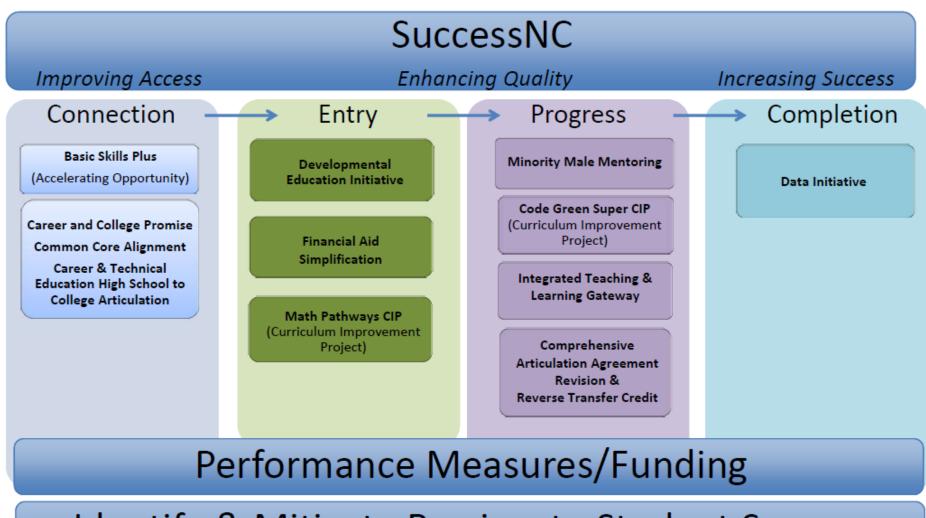


# Data Initiative Overview

Chris Cline, Associate VP for Business Intelligence and Project Management Office Bill Schneider, Associate VP for Research and Performance Management

**Data Initiative Facilitators** 

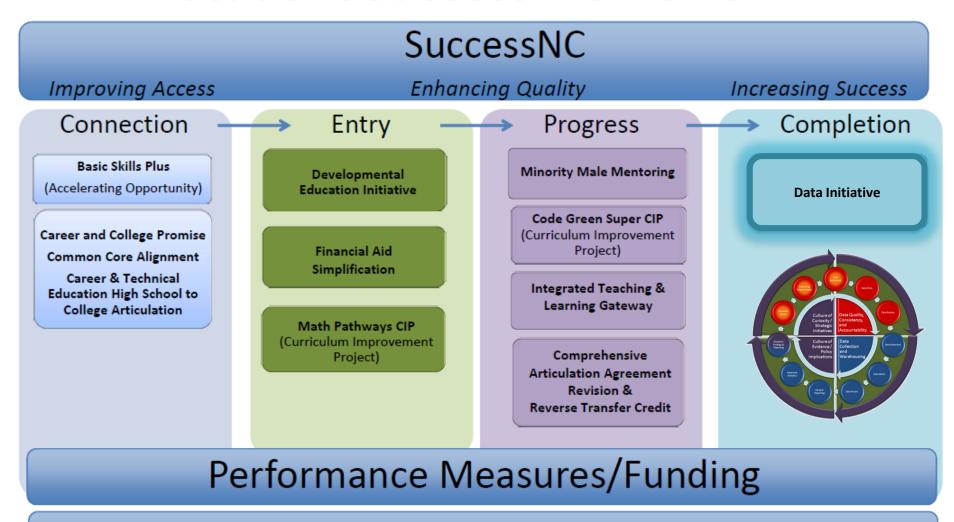
# **Student Success Framework**



Identify & Mitigate Barriers to Student Success

Completion by Design

# **Student Success Framework**



Identify & Mitigate Barriers to Student Success

Completion by Design



# **Data Initiative Overview**

The Data Initiative includes the **review**, assessment and revision of our current data collection and reporting processes that results in a robust data system which provides accurate and accessible information fostering a culture of data-driven decision making which addresses research questions and informs policies.



