



Performance Metrics: Approach and Framework

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Today's Objectives



Using Metrics to Drive Regional Talent Development

8:00 AM - 9:00 AM

In order to be effective, regional workforce and economic development efforts must be focused on measurable results and be informed and guided by real data and information. The Bio-1 WIRED region in central New Jersey has developed a state-of-the-art metrics system that uses a balanced-scorecard approach to guide program design and implementation. Learn about the region's metrics system and engage in a discussion on how metrics systems can be used to inform talent strategies.



Today's Objectives



1. Describe an *approach and a process* for development of metrics which will work for you and your region
2. *Share* Central New Jersey Bio-1's Metrics Framework
3. Introduce *key metrics concepts* – Balanced Scorecard, Dashboard, Leading and Lagging Indicators
4. Facilitate a *discussion* around four measurement areas - Capability Building, Education/Training, Employment, Economy/Innovation



Agenda for Today



I. Background

Mary Ellen Clark

- Bio-1 Region Overview and Metrics Timeline
 - Key Success Factors for Development of Metrics
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II. Discussion of the Bio-1 Metrics Framework

Aaron Fichtner

- The Bio-1 Framework
 - The Four Areas - Capability Building, Education/Training, Employment, Economy/Innovation
 - Data Sources
-

III. Use of a Dashboard

Mary Ellen Clark

IV. Open Discussion – Topics of Interest

Aaron Fichtner



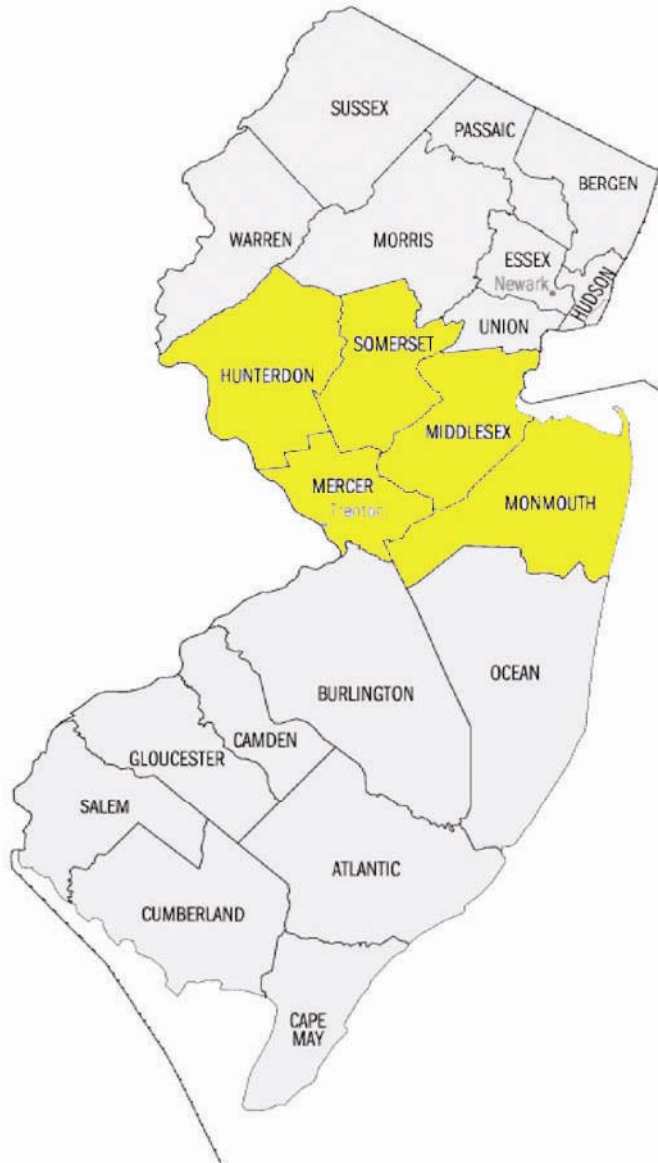
Agenda for Today



I. Background



Bio-1: Our Region

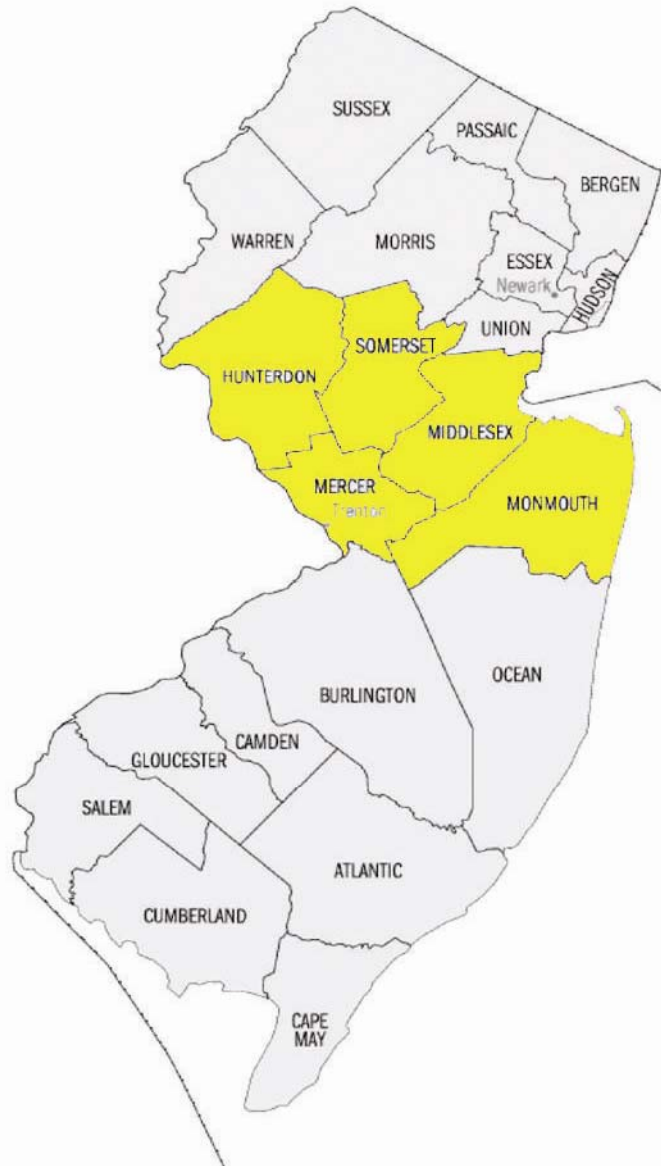


Central New Jersey Bio-1

- **Five county region**
- **Four workforce investment boards**
- **Consortium of leading educational institutions**, including county colleges (Brookdale, Mercer, Middlesex, Raritan Valley), four-year colleges and universities (including Rutgers, Princeton, TCNJ, Monmouth, Rider, UMDNJ) and more than 40 high schools
- **Many Bioscience Employers**
Including major pharmaceuticals J&J, Merck, BMS and 180+ biotechnology companies employing 37,600 individuals
- **Advanced research institutions**
Cancer Institute, Stem Cell Institute, Waksman Institute, Biotechnology Center for Agriculture and the Environment, Center for Advanced Biotechnology and Medicine
- **State Agencies**
Labor and Workforce Development, Economic Development Authority, Education
- **Target Industry** Biosciences



