



*CCSSO/CELT Decision Support
Architecture Consortium (DSAC II)*



DSAC II Process Guide

*(DSAC II Interview, Proven Practices
Library, Balanced Scorecard)*

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*Prepared by CELT Corporation for submission under contract with the
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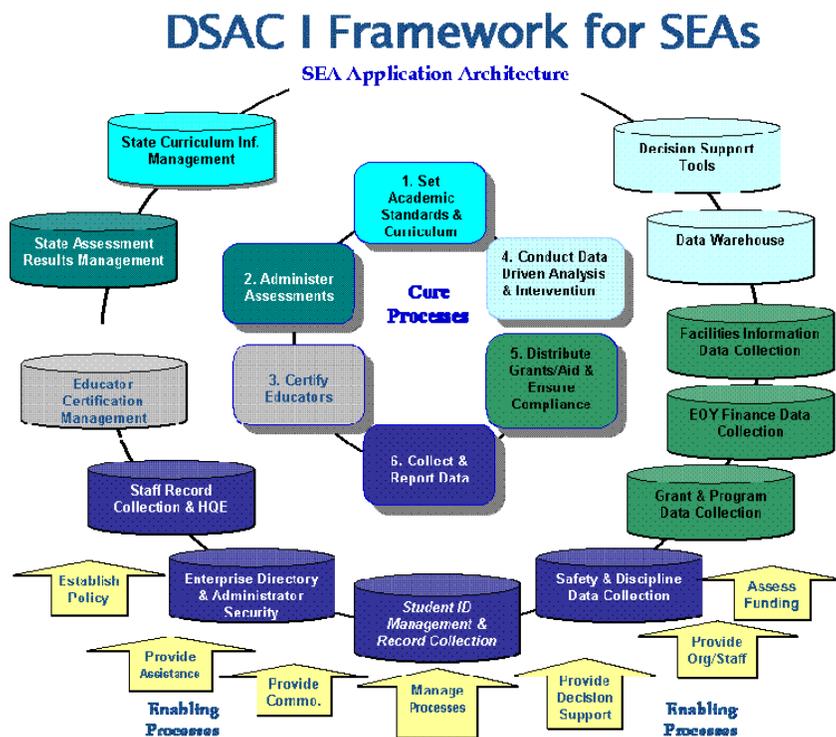
1.0 Introduction

1.1 Background

In 2004, the Council of Chief State School Officers (CCSSO), with funding from The Broad Foundation and the Bill & Melinda Gates Foundation, initiated a program called the Decision Support Architecture Consortium (DSAC). The purpose of the original DSAC effort was to assess the degree to which the state education agencies (SEAs) had the proper processes and information systems in place to positively affect student achievement. The primary goals of the DSAC project were to:

- Develop a decision support system architecture with related functional requirements and specifications that could be readily adapted and implemented by both SEA's and local education agencies (LEA's)
- Assess and assist SEA's and LEA's in exchanging, customizing, retrofitting, and implementing critical components of the decision support system architecture
- Integrate the DSAC initiatives, outcomes, and architecture with other states, districts and federal data collection efforts

An architecture model was developed as shown below:



Teams of DSAC consultants visited 24 SEAs and prepared a detailed report of findings, recommendations, and projects for each state. These reports were helpful to the states in determining key projects and initiatives that they should pursue in order to improve their focus on student achievement. Some of these reports were written into state legislation and/or included as major components of the SEA's strategic plan.

1.2 Introduction to DSAC II

Several states expressed an interest to the CCSSO in a similar process to DSAC for districts. This follow-on effort has become known as DSAC II. As with the earlier effort, it focuses on the processes and tools that affect student achievement, with a focus on the district level. More importantly, DSAC II is focused on helping districts achieve systemic, sustained improvement of student achievement. There are three overarching beliefs (see figure in section 1.2.3) employed by DSAC II to help bring this about:

1. Business methodologies, long proven to bring about systemic and sustained improvement in the private sector, are very applicable and can and should be properly applied to school systems.
2. Education best practices should be publicly available, continuously updated and validated, used by all education agencies for strategic planning and for establishing key strategies.
3. Technology can and should be employed to support improvements in K-12 education.

Following is an explanation of each of these beliefs and strategies in turn.

1.2.1 Business Methodologies

There are a number of business methodologies and tools that have been used successfully by the private sector to help bring about and sustain, positive change, results, and continuous improvement. These include the disciplines of process management, balanced scorecard processes, and the use of measures (also called key performance indicators). These disciplines (or their component parts) have formed the underpinnings of a number of management practices over the past 30 years, to include Total Quality Management (TQM), Baldrige, and Six Sigma.