# **Data Initiative Motivation**

- Concerns over data quality at the college and state level
- Increasing demands for data from federal, state, and grant-providing agencies/organizations
- Expectations of collaboration between state agencies to share data
- The disconnect between data access and decision makers at the college and state level
- Increasing demands on colleges from accreditation bodies to practice and exhibit informed decision-making
- Current reporting tools do not adequately supporting the increasing research and reporting demands
- The need to ensure policies are based on sound data



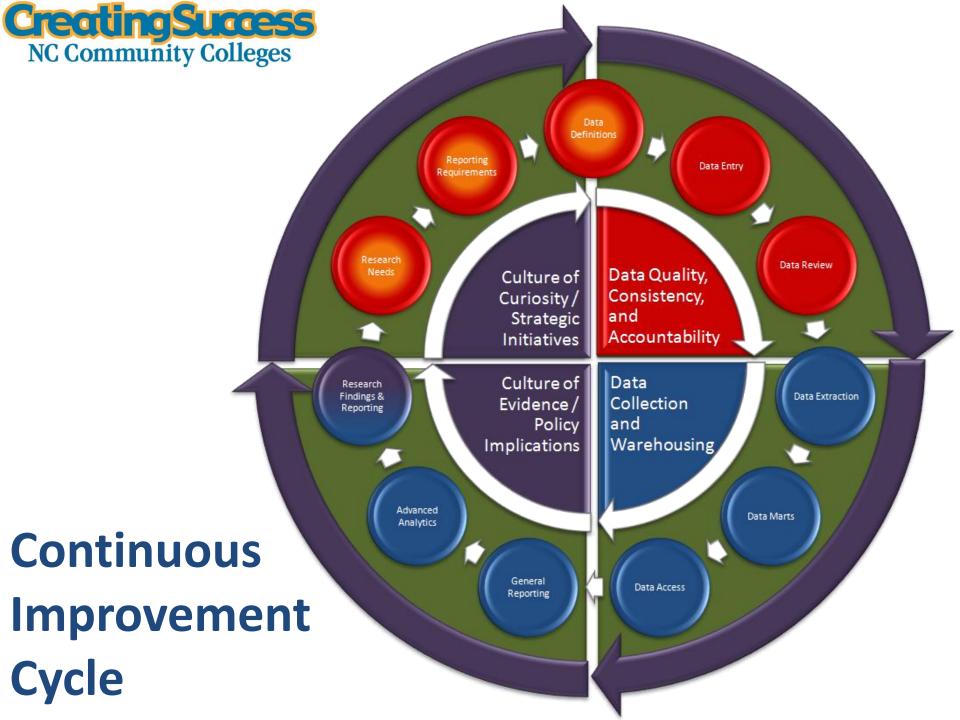
# **Data Initiative Objectives**

- Expand the individual and collective inquisitiveness of stakeholders within the NC Community College System to ask research questions that inform decisions and policies.
- Develop data definitions based on research needs and reporting requirements.
- Ensure data quality and consistency through appropriate and uniform entering and collecting of information across the System so data extracted are valid and reliable.
- Incorporate a **data review process** that ensures accountability through the validation of submitted data.



# **Data Initiative Objectives**

- Develop focused topic-based data marts that will serve a wide variety of analytical research needs including, but not limited to, strategic initiatives, grants, and business and student centric needs.
- Expand information accessibility by making all data users aware of the availability of predefined reports, web-based dashboards, statistical software, and training.
- Enhance advanced analytical capabilities to empower researchers focusing on specific topics and initiatives.
- Utilize research findings and reports to educate policy makers on the extent to which various factors impact outcomes, including student enrollment, student learning, student completion, faculty and staff development, budget allocation, etc.





# **Culture of Curiosity / Strategic Initiatives**

#### **Culture of Curiosity**

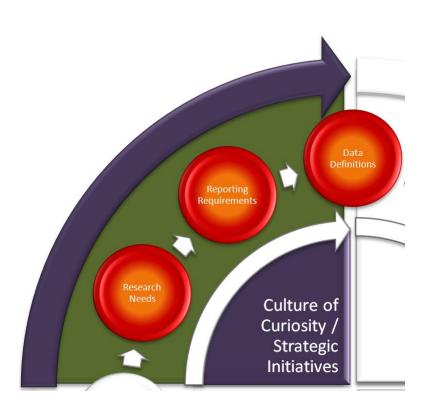
Represents individual and collective inquisitiveness to ask research questions that inform decisions and policies

#### **Data Needs**

- Strategic Initiative Variables
- Reporting Mandates
- Research Needs

#### **Data Definitions**

Developed based on research needs and reporting requirements





# Data Quality, Consistency, and Accountability

#### **Data Quality and Consistency**

Ensures information is collected and entered appropriately and uniformly across the system so data extracted for reporting purposes is valid and reliable

#### **Data Entry**

Proper understanding of data definitions will sustain the quality of the data collection and reporting processes