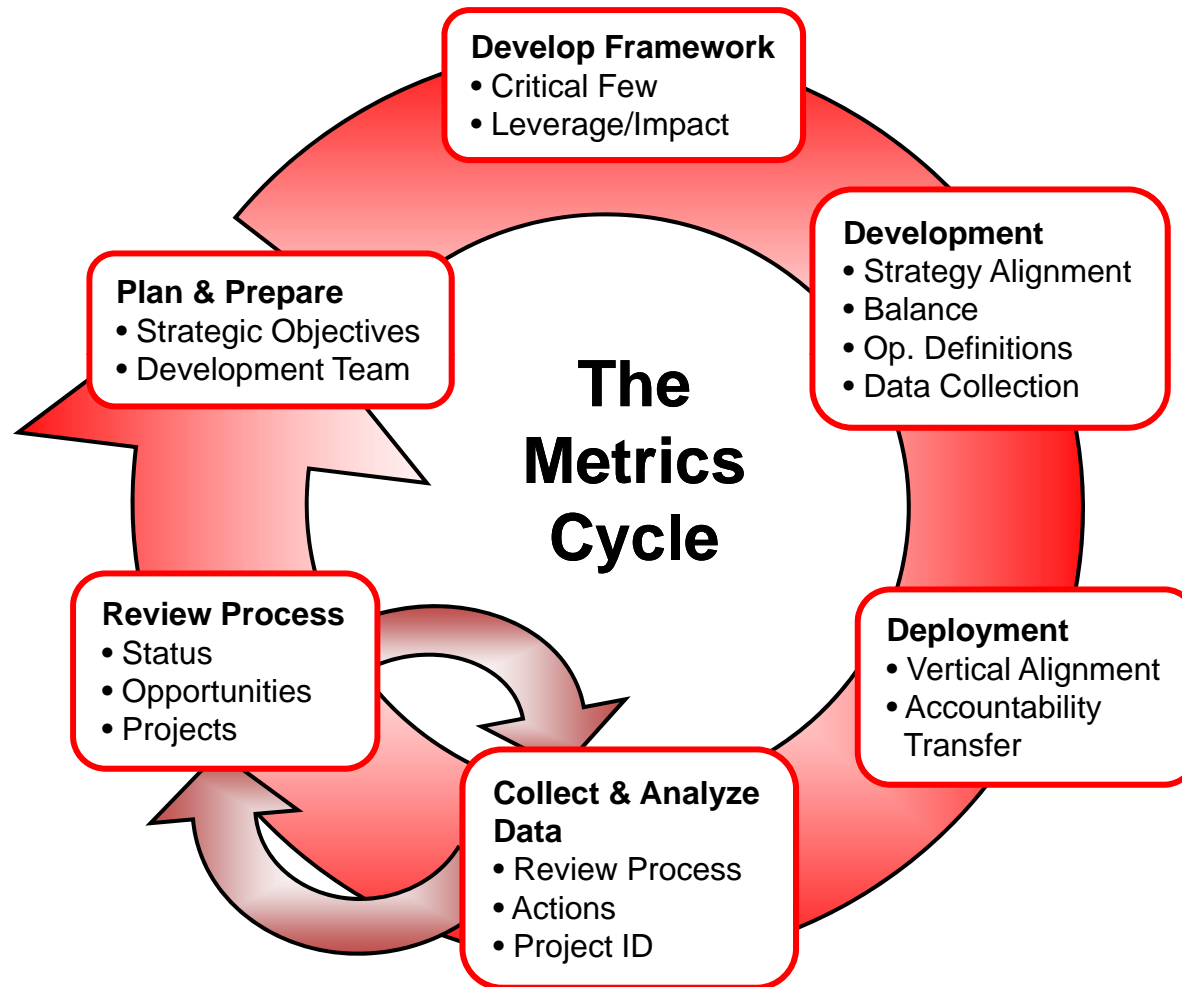
Bio-1: Our Strategies



Central New Jersey Bio-1

- **Excite Young People about the Biosciences, focusing on underrepresented groups**
 - Life Science Career Campaign
 - Career Academies, Residential Programs
- **Lay Smooth Education and Career Pathways**
 - NJ Biotechnology Educators Consortium
 - Articulation Agreements and Consistent Curricula
- **Transform Graduate Education**
 - 10 Professional Science Masters Degree Programs
 - Interdisciplinary PhD Program (Rutgers/UMDNJ)
- **Increase Bioscience Workforce Development**
 - Flak Jackets to Lab Coats for returning Vets
 - Women in Science and Technology Summit
 - Retrain scientists/engineers for Biotech
- **Enhance Linkages between Education & Industry**
 - Web Portal to match interns, coops with industry
 - Seminars and Forums for idea exchange
- **Facilitate Global Competitiveness**
 - Ambassador Program
 - Entrepreneurship Education and Support