Process management involves the recognition that the work that is accomplished within an organization can almost always be described in terms of a process. A process is defined as a structured method focused on obtaining desired results. It is any activity or group of activities that takes an input, adds value to it through a series of pre-defined steps or activities, and provides an output to an internal or external customer. Following is an example of two processes and the accompanying sub-processes commonly found in K-12 school districts:

- Process:** 01.1 Establish Curriculum
- 01.1.1 Adopt/approve challenging content standards for all grades, subjects, students, and schools
 - 01.1.2 Adopt/approve challenging student learning goals/achievement standards
 - 01.1.3 Align curriculum both vertically and horizontally (i.e., collaboration among and between buildings and grade levels)
 - 01.1.4 Develop a course scope, schedule, and sequence
 - 01.1.5 Select instructional resources and model programs for all content areas
 - 01.1.6 Deliver programs for students with disabilities (SWD)
 - 01.1.7 Deliver programs for gifted and talented students (GT)
 - 01.1.8 Deliver English language learners (ELL) programs
 - 01.1.9 Deliver career and technical education programs (CTE)
 - 01.1.10 Provide alternative education services

- Process:** 01.2 Deliver instruction
- 01.2.1 Provide sufficient resources to faculty and students to meet standards
 - 01.2.2 Offer a sufficient range of instructional techniques to meet individual strengths and needs of students

The discipline of process management involves the following:

- Identifying the major processes and sub-processes of the organization – called a process map (a K-12 district process map forms the basis for the DSAC II assessment tool and is discussed in the next major section).
- Assigning an owner, or steward, for each process.
- Defining the process in terms of inputs, outputs, and key steps within a process (this is the role of the process owner – see Appendix D for a template for defining a process).
- Identifying measures that inform the process owner as to how well the process is performing and to help shape the ongoing and continuous improvement of the process (this is the role of the process owner).
- Training all employees who are involved in or who perform the process, using the process definition (this is the role of the process owner).
- Continuously improving the process.

Regarding Balanced Scorecards - every organization, whether in the public or private sector, small or large, should have a clearly articulated mission (the purpose for existing as an organization) and a vision (where an organization wants to be in the future, that is better than today). Many organizations do very good strategic thinking relative to mission and vision. Unfortunately for many of these organizations, there is a lack of ability to transform the vision for improvement into actionable strategies and ongoing performance measures that are tracked and monitored. The Balanced Scorecard (BSC) Process is a management process that clarifies the strategies necessary to achieve the vision, mission and goals of an organization.

The BSC process defines the top-level strategies that the organization will pursue along with the key performance indicators (or measures) that are to be monitored to ensure the strategies are effective. The process typically “balances” the strategies and measures across four perspectives to ensure sustainable improvement: Financial, Customer, HR Learning & Growth and Internal Process.

The key belief in this regard is not so much in any given management process itself (such as the Balanced Scorecard) but in the fact that it is important for an organization to be clear where it is going (vision and mission), how it will get there (key strategies - or best practices) and how it will measure progress along the way (measures and targets). The Balanced Scorecard is just one such management process that accomplishes this.

The steps in the BSC process include:

- Step 1:** The process begins with a self assessment. For K-12 organizations, it is helpful to assess against a set of known best practices and benchmarks.
- Step 2:** Objectives are brainstormed and narrowed to address most significant plans or desired results.
- Step 3:** Strategies are identified to accomplish the objectives. It is helpful to use a set of known best practices to establish the adopted set of strategies.
- Step 4:** Measures and targets are developed for each objective.
- Step 5:** Projects that will achieve the measures are developed.
- Step 6:** The BSC is cascaded down to the department, unit, or individual level.

1.2.2 Education Best Practices

Our second key area of belief that has shaped DSAC II is in the area of best, or proven, practices for education. While in the private sector, competition sometimes makes it difficult to identify a full set of best practices within a given category of business, this is not a necessary inhibitor in the public sector – particularly in education. It is the belief of DSAC II that education best practices should be:

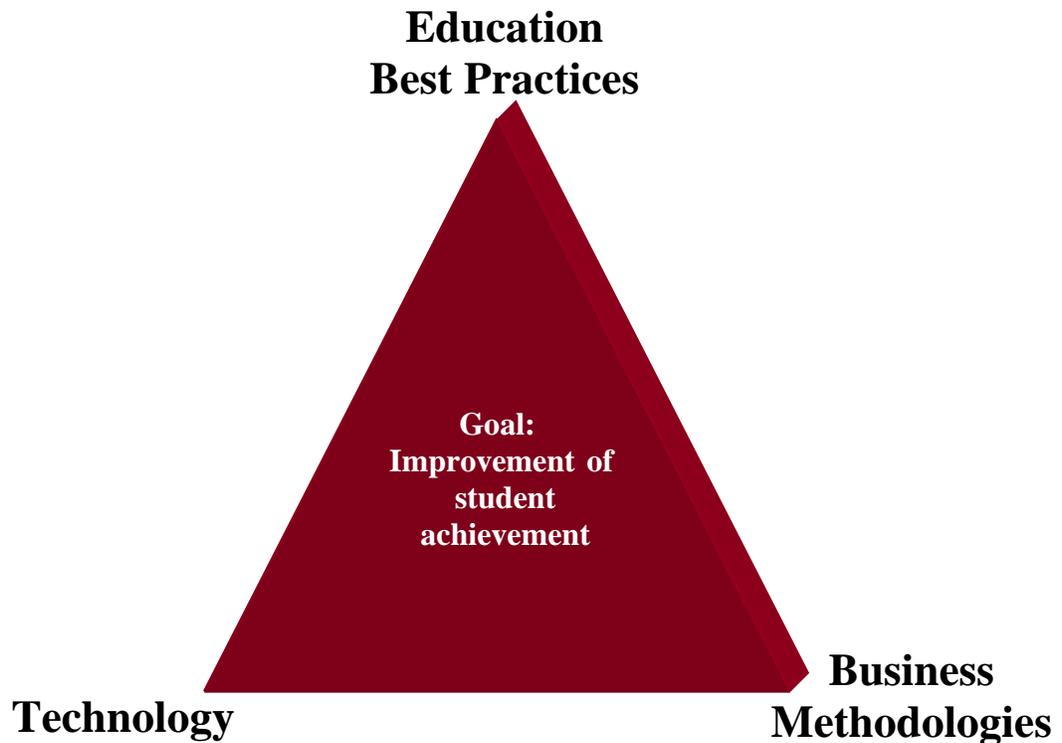
- Documented and shared in a publicly available library.
- Vetted on a national scale through a well-defined and rigorous process involving nationally recognized content-area experts and/or institutions.
- Supported with research and evidence.
- Continuously updated.
- Used for assessing the organizational effectiveness of a school or district.
- Used to identify effective strategies in the planning and/or Balanced Scorecard process.
- Organized by process and sub-process.