#### **Data Review**

Process which ensures accountability through the validation of data submitted for reporting purposes

#### **Data Definitions**

Direct what, where, when, and how information is entered into the data collection systems





# **Data Collection and Warehousing**

#### **Data Collection and Warehousing**

Centralized and technical processes that impact the way in which data is transferred and transformed between data systems and stored for reporting purposes

#### Data Extraction, Transformation, and Loading

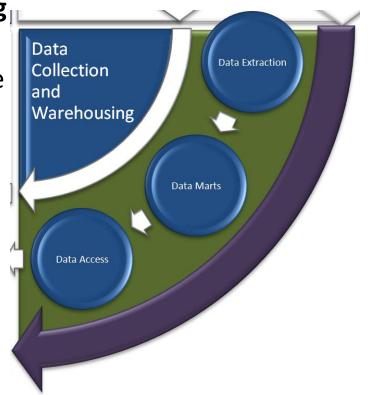
Procedural routines of extracting data files from local systems to a centralized warehouse

#### **Data Marts**

The creation of specific data sets dedicated to strategic initiatives and research focus areas

#### **Data Access**

The ability to query variables within data marts for basic informational purposes and detailed research needs





# **Culture of Evidence / Policy Implications**

#### **Culture of Evidence / Policy Implications**

- Determination of optimal decisions and policies based on the analysis and reporting of collected data
- Likely to result in development of additional research and evaluation needs

Culture of

Evidence /

**Implications** 

General Reporting

**Policy** 

Findings &

Advanced Analytics

## **General Reporting**

Automated informational reports updated routinely

#### **Advanced Analytics**

Research and analysis focused on specific topics and initiatives to inform current and future practices.

## **Research Findings & Reporting**

Educate policy makers on the extent of impact of various factors on outcomes, including student learning and progress



# **Additional Data Initiative Benefits**

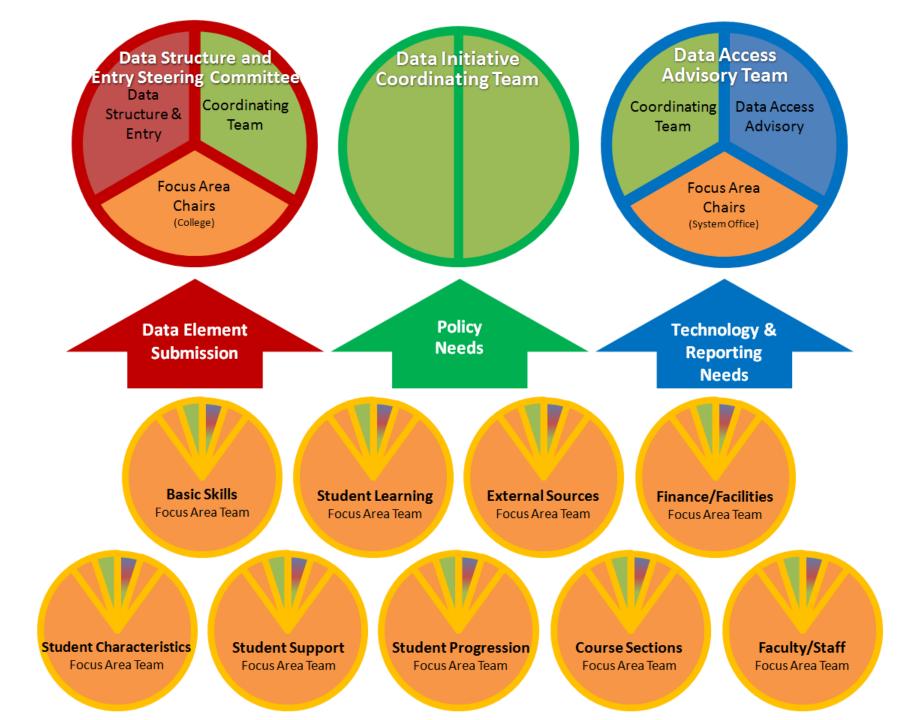
•Decreased institutional research resources on mandated reports, thus increasing resources to research student progression and program effectiveness

Access to comprehensive comparisondata with peer colleges

•Dashboard tools providing quick access to data for decision makers including presidents, vice-presidents, deans, department chairs, directors, and others