Metrics Process





Metrics Timeline



Workshop 11/2007

Implementation Plan 12/2007

4th Qtr/2007

Develop Framework

- Critical Few
- Leverage/Impact

Plan & Prepare

- Strategic Objectives
- Development Team

Development

- Strategy Alignment
- Balance
- Operational Definitions
- Data Collection

We are here

The Metrics Cycle

Review Process

- Status
- Opportunities
- New Projects

Deployment

- Vertical Alignment
- Accountability Transfer

Collect & Analyze Data

- Review Process
- Actions
- Project ID

Quarterly Reviews w/
Bio-1 Governance
Board, report to DOL

Review w/ Bio-1
Governance Board 2nd
Qtr/2008

Beginning 3rd
Qtr 2008



Key Success Factors for Metrics to Work for You and Your Region



1. Involve the *Right People* in your Development Team
2. Involve *Everyone* (top down and bottom up) and ensure alignment and linkages between project metrics and strategic metrics
3. Follow a *Process* and do the steps in order to avoid confusion and rework
4. Employ a conceptual *Framework* - “Balanced Scorecard”
5. Select the *Critical Few* Metrics
6. Develop and Communicate *Operational Definitions*
7. *Utilize a Dashboard* as a consistent Communications and Decision Making Tool to help focus discussions



