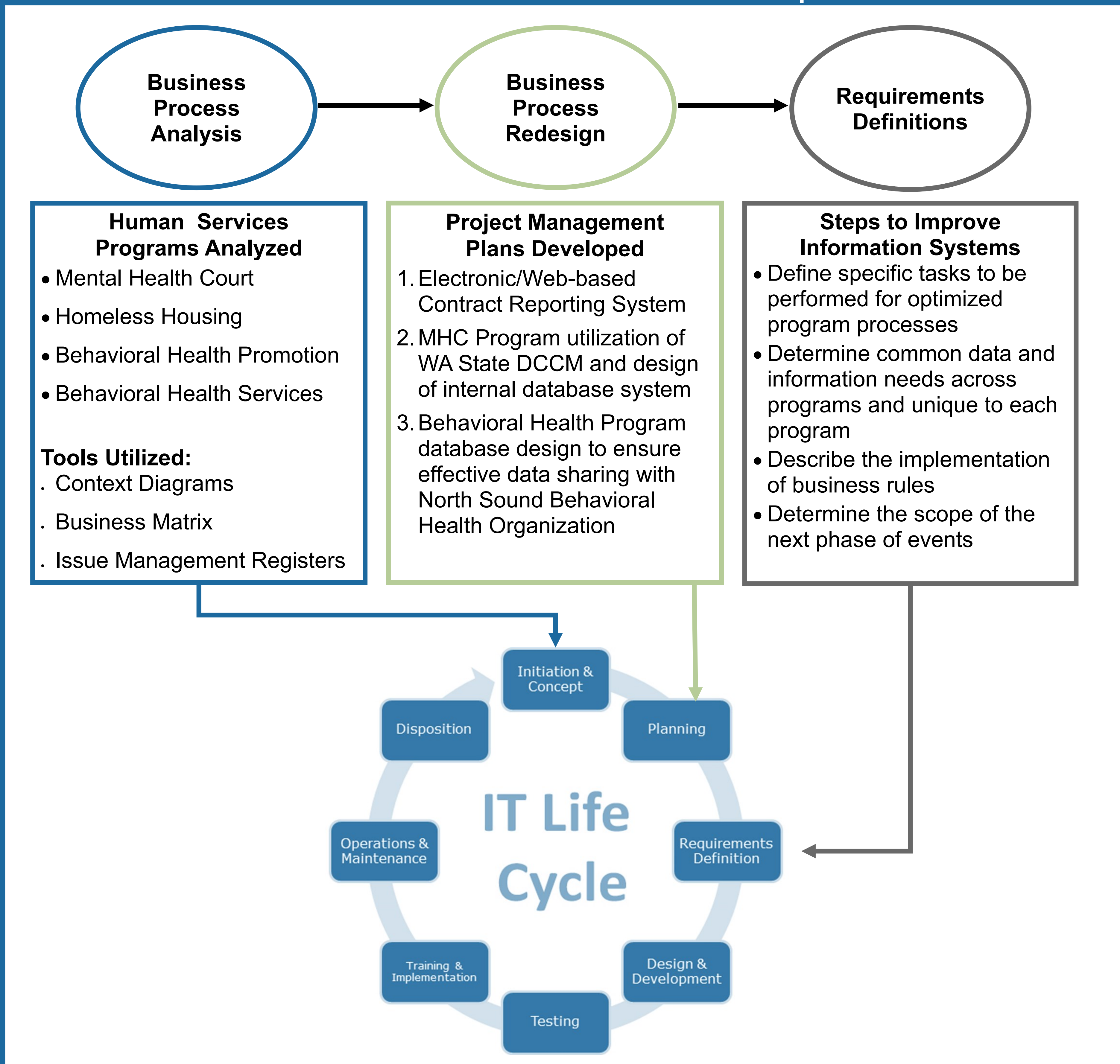


Figure 2: WCHD Business Process Matrix

Program: Behavioral Health Promotion						
Program Goal: Promote healthy children and families by decreasing the impact of substance use and mental health issues						
Contribution to WCHD Population Results: Children and adults are physically and mentally healthy. Families are strong and self-sufficient.						
Program Staffing: Program Specialist, Joe Fuller, Program Specialist, Amy Hockenberry, Program Supervisor, Perry Mowery						
Program Objectives	Key Business Process	Performance Standards (Business Rules)	Inputs	Activities (Task Set)	Outputs	Program Measures
Work collaboratively to increase community access to effective behavioral health programs and services.	Delivery of Behavioral Health Promotion Programs & Services	<p>PHAB Standards:</p> <ul style="list-style-type: none"> 4.1 Engage with community to id & address health problems 7.1 Assess service capacity and access to services 7.2 Identify and Implement strategies to improve access to health care 10.1 Use Evidence-based practices <p>Contract Requirements: DSHS/DBHR Prevention Services United General – Marijuana Prevention</p> <p>Professional Standards: Strategic Prevention Framework</p> <p>Laws/Other: HIPAA</p> <p>Advisory Board: Behavioral Health Advisory Board</p>	<p>Resources:</p> <ul style="list-style-type: none"> Community capacity to provide programs/services Youth barriers (ACEs, low SES, homelessness) <p>Partnerships:</p> <ul style="list-style-type: none"> Schools Youth-serving organizations Law enforcement Civic & volunteer groups Healthcare professionals Organizations reducing SAMH promotion Media Business Community Tribal government Parents Youth <p>Data Systems:</p> <ul style="list-style-type: none"> HYS DSHS