Increased collaboration across
 departments and divisions at the college



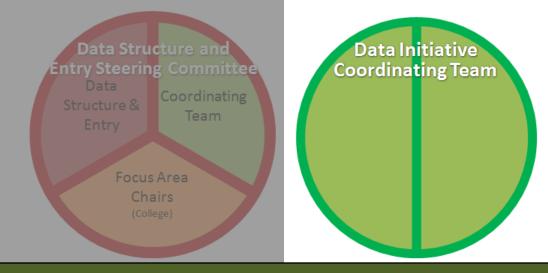




# **Initiative Representation**

	Orange	Red	Blue	Green	Unduplicated
System Office	51	13	13	11	65
Colleges (52)	105	11	11	7	127
Other	4				4
Total	160	24	24	18	196

**Hope • Opportunity • Jobs** 





#### **Data Initiative Coordinating Team**

- Guiding committee for the initiative
- Identify general areas of informational needs that support college and statewide priorities
- Appoint Focus Area Teams and identify team chairs
- Participate in the Data Structure & Entry Steering Committee or the Data Access Advisory Team
- Review recommendations made by Data Structure & Entry Steering Committee
- Review recommendations made by Data Access Advisory Team
- Address and resolve any issues the other teams cannot come to agreement to including policy
- Oversee Communication Plan

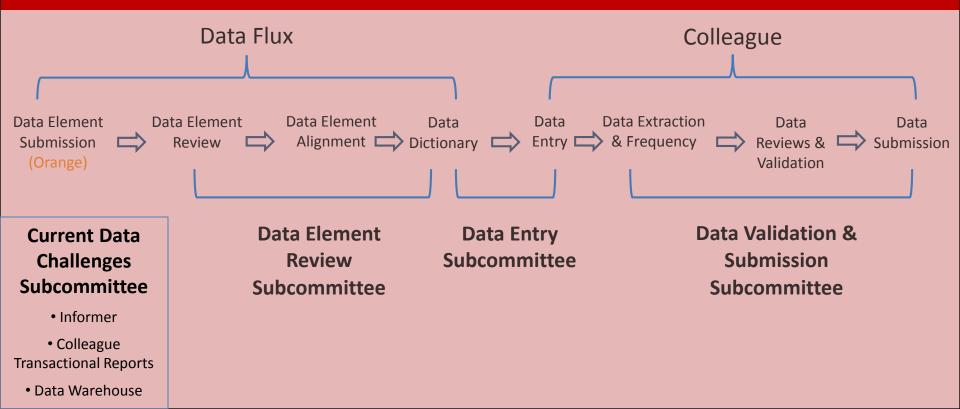


#### **Data Structure & Entry Steering Committee**

- Oversee Focus Area Team progression
- Recommend processes and training that ensure data quality and consistency through appropriate and uniform entering of information across the System
- Develop a college-level data review process that ensures accountability through the validation of data prior to submission
- Recommend data collection processes and frequencies
- Identify problems within current and previous data collections and recommend data element revisions within data warehouse
- Collect recommendations made by Focus Area Teams and share with Data Initiative Coordinating Team

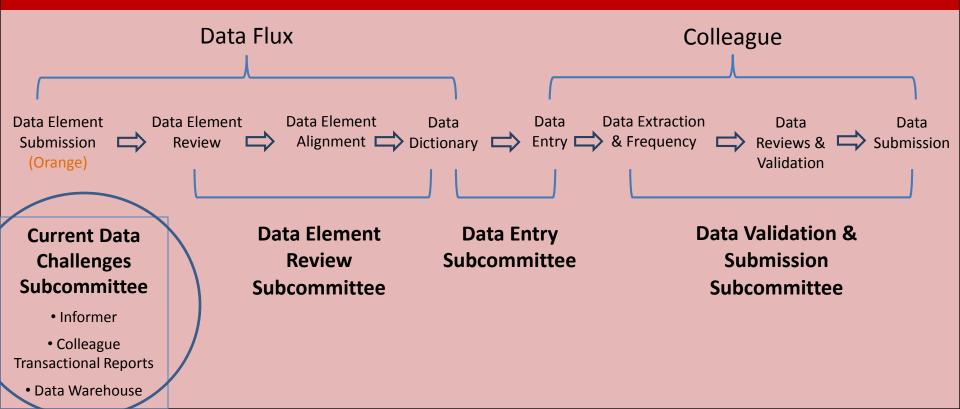


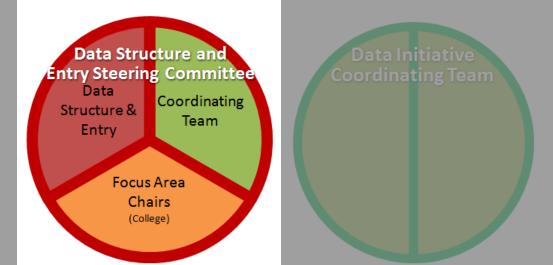
#### **Data Structure & Entry Steering Committee**