Agenda for Today



II. Discussion of the Bio-1 Metrics Framework



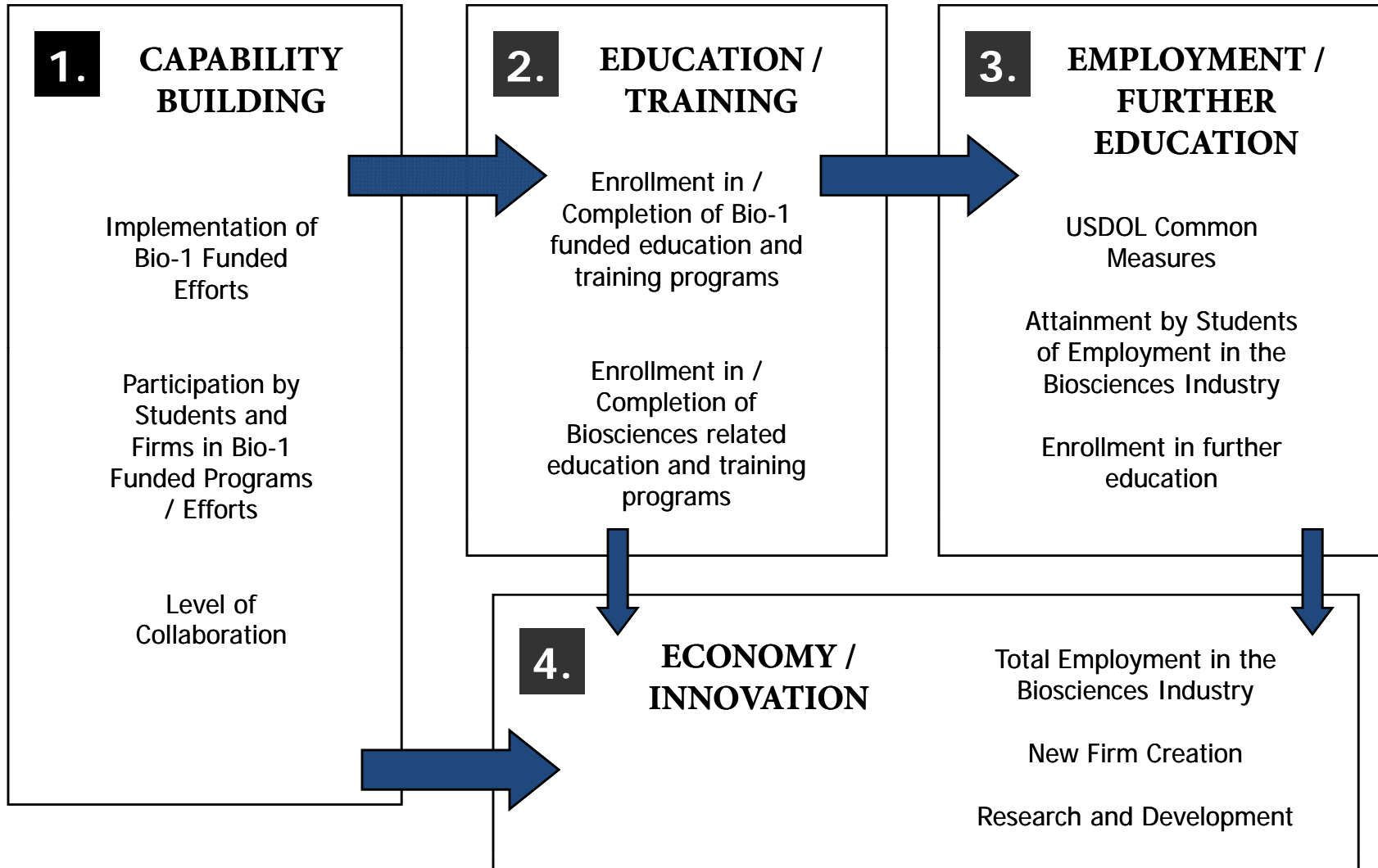
Design Criteria: Metrics Framework



1. Develop metrics (including *common measures*) that meet the reporting requirements of the US Department of Labor, Employment and Training Administration.
2. Create a *metrics dashboard* that can be used by Bio-1 leadership to monitor performance and to inform decision-making.
3. Utilize *existing data sources* and minimize the burden on Bio-1 partners.
4. Use a *balanced-scorecard* approach to measure a comprehensive set of indicators.
5. Measure *leading* as well as *lagging* indicators.



Four Categories of Measures



Leading Indicators **Lagging Indicators**



Data Sources



New Data to be Collected

1. Reporting of Bio-1 Funded Programs
2. On-line Survey of Bioscience Companies

Individual Student Record Data (Not publically available)

3. Individuals Receiving Training from the Workforce Development System (NJ Department of Labor and Workforce Development (NJ LWD) AOSOS system)
4. Individuals Receiving Post-Secondary Training (All funding sources) (NJ LWD CRC system)
5. Individuals Enrolled and Completing Post-Secondary Education (All funding sources) (New Jersey Commission on Higher Education SURE system)

Outcome Data (Not publically available)

6. New Jersey Unemployment Insurance Wage Records (NJ LWD)
7. Wage Record Interchange System (WRIS) (US Department of Labor) *(if available)*

Existing Publically Available Data

8. New Jersey School Report Card (NJ DOE)
9. Local Employment Dynamics (US Census Bureau)
10. CASPAR Database (academic R&D expenditures, degrees granted) (National Science Foundation)



DRAFT Metrics for Bio-1



	I. Excite Young People About the Biosciences	II. Lay Smooth Career and Educational Pathway	III. Transform Graduate Education	IV. Increase Bio-Science Workforce Development	V. Enhance Linkages Between Education and Industry	VI. Facilitate Globally Competitive Bio-Business
	<i>High Schools</i>	<i>Two Year and Four Year Colleges</i>	<i>Universities</i>	<i>One Stop Career Centers</i>	<i>Work-based Learning</i>	<i>Economic Development</i>