1.2.3 Technology

While technology plays an important supporting role in improving student achievement, technology in-and-of itself cannot transform education.

Technology plays an important role in DSAC II by:

- Providing support applications to each of the processes in K-12 education. In this regard, technology can make the processes much more effective and efficient.
- Providing information from operational data stores, data warehouses, and business intelligence tools to support the use of measures and a Balanced Scorecard.
- Providing a means to store, vet, communicate, and share best practices from an online library or data base.



1.3 DSAC II Integrated Tools

The philosophies discussed earlier have been woven into a framework and set of tools for DSAC II that includes five integrated systems as shown in below:

Online Tools to Support DSAC II Five Integrated Systems

Needs Assessment	Strategic Focus and Measurement		Results
Interview Tool	State Interview Template Tool	Proven Practices and Measures National Library	Balanced Scorecard Process Tool
		Proven Practices and Measures Vetting Process Tool	

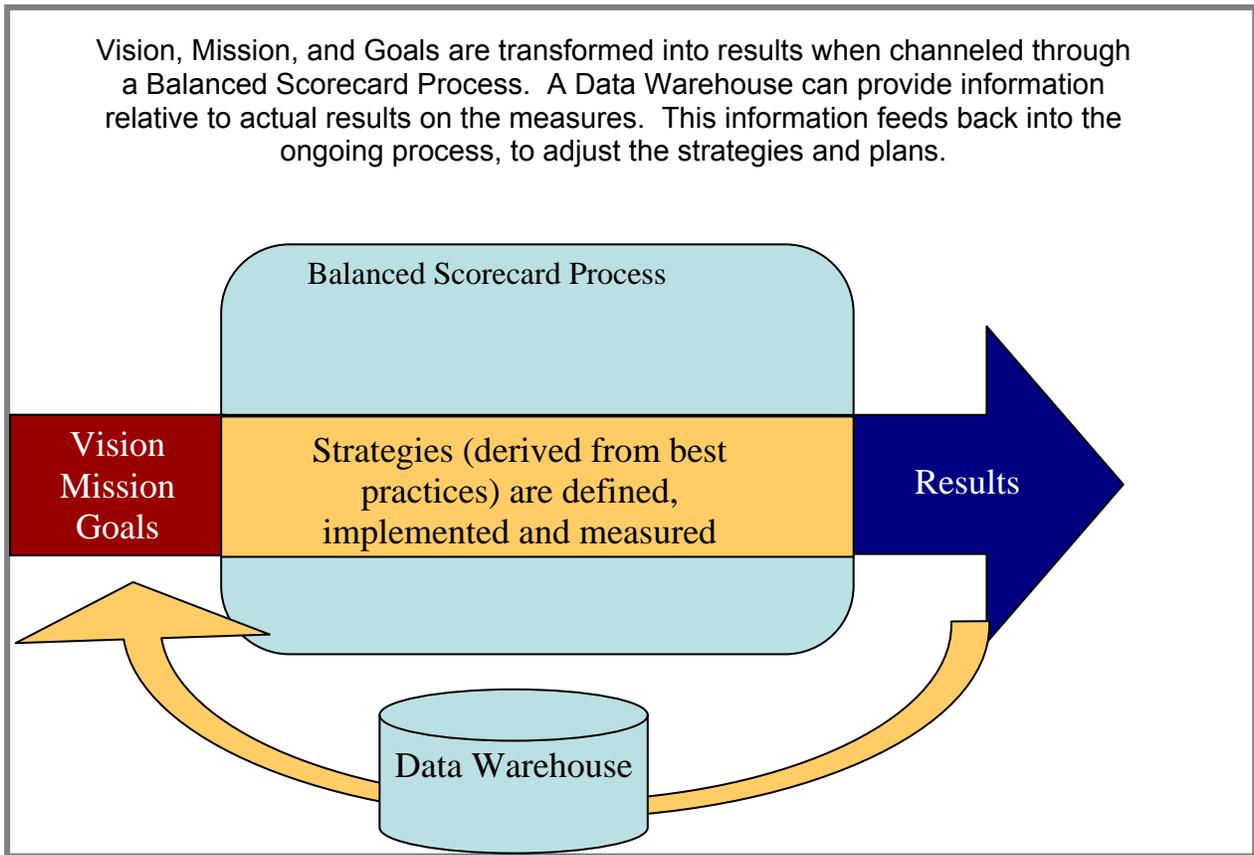
- A DSAC II Interview Tool that can be used by districts to:
 - Assess the degree to which a district has assigned accountability for, and defined, its most important processes.
 - Assess itself against the best practices used by its peers in each process and sub-process.
 - Identify areas of improvement and ideas for future strategies.
 - Assess the completeness of the technology to support the processes of the district.