Data Books, Risk Profiles Minerva Community Survey Data CHAT NIDA 	<ol style="list-style-type: none"> Identify need for behavioral health programs/services Assess community for resources and capacity Develop (select) programs/services with community partners Determine partner's capacity to deliver selected programs Build and finalize contracts with partner organizations Support the coordination of and build community capacity to deliver programs and services Monitor programs & services for effectiveness Support and coordinate the community's capacity to manage any changes 	<ul style="list-style-type: none"> Contract Reporting Survey Input DBHR Strategic Plans Leadership Boards/ Local Government Reports on services Develop and deliver consistent, accessible, and effective prevention services 	<p>Short Term/ Process Outcome: Community In Schools (CIS)</p> <ul style="list-style-type: none"> Increase student attendance Increase student attendance Increase in grades Decrease in discipline <p>Strengthening Families</p> <ul style="list-style-type: none"> # of families served # of programs delivered <p>WFCN/NAMI/Coalitions</p> <ul style="list-style-type: none"> # of events # of partners involved <p>Medium Term/Results Outcome: Community In Schools (CIS)</p> <ul style="list-style-type: none"> Increase student attendance Increase in grades Decrease in discipline <p>Strengthening Families</p> <ul style="list-style-type: none"> Pre- & posttest results <p>WFCN/NAMI/Coalitions</p> <ul style="list-style-type: none"> Increase partnerships Coalition Assessment Tool <p>Long Term/Is anyone better off? Healthy Youth Survey</p> <ul style="list-style-type: none"> 30-day use of alcohol 30-day use of marijuana Report of depression in last 12 months Report of anxiety over the last 2 weeks