#### **Data Structure & Entry Steering Committee**





# Data Access Advisory Team Coordinating Team Data Access Advisory Focus Area Chairs (System Office)

#### **Data Structure & Entry Steering Committee**

www.rccc.edu/evaluations/datainitiativestate

# Current Data Challenges Subcommittee

- Informer
- Colleague
   Transactional Reports
  - Data Warehouse



## **Data Access Advisory Team**

- Establish reporting tools and appropriate access to data at the college and system levels
- Ensure data quality and consistency through appropriate extraction processes of information across the System so data extracted are valid and reliable
- Make recommendations for data extraction, data access, and reporting tools
- Expand information accessibility by making all data users aware of the availability of predefined reports, web-based dashboards, statistical software, and training
- Enhance advanced analytical capabilities to empower researchers focusing on specific topics and initiatives
- Develop Professional Development Plan tied to objectives within the initiative



# The SAS Grant

- Thousands of hours to get us to this point
- We have a SIGNED AGREEMENT between SAS and NCCCS
  - Education Analytical Suite (Dashboards)
  - SAS <sup>®</sup> Enterprise Miner <sup>™</sup> (Predictive tools)
  - SAS <sup>®</sup> Visual Data Discovery (Data Flux)

# **Next Steps**

- Hosting of the software and gathering of requirements
- Learn the software and how to best leverage it
- Rollout to NCCCS SO and Colleges



# **Dashboards**

System Wide Dashboards

System wide consistent dashboards that aggregate all 58 colleges for one centralized master view of the system. What data is important across all?

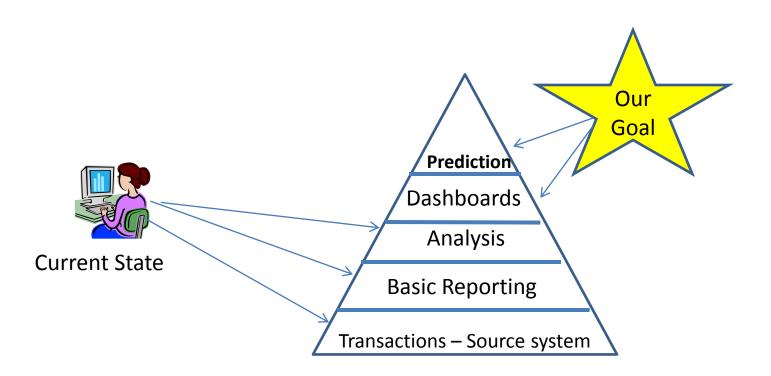
Local College Dashboards Local dashboards that are consistent across all 58 colleges but contain only information on their data. The data source could be the DW or local DW.



Local dashboards that are real-time, pulling data from their systems for local fire drills.



# **Dashboards**

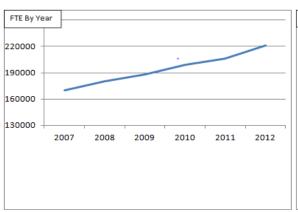


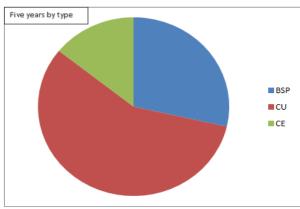
The higher up the data pyramid the higher the data maturity and more insight into the organization.



# Sample Dashboard

#### SAMPLE DATA



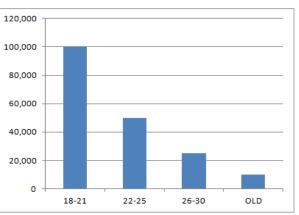


#### Transactional Reports

- FTE by Gender
- Gender by FTE
- Roster Reports
- GED Status Alert
- First Year Student Tracking
- IPEDS/NCHED Annual Reports