- A State Interview Template Tool that can be used by the state to:
 - Develop a yearly state template of processes, best practices, and technology functional requirements against which each district can assess itself
 - Query the interviews conducted by the districts in the state to determine if any new practices or evidence have been entered
 - Provide a mechanism for nominating best practices for the national proven practices library

- A Proven Practices Library that can be used to:
 - Store a complete set of best practices, organized by process and sub-process.
 - Provide meta-data about the best practices that address the level of adoption and validation of the practice.
 - Provide a resource from which State Education Agencies (SEAs) or districts can select a subset of processes and best practices that they wish to adopt.

- A Proven Practices Vetting Process and Tool that can be used to:
 - Support a national vetting process for the best practices.

- A Balanced Scorecard Tool (see figure below) that can be used to:
 - Select a set of proven practices to adopt as strategies for meeting the organization's vision, mission, and goals.
 - Select a set of key performance indicators to monitor the effectiveness of the strategies.
 - Publish the Balanced Scorecard to the web.



The following sections describe each of these tools and how they can/should be used.

2.0 DSAC II Interview Tool

Since it is cost-prohibitive to send teams of experts into every school district to do a custom report (as was done with the original DSAC) the overall intent for DSAC II is to provide an online evaluation tool that districts can use for self-evaluation, or that states can use to aid and guide their own teams dispatched to districts to conduct the evaluation.

As with the first DSAC, an overall framework is required, around which the evaluation process can be designed. The DSAC II framework is built around three major components: processes and sub-processes, best practices, and information systems (technology). The DSAC II architectural framework is developed around twelve key categories of processes that together cover the work that a district performs:

1. Curriculum Development and Learning Management (CD/LM)
2. Transportation
3. Parent and Community Involvement
4. Safe, Secure, and Engaging Environment
5. Data Management
6. Food Services
7. Purchasing and Warehousing
8. Information Technology
9. Financial Applications
10. Human Resources
11. Facilities
12. Leadership and Governance

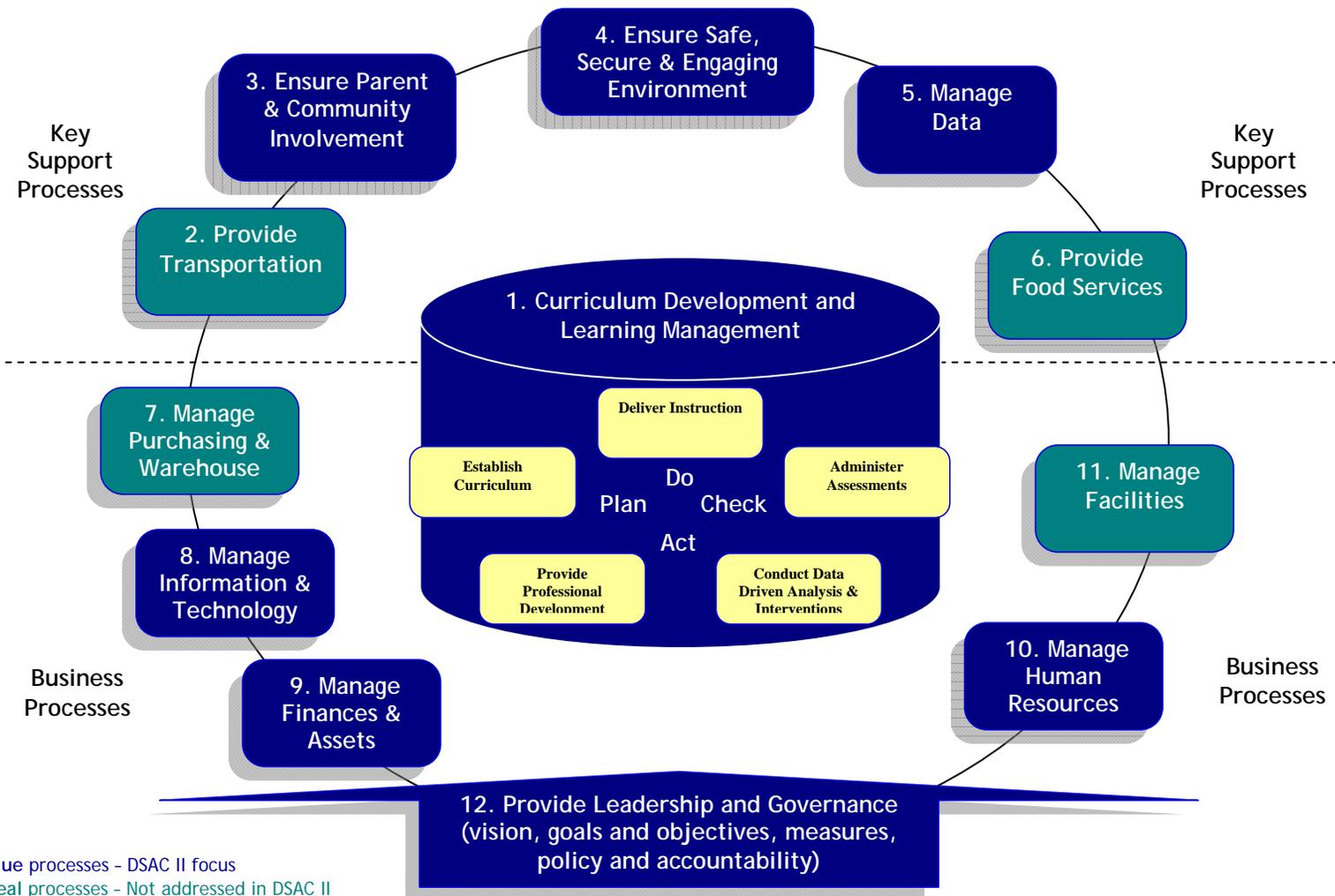
The figure on the following page is a high-level diagram depicting the twelve categories.