Capability Building <i>(Specific measures are being determined)</i>	1 Number of students participating in bioscience career awareness activities (less than one day in length)	1 Number of articulation agreements between high school, two-year, and four-year colleges	1 Number of PSM and interdisciplinary PhD programs	1 Creation of the One-Stop website	1 Number of firms listing internship and coop opportunities on the web portal	1 Number of firms that receive assistance from Bio-1
	2 Number of students participating in intensive, bioscience education activities (more than one day in length)	2 Number of internships and cooperative education experiences of RISE students		2 Number of people receiving training through Bio-1 programs	2 Number of students posting resumes to web portal	2 Number of individuals who participate in Bio-1 programs
	Overarching Metric 1: Extent of collaboration (currently being developed based on networking analysis)					
Education / Training	3 Number of students taking AP Science Test in high schools	3 Enrollment in ALL Biosciences Undergraduate Programs	2 Enrollment in PSM and Interdisciplinary PhD Programs	3 Enrollment in Biosciences training programs	3 Number of students participating in work experience in the industry	
	4 Enrollment in Bioscience CTE programs in high schools	4 Completion of ALL Biosciences Undergraduate Programs	3 Completion of PSM and Interdisciplinary PhD Programs	4 Completion of Biosciences training programs		
Employment / Enrollment in Further Education		5 Enrollment in Further Education (overall and in related programs)	4 Entered Employment (overall and within industry)	5 Entered Employment (overall and within industry)	4 Entered Employment (overall and within industry)	
		6 Entered Employment (overall and within industry)	5 Employment Retention (overall and within industry)	6 Employment Retention (overall and within industry)	5 Employment Retention (overall and within industry)	
		7 Employment Retention (overall and within industry)	6 Avg. Earnings of Completers (overall and within industry)	7 Avg. Earnings (overall and within industry)	6 Avg. Earnings (overall and within industry)	
		8 Avg. Earnings (overall and within industry)				
Economy / Innovation						3 Bioscience Industry Employment
						4 Total Payroll in the Bioscience Industry
						5 New Firm Creation / Destruction in the Bioscience Industry
						6 Bioscience Academic R&D