#### **Data Quality Reports**

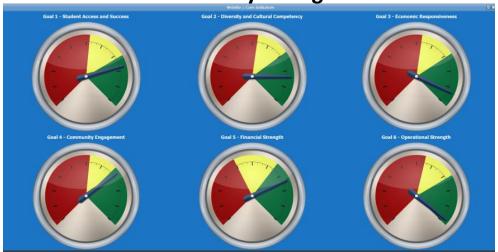
- Valid Birthdates
- Standard System Edit
- Enrollment Conditions Met



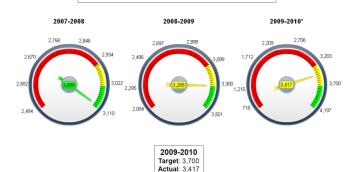


# Sample Community College Dashboards

#### **Lincoln Land Community College**

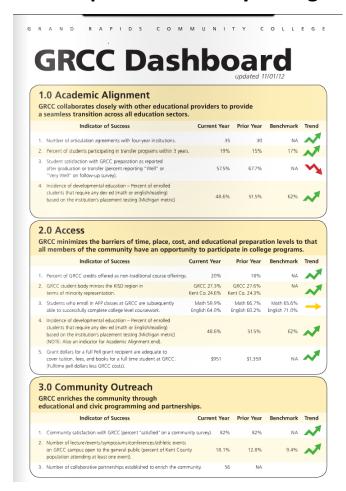


#### Northern Virginia Community College



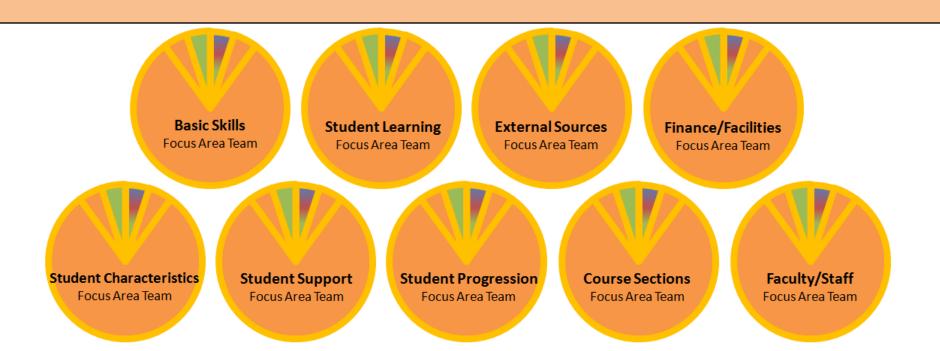
NOVA Definition: The number of graduates that complete a program of study (degree, certificate, including career studies) in a given year. \*2009-2010 preliminary data used.

#### **Grand Rapids Community College**



#### **Focus Area Teams**

- "Engine" of this initiative
- Research and recommend data elements that assist in addressing the informational needs associated with decision-making, performance management, federal/state reporting, accreditations, grant requirements, and informational requests
- Develop data definitions and dictionaries based on research needs and reporting requirements
- Help develop focused topic-based data marts that will serve a wide variety of analytical research needs



Basic Skills	Kristen Corbell	Coordinator for Research Projects, NCCCS
	Kathi McLendon	Dean, Community Development, CPCC

Elizabeth Thomas Controller, Sandhills CC

Barbara Boyce

Marlowe Mager

Pamela Senegal

Matt Meyer

Kara Bosch

Nancye Gaj

Kim Van Metre

Brian S. Merritt

Alan Tucker

Jason Chaffin

Frank Scuiletti

Stacy Holliday

Cynthia Liston

**Beverly Watts** 

Daniel Alvarado

**Course Sections** 

**External Sources** 

Faculty/ Staff

Student

**Outcomes** 

Progression

**Student Support** 

Student

Finance/ Facilities

Characteristics

**Student Course** 

Success & Learning

<b>Focus Area Team Chairs</b>	<b>Focus</b>	Area	Team	Chairs
-------------------------------	--------------	------	------	--------

Associate VP for Workforce Development, NCCCS

Associate VP for STEM Innovations, NCCCS

Support College & Career Readiness, NCCCS

Dean of Student Learning, Central Carolina CC

QEP Director/English Instructor, Cape Fear CC

**Program Coordinator, NCCCS** 

Director of Program Quality & Accountability, NCCCS

Vice President, Economic and Community Development

Systems Accounting and Special Projects Manager, NCCCS

Associate VP for Policy Research & Special Projects, NCCCS

Associate Director, Student Leadership & Development, NCCCS

Director of Dev Studies and Quality Enhancement, McDowell

Coordinator of Research and Institutional Effectiveness, Haywood

Team Leader/Director Professional Development & Instructional

Director College Administrative Support, Training and Reporting, CPCC

Director, Campus Innovations and Student Success Initiatives, Davidson



# **Basic Skills**



Enrollment and
progression data
related to students
in Basic Skills
programs.
Established and
implemented
based on
immediate federal
reporting needs.