CCSSO/CELT Decision Support Architecture Consortium II (DSAC II)

Using Data to Improve Student Achievement





As can be seen in the previous figure, the focus of DSAC II is on the functional processes and information systems that most affect student achievement. To this end, the DSAC II efforts will only deal with eight of the twelve categories:

1. Curriculum Development and Learning Management
2. Parent and Community Involvement
3. Safe, Secure, and Engaging Environment
4. Data Management
5. Information Technology
6. Financial Applications
7. Human Resources
8. Leadership and Governance

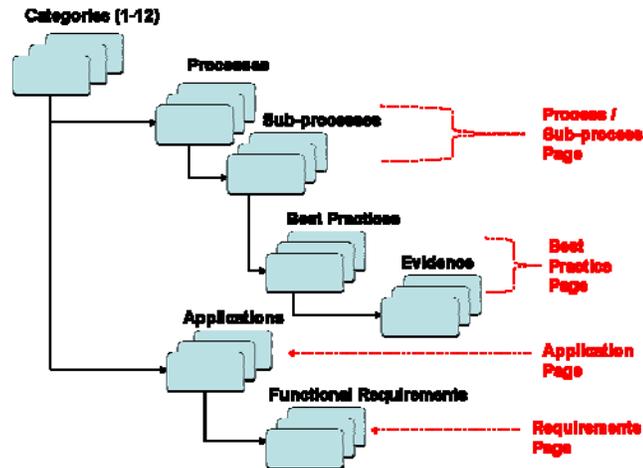
To focus on the remaining areas, while indirectly affecting student achievement, would deal more with addressing organizational efficiency and effectiveness, and is beyond the scope of this effort. This may be a potential focus for a future related effort.

2.1 Framework Views

The framework uses two key views to both convey the desired future state of these areas and to assess a district's current state. The first is a process oriented view – breaking each of the eight categories into the processes and sub-processes that constitute the work that should be done in this area. This view allows for the discussion of best practices within the processes.

The second view is a technology oriented view – showing the types of technology applications that can be used to support each process. This view allows for the discussion of the types of functionality that should be available within these tools to support the best practices within the related process.

Shown below is the structure of the DSAC II Framework elements:



2.1.1 Process View

The framework begins by providing a table of processes and sub-processes for each of the eight categories. The table allows the district to assess for each process and sub-processes:

- Whether there is a clear process owner for the district
- Whether the process is clearly defined and trained upon
- Whether the process uses best practices
- Whether there is evidence that the best practices are being used or are in place

Shown below is an example of how the first category of processes and sub-processes can be viewed.

01 Curriculum Development and Learning Management - Processes				
Process Name	Process Owner Defined	Process Defined	Uses Best Practices	Evidence of Best Practice
01.1 Establish Curriculum				
01.1.1 Adoption/Approval of Challenging Content Standards for all Grades, Subjects, Students and Schools	- ▾	- ▾	- ▾ ...	- ▾
01.1.2 Adoption/Approval of Challenging Student Learning Goals/Achievement Standards	- ▾	- ▾	- ▾ ...	- ▾
01.1.3 Vertical and Horizontal Alignment of Curriculum (i.e., Collaboration Among and Between Buildings and Grade Levels)	- ▾	- ▾	- ▾ ...	N ▾
01.1.4 Develop a Course Scope, Schedule and Sequence	- ▾	- ▾	- ▾ ...	- ▾
01.1.5 Select Instructional Resources and Model Programs for all Content Areas	- ▾	- ▾	- ▾ ...	- ▾
01.1.6 Deliver Programs for Students with Disabilities (SWD)	- ▾	- ▾	- ▾ ...	- ▾
01.1.7 Deliver Programs for Gifted and Talented Students (GT)	- ▾	- ▾	- ▾ ...	- ▾

Each sub-process can be rated using the following rubrics for each of the four columns:

Process Owner Defined

Y =	Yes
N =	No
U =	Unknown

Processes Defined – Rubric

4 =	Process is clearly defined and trained upon and is done the same way by most people
3 =	Process is defined and generally done the same by most people, though formal training may not be provided
2 =	Process is poorly defined
1 =	Process is not defined
N/A	Not applicable

Uses Best Practices – Rubric

4 =	Best Practices are clearly defined and trained upon and used by most people
3 =	Best Practices are <u>defined</u> and generally <u>used</u> by most people, though formal training may not be provided
2 =	Best Practices are <u>poorly defined</u>
1 =	Best Practices are <u>not defined</u>
N/A	Not applicable

Provides Evidence – Rubric

Y =	Evidence exists to support the fact that Best Practices are used
N =	No evidence exists to support the fact that Best Practices are used

Best Practices

While rating the Process Owner and Process Defined components for each sub-process is appropriate at this level, the DSAC II framework contains a library of best practices and sample evidence for the best practice for each sub-process. This level of detail is accessed by clicking the Best Practice window icon for each sub-process as shown below.

Process Name	Process Owner Defined	Process Defined	Uses Best Practices	Evidence of Best Practice
01.1 Establish Curriculum				
01.1.1 Adoption/Approval of Challenging Content Standards for all Grades, Subjects, Students and Schools	- ▾	- ▾	- ▾ 	- ▾
01.1.2 Adoption/Approval of Challenging Student Learning Goals/Achievement Standards	- ▾	- ▾	- ▾ 	- ▾
01.1.3 Vertical and Horizontal Alignment of Curriculum (i.e., Collaboration Among and Between Buildings and Grade Levels)	- ▾	- ▾	- ▾ 	N ▾

Clicking on the Best Practice window above will open the Best Practices window where a rating can be given to each best practice and evidence that supports the use of that best practice can be checked. Shown below is a sample of a Best Practices page.

01 Curriculum Development and Learning Management		
01.1 Establish Curriculum		
01.1.1 Adoption/Approval of Challenging Content Standards for all Grades, Subjects, Students and Schools		
Best Practice	Rating	Evidence (Check all that Apply)
Includes a written plan outlining content standards for all grades, subjects, students, and schools	- ▾	Written curriculum and curriculum maps based on state standards, current research and best practices with input from key stakeholders <input type="checkbox"/>
		Curriculum documents that display a continuum of skills that spiral from one content area or grade level to the next <input type="checkbox"/>
		Curriculum documents that convey that essential content has been identified to eliminate gaps and redundancy <input type="checkbox"/>
		Curriculum documents contain current research and best practices regarding instructional strategies <input type="checkbox"/>
		Curriculum documents detail involvement of key stakeholders <input type="checkbox"/>
		Other <input type="checkbox"/>

The rubric for the Best Practice is the same as it was on the Sub-process page, but singular in nature. The rubrics associated with this page are as follows:

Best Practice Rating – Rubric

4 =	Best Practice is clearly defined, trained upon, and used by most people
3 =	Best Practice is defined and generally used by most people
2 =	Best Practice is poorly defined
1 =	Best Practice is not defined
N/A	Not applicable

Evidence of Best Practice

√	Evidence exists to support the fact that the best practice is used
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Each sub-process may have a number of best practices associated with it. The ratings for the best practices are averaged for an overall rating for the sub-process. If any evidence is checked for a best practice, the rating for the sub-process will be a “Y”.

2.1.2 Technical View

The second view is a technology oriented view – showing the types of information systems that can/should be used to support each of the categories of processes. This view allows discussion on the types of functional requirements that should be available within these tools to support the best practices within the related process as well as a review of the technical health (relative to the current state of the art of similar systems, total cost of ownership, and return on investment).

Shown below is an example of a list of technology applications that could support the district processes in the area of Data Management:

05 Data Management - Technology				
Technology Product	Functional Health			Technical Health
	Schools	Central Office	Functional Requirements	Technology Staff
Student Information System*	- ▾	- ▾	...	- ▾
Decision Support System/Data Warehouse *	- ▾	- ▾	...	- ▾
Data dictionary	- ▾	- ▾	...	- ▾
Business Intelligence (BI) and Reporting Tools*	- ▾	- ▾	...	- ▾
Special Education/IEP System	- ▾	- ▾	...	- ▾
Transportation System	- ▾	- ▾	...	- ▾
Finance System	- ▾	- ▾	...	- ▾
HR System	- ▾	- ▾	...	- ▾
Parent Communication System	- ▾	- ▾	...	- ▾
Library/Media System	- ▾	- ▾	...	- ▾

For each technology application, a rating can be given for the functional health of the application, either from the viewpoint of a person representing a school or central office. (This information is collected in order to identify any discrepancies in perceptions from the two viewpoints.)

The technical health of each application can also be rated by the technology staff.