Figure 3: Context Diagram

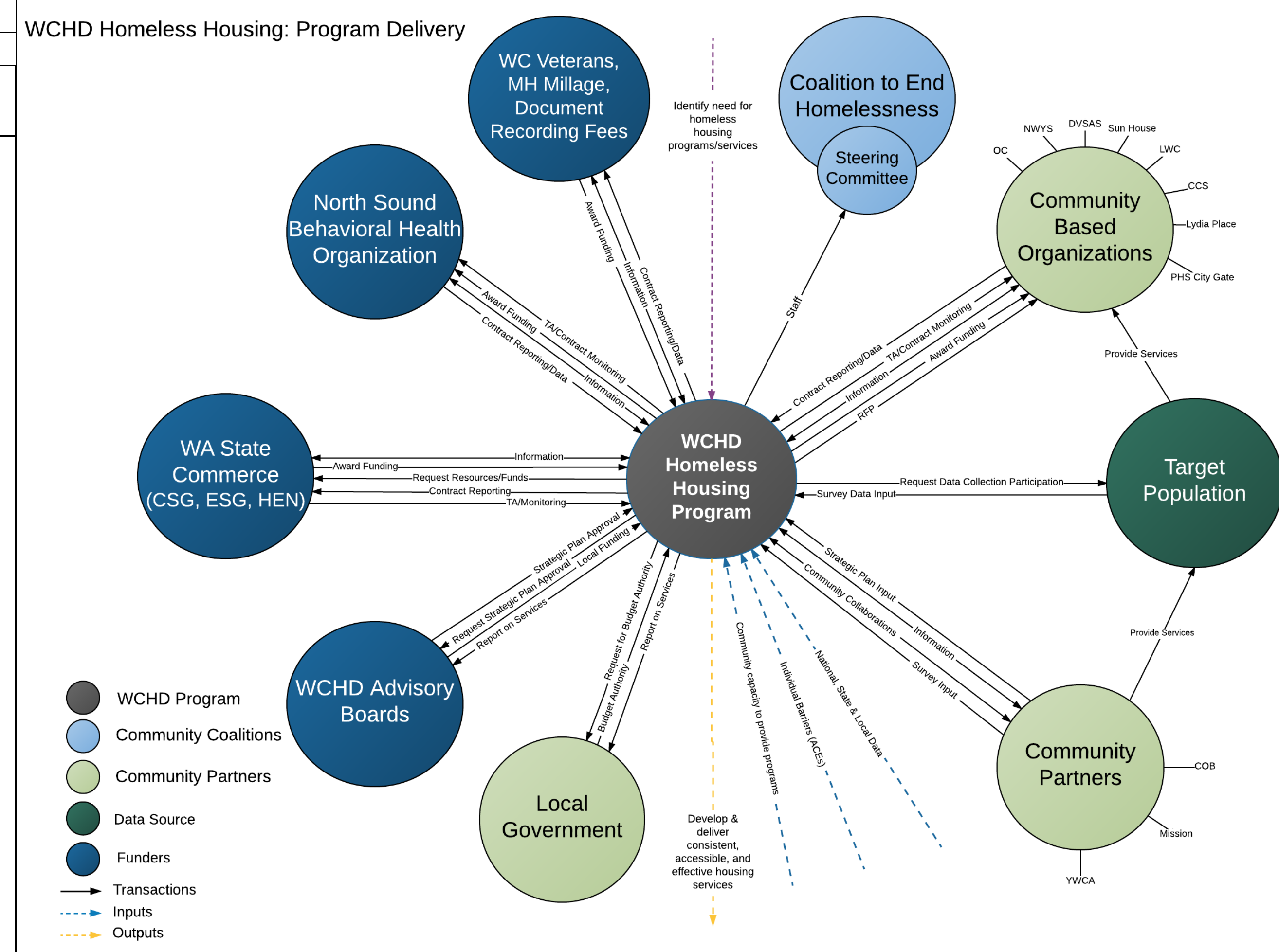
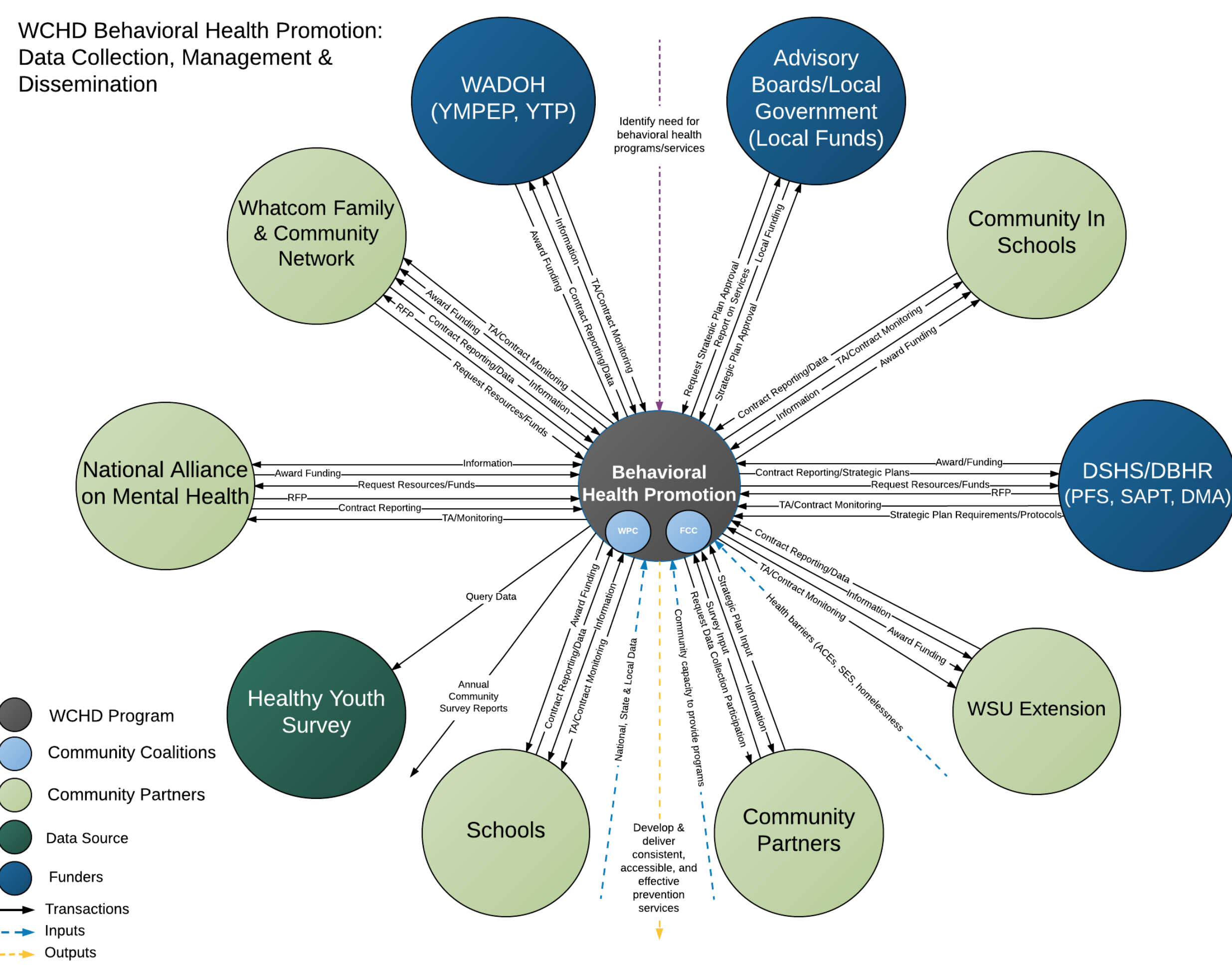


Figure 1: Context Diagram



Conclusions

To successfully improve behavioral health program performance and population health outcomes it is imperative first to understand how programs currently function, and how and where data and information are collected, utilized and disseminated. Application of informatics tools and strategies allows for a mapping of these systems and provides the opportunity to identify program and data management inefficiencies and the steps needed for improvements. Information gathered from this project will help to inform the creation of information systems that promote communication and integration and provide automated routine analysis and decision support queries. Future direction also includes expanding the utilization of informatics tools for contract management, and the community health assessment and improvement plan.

Successes

The success of the project has been in support of the department's leadership and staff and their commitment to the WCHD's strategic goals of 1) data and compassion drive our decisions and 2) our workforce is fully supported and engaged. Success is linked to the dedicated time researching, learning and following select public health informatics frameworks and tools. These tools served as useful guides and resources and assisted in planning and generating meaningful conversations.

References

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- Taylor, R. S. Value-added processes in the information life cycle. Journal of the American Society for Information Science, 33, 341-346. 1982
- Public Health Informatics Institute. Designing and Managing Public Health Information Systems on the IT Lifecycle. For more information contact, Amy Hockenberry at ahockenb@whatcomcounty.us

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