**Team Description** 

**Types of Elements** 

**Reporting Examples** 

- Accelerating Opportunity
- Adult High School
- Basic Skills Plus
- Compensatory Education
- GED
- Level Completion
- NRS Assessments
- Placement

- Enrollment
- Level Completion
- NRS
- Perf Measure: Basic Skills Progression
- Perf Measure: GED Completion
- Student Progress



# **Student Characteristics**



**Team Description** 

**Types of Elements** 

**Reporting Examples** 

- Enrollment related data focused on student admission, entry, background, and characteristics.
- Academic Background
  - Demographics
  - Program of Study
  - Student Status
  - Transfer Enrollment
  - Transfer Credit

- Customized Industry Training Legislative Report
- Enrollment
- IPEDS 12-Month Enrollment
- IPEDS Fall Enrollment
- IPEDS Student Financial Aid
- NCHED A-1.2 Undergraduate
- Program Analysis
- Student Characteristics



# **Student Support**



<b>Team Description</b>	Types of Elements	Reporting Examples
Information focused on financial, academic, and personal support, special accommodations provided to students. Includes assessments of financial and remediation needs.	<ul> <li>Advising</li> <li>Campus Organizations</li> <li>Career Planning</li> <li>Counseling</li> <li>Course placement</li> <li>Financial Aid Award</li> <li>Financial Aid Source</li> <li>Placement Scores</li> <li>SAT/ACT</li> <li>Scholarship Awards</li> <li>Skills Lab Hours</li> </ul>	<ul> <li>IPEDS Student Financial Aid</li> <li>NCHED A-10U Student Financial Aid Summary</li> <li>NCHED A-6 Academic Library Survey</li> <li>SACS Compliance</li> </ul>



# **Student Progression**



Team Description	Types of Elements	Reporting Examples
Student cohort tracking that includes success rates relating to retention, graduation, transfer, and employment.	<ul> <li>CRC</li> <li>Certifications</li> <li>Cohort Identification</li> <li>Graduation Information</li> <li>Retention</li> <li>Stackable Credentials</li> <li>Transfer Rates</li> </ul>	<ul> <li>Completions</li> <li>Graduation Rates</li> <li>IPEDS Completions</li> <li>IPEDS Graduation Rates</li> <li>Perf Measure: Credit Accum</li> <li>Perf Measure: Six Year Success</li> <li>Program Analysis</li> <li>Retention Rates</li> <li>SACS Compliance</li> <li>Student Progress</li> <li>Transfer Rates</li> <li>Transition Reporting</li> </ul>



# **Student Course Success and Learning Outcomes**



Team Description	Types of Elements	Reporting Examples
Student course progression and performance data and associated learning outcomes.	<ul> <li>Course Outcomes</li> <li>Final Grades</li> <li>Midterm Grades</li> <li>Pre&amp;Co/Reqs</li> <li>Skills Mastery</li> <li>Student Course Progression</li> </ul>	<ul> <li>Course Analysis</li> <li>Course Sections</li> <li>Grade Distributions</li> <li>Perf Measure: Developmental Success in Credit Math</li> <li>Perf Measure: Developmental Success in Credit English</li> <li>SACS Compliance</li> <li>Student Course Success</li> <li>Student Learning Outcomes Analysis</li> </ul>



# **External Sources**



<b>Team Description</b>	Data Sources	Reporting Examples
Data collected by outside agencies and/or housed outside of Colleague which assist in the evaluation of student and institutional performance.	<ul> <li>Career Readiness Cert</li> <li>Commerce</li> <li>Customized Industry Training</li> <li>DPI</li> <li>Independent Colleges</li> <li>Licensure Agencies</li> <li>National Student Clearinghouse</li> <li>Small Business Center</li> <li>Survey Data</li> <li>Census</li> <li>UNC-GA</li> </ul>	<ul> <li>Certification and Licensure</li> <li>Employment</li> <li>Perf Measure: Transfer         Performance</li> <li>Perf Measure: Licensure &amp;         Certification</li> <li>SACS Compliance</li> <li>Service Area Characteristics</li> <li>Transfer Analysis</li> </ul>



# Faculty/Staff



**Team Description** 

**Types of Elements** 

**Reporting Examples** 

Employee and position characteristics that include salaries, employee background, employment status, and position details.