Listed below are the rubrics used to measure each of these components:

Functional Health – Rubric

4 =	Product exceeds the expectations of the customer in this area
3 =	Product meets the needs of the customer in this area
2 =	Product meets some of the needs of the customer in this area
1 =	Product does not meet the needs of the customer in this area
N/A	Not applicable (district does not have this application)

Technical Health – Rubric

4 =	The software vendor is the industry leader for this type of application. For internally developed applications, three-tiered support is available.
3 =	Database structure is relational with supporting data query tools. The software is web-enabled with data stored in one place. For internally developed applications, there is a well-trained support staff available.
2 =	Vendor support is available but maintenance fees have not been paid. Software runs over the network. Software is supported by a commercially available database.
1 =	Software does not have any vendor support. Software is not supported by a commercially available database. Software relies on utilities or subsystems that are no longer supported.
N/A	Not applicable (district does not have this application)

Functional Requirements

For many of the Technology Applications (those listed with an asterisk) there is a minimal set of functional requirements that can be used to further gauge the functional health of the application.

This information is accessed by clicking on the Functional Requirements window icon as shown below:

Technology Product	Functional Health			Technical Health
	Schools	Central Office	Functional Requirements	Technology Staff
Student Information System*	- [v]	- [v]	... [v]	- [v]
Decision Support System/Data Warehouse *	- [v]	- [v]	... [v]	- [v]
Data dictionary	- [v]	- [v]	... [v]	- [v]
Business Intelligence (BI) and Reporting Tools*	- [v]	- [v]	... [v]	- [v]
Special Education/IEP System	- [v]	- [v]	... [v]	- [v]
Transportation System	- [v]	- [v]	... [v]	- [v]

Listed below is a sample of functional requirements that can be rated either from the school or central office perspective.

05 Data Management		
Application: Student Information System*		
Functional Requirement	Schools	Central Office
General Requirements		
System is a fully functional browser-based product	- [v]	- [v]
Provide real time full integration of information between schools and district ALL data available real-time throughout system	- [v]	- [v]
District wide unique student identifiers generated by the software	- [v]	- [v]
System wide course numbers and titles	- [v]	- [v]
Seamless student data transfer between sites and district	- [v]	- [v]
Ability to generate Alert messages viewable on screens and/or sent to staff by email also	- [v]	- [v]
Prevent entry of invalid information through extensive validations and error checking	- [v]	- [v]
Provide for electronic signatures and integrate with LDAP (Active Directory)	- [v]	- [v]
Maintain archives of student information for students who are inactive	- [v]	- [v]
Accommodate field for unique teacher identification number	- [v]	- [v]

The functional requirement ratings do not modify the “Functional Health” rating for the application, but serve only as additional information.

Functional Health – Rubric

4 =	Product exceeds the expectations of the customer in this area
3 =	Product meets the needs of the customer in this area
2 =	Product meets some of the needs of the customer in this area
1 =	Product does not meet the needs of the customer in this area
N/A	Not applicable (district does not have this application)

2.2 Conducting Interviews

The DSAC II Interview Tool can be used in a variety of ways and feedback from several states and districts proves that this is indeed the case. Interviews can be conducted with individuals or with groups of individuals or a combination of methods.

2.2.1 Group Interviews

When conducting the interviews with groups of individuals, consensus of the group is obtained as rating values for the items are determined. This group type of interview fosters enormous discussion and idea exchange. In this format, many times, such comments as: *“I didn’t know that”* or, *“Is that how it is done at your school?”* are heard. In at least one state, this type of process is a requirement in their mandated strategic planning process. It provides key district and school leaders with a common understanding of the district’s operations.

During the development of the DSAC II Interview Tool, this type of interview process was envisioned. Listed below is a suggestion of the different roles of individuals that might be grouped together for the various interview sessions:

Interview Planning Sheet	
Group	Process Category
Group 1: Superintendent, together with the sponsor/coordinator for DSAC II	<ul style="list-style-type: none"> • Leadership and Governance • Data Management • Curriculum Development and Learning Management (CD/LM)
Group 2: Associate Superintendent for Instruction and Student Services; Asst Supt. for C&I; Dir. of Special Education; Dir. Of Work Force Development; Media Services Director; High School C&I; Middle School C&I; Elementary School C&I	<ul style="list-style-type: none"> • Curriculum Development and Learning Management (CD/LM) • Human Resources
Group 3: Associate Superintendent for Business and Management Services; HR Director; Finance Director	<ul style="list-style-type: none"> • Human Resources • Leadership and Governance • Data Management
Group 4: Planning Director; Public Relations Director; Security Director	<ul style="list-style-type: none"> • Parent & Community Involvement • Safe, Secure & Engaging Environment
Group 5: Associate Superintendent for Accountability	<ul style="list-style-type: none"> • Curriculum Development and Learning Management (CD/LM) • Data Management
Group 6: Instructional Technology Director	<ul style="list-style-type: none"> • Information Technology • Data Management • Curriculum Development and Learning Management (CD/LM)
Group 7: Regional Superintendents: Elementary School Principals; Middle School Principals; High School Principals	<ul style="list-style-type: none"> • Curriculum Development and Learning Management (CD/LM) • Parent & Community Involvement • Safe, Secure & Engaging Environment • Human Resources • Leadership and Governance
Group 8: Technology Team Leaders	<ul style="list-style-type: none"> • Information Technology • Data Management • Leadership and Governance

A variation to this list is to convene a group interview for each of the 8 categories with ALL appropriate people in the interview.

2.2.2 Individual Interviews

An alternate way to conduct the interview process is to either interview individuals separately or allow them to self-interview. The self interview can be conducted by allowing the individuals to enter their responses on paper and provide to the interviewer for data input. While this type of interview allows the capture of individual differences and perceptions, the drawback is no discussion regarding the framework items is conducted. Different interpretations of interview items may lead to skewed results when the interview data is combined.