Agenda for Today



III. Use of a Dashboard



SAMPLE REPORT: Metrics Dashboard



Excite Young People about the Bio-Sciences	Lay Smooth Career and Educational Pathway	Transform Graduate Education	Increase Bio-Science Workforce Development	Enhance Linkages between Education and Industry	Facilitate Globally Competitive Bio-Business
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Capability Building	On Target	Minor Issue	On Target	On Target	Minor Issue	On Target
Education / Training	Minor Issue	On Target	Minor Issue	On Target	Major Issue	
Employment		On Target	Minor Issue	In Progress	In Progress	
Economy / Innovation						In Progress

●	On target
●	Minor issue
●	Major issue
○	In progress



Use of a Dashboard



1. Gives you the ability to measure your region's progress on implementation of your strategy visually
2. Highlights problem areas quickly for resolution
3. Allows your steering team to focus the dialogue on what's important and make mid-course corrections
4. Creates line of sight vision from local to regional performance
5. Is a great communications tool for the region



Operational Definition Playbook Template



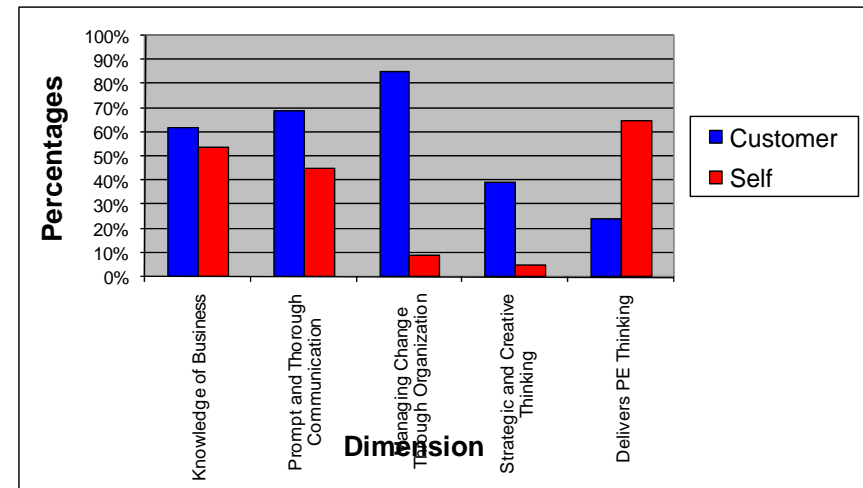
- **Measure Owner:** Who will report on this metric
- **Data Owner:** Who will collect and summarize the data
- **Definition:** in words

- **Formula:** How is this derived?

- **Benchmark/ Goal** What is the target? If you have benchmarks from comparable regions include them here.

- **Data Source:** Where the data comes from
- **Update Frequency:** Monthly, quarterly, annual
- **X-Axis:** label for display graphic if applicable
- **Y1-Axis:** label for display graphic if applicable
- **Red/Yellow/Green:** Determine what level is considered Green (acceptable – target hit), Yellow (caution – “close but no cigar”), and Red (unacceptable – missed the target)

- **Include the display graphic here**





IV. Open Discussion – Topics of Interest