- Classification
- Credentials
- Demographics
- Faculty/Staff Degree Level
- Position Descriptions
- Position Titles
- Salary

- Employee Characteristics
- Employee Retention
- Faculty Credentials
- IPEDS Human Resources
- Faculty Workload Analysis
- SACS Compliance



# **Course Sections**



Team Description	Types of Elements	Reporting Examples
Course information and section data that includes course availability, section logistics (where, when and how, length, etc.) and section enrollments.	<ul> <li>Census Date</li> <li>Contact Hours</li> <li>Course</li> <li>Credit Hours</li> <li>Instructor</li> <li>Location</li> <li>Managed/Open Enrollment</li> <li>Method of Instruction</li> <li>Pre &amp; Coreqs</li> <li>Transfer Articulation</li> <li>Scheduled Hours</li> <li>Staff Assignment</li> </ul>	<ul> <li>Class Fill Rates</li> <li>Course Cancelation Rates</li> <li>Course Enrollments</li> <li>FTE</li> <li>IPEDS 12-Month Enrollment</li> <li>NCHED A-1.1 Supplement 3:         Types of Instruction</li> <li>Instructional Cost</li> <li>SACS Compliance</li> <li>Staff Information Report</li> </ul>



# Finance/Facilities



**Team Description** 

**Types of Elements** 

**Reporting Examples** 

Budgetary and facilities information that includes summary, financial data and detailed facilities data.

- Department Codes
- Facility Data
- Funding Types
- Resource Allocation
- Operational Costs
- Operational Revenues
- Expenditures
- Program Costs
- Tuition/Fees

- Budget Allocation
- Energy Efficiency
- Facility Utilization
- IPEDS Finance
- NCHED A-3 Student Tuition, Fees, and Charges
- SACS Compliance
- Year End Financial Reports

# 

January 2012

February2012

March 2012

March 2012

March 2012

March 2012

April 2012

**April 2012** 

May 2012

Completed Willestones	
Communicate to Colleges the 2012 System Priority –Data Initiative	

SAS Dashboard & Reporting tool demonstration to State Board

Appointment of Data Access Advisory Team and the Data Structure

Basic Skills Focus Area Team meets twice and drafts 70 elements

Appointment of Data Initiative Coordinating Team

Knowledge Break Sessions held for System Office Staff

Data Initiative Coordinating Team meets for first time

Basic Skills Focus Area Team (Group 1) Launched

& Entry Steering Committee

Data Initiative Kickoff

July2012

August 2012

October 2012

October 2012

October 2012

November 2012

November 2012

March 2013

Recent and Forthcoming Milest	ones
9 categories of focus areas and their scope were finalized by the	July 2012

SAS Dashboard & Reporting tool demonstration to Presidents'

Solicited Focus Area Interest through survey to list serves and

Focus Area Team membership agreements for remaining eight

Data Structure & Entry Steering Committee to meet formally for

Data Access Advisory Team to meet formally for first time

Data Initiative Coordinating Team

Initiative presence at System Conference

Finalization of SAS Partnership Agreement

Focus Area Teams Launch and Training

professional associations

Association

focus area teams

first time

# **Upcoming Focus Area Team Events**

## Focus Area Team Training – Thursday, March 14, 9:00-4:30

- Will provide attendees with an understanding of:
  - Data Initiative's objectives, desired outcomes, and timeline
  - Focus Area Team roles, responsibilities, best practices, and resources
  - Expectations of individual team members
- Will provide teams with primary list of elements, instructions for reporting, and guidelines for interacting with other teams

## **Professional Development Session – Thursday, April 11, 9:00-5:00**

• The culture of inquiry will be presented in order to facilitate group discussion that will spawn research needs, thus generating data elements necessary for collection (Rob Johnstone)

## Focus Area Team Meeting – Friday, April 12, 8:30-3:00

Will provide you the opportunity to formally meet with your Focus Area
 Team for the first time
 Hope • Opportunity • Jobs



# Questions? Contact Chris Cline or Bill Schneider

Chris Cline clinec@nccommunitycolleges.edu

Bill Schneider <a href="mailto:schneiderb@nccommunitycolleges.edu">schneiderb@nccommunitycolleges.edu</a>