2.2.3 Combination Interviews

Finally, any combination of interview types may be conducted. For example, one district executive wanted to conduct separate group interviews in each of his schools in order to capture each school's perception of the district's processes in a particular category. He also wanted to aggregate some of the schools' data in order to gauge responses from the Elementary, Middle, and High School levels.

These interviews could also be compared against responses by particular individuals within the organization.

As can be seen, any combination of interview processes, interview types, and interview categories can be supported by the DSAC II Interview Tool. All interview data is collected in a relational database for reporting and analysis.

2.3 Reports

Phase 1 of the DSAC II Interview Tool provides the following three types of reports:

Interview Report – This report lists responses for any categories rated in a single interview. Detail of responses is provided for all processes, sub-processes, best practices, evidence, technology application, and functional requirements for the categories that are addressed in the interview.

District Detail Report – This report is similar to the Interview report above but combines all of the interviews conducted in the district into one report.

District Summary Report – This report is a high-level report combining all interviews conducted by the district but summarizing the detail to the sub-process and technical application level.

2.3.1 Interview Report

The interview report will provide details on the responses for any categories included in this interview. Only those categories that have at least one response in this interview will appear. A sample is shown below:

Category 01 Curriculum Development and Learning Management							
Process Health							
Process Sub-Process Best Practice Evidence	Process Owner	Process Defined	Best Practice Used	Evidence of Best Practice	Best Practice Rating	Evidence Used	
1.0 Establish Curriculum	Y	3	3	Y			
1.1 Adoption/Approval of Challenging Content Standards for all Grades, Subjects, Students and Schools	Y	3	3	Y			
Includes a written plan outlining content standards for all grades, subjects, students, and schools					4	Y	
Written curriculum and curriculum maps based on state standards, current research and best practices with input from key stakeholders						Y	
Curriculum documents that display a continuum of skills that spiral from one content area or grade level to the next						N	
Curriculum documents that convey that essential content has been identified to eliminate gaps and redundancy						N	
Curriculum documents contain current research and best practices regarding instructional strategies						N	
Curriculum documents detail involvement of key stakeholders						Y	
Other						N	
Implement career-based learning experiences at the elementary, middle and high school levels that are integrated into the curriculum extending the classroom into the community					3	Y	
Technical Health							
Technology Product	Functional Health			Technical Health	Functional Requirement	Rating	
	Schools	Central Office	Difference			School	Central Office
Curriculum Development System*	3			4			
					The system has an integrated curriculum mapping system that includes the following components:		
					a) Year long maps for each specific course	3	
					b) Course overview/map information	3	
					c) Modifiable unit plans with the ability to add new plans	4	
					d) Modifiable lesson plans with ability to add new plans	4	
					e) Mapping correlates to state standards	1	
					The system can print all of the components listed above either in bulk or individually	N/A	

2.3.2 District Detail Report

The district detail report is similar to the individual interview report but combines data from all interviews conducted for this district regardless of the interviewer. All interviews included in this report will be listed at the top of the report as shown below:

District Detail Report - Test District 2

Interviews Included:
8/9/2007 - (Sample Interview) Interview by dgiader 

Category 01 Curriculum Development and Learning Management

Process Health

Process Sub-Process Best Practice Evidence	Process Owner	Process Defined	Best Practice Used	Evidence of Best Practice	Best Practice Rating	Evidence Used
1.0 Establish Curriculum	Y	3	3	Y		
1.1 Adoption/Approval of Challenging Content Standards for all Grades, Subjects, Students and Schools	Y	3	3	Y		
Includes a written plan outlining content standards for all grades, subjects, students, and schools					4	Y
Written curriculum and curriculum maps based on state standards, current research and best practices with input from key stakeholders						Y
Curriculum documents that display a continuum of skills that spiral from one content area or grade level to the next						N

2.3.3 District Summary Report

The district summary report combines data from all interviews and consolidates the output to the process, sub-process, and technical application levels. Shown below is an example of a district summary report:

Category 04 Safe, Secure & Engaging Environment				
Process Health				
Process Sub-Process	Process Owner	Process Defined	Best Practice Used	Evidence of Best Practice
1.0 Prevention	Y	2.8	2.6	Y
1.1 Plan for a Safe and Secure Environment	Y	4	2	Y
1.2 Establish Safe School Procedures and Monitoring	Y	3	4	Y
1.3 Manage Extracurricular/Co-Curricular Activities	Y	2	2	Y
1.4 Address Diversity Issues	Y	1	1	Y
1.5 Manage Dropout Prevention Programs	Y	4	4	Y
1.6 Provide School Law Enforcement		N/A	N/A	
2.0 Preparation	U	3.5	3.5	N
2.1 Plan for Crisis Management	U	3	3	N
2.2 Practice School Safety Plans		4	4	Y
2.3 Coordination with All Local Emergency Services		N/A	N/A	
3.0 Response	Y	3	3	
3.1 Utilize Unified Command Structure (NIMS)	Y	3	3	

Technical Health				
Technology Product	Functional Health			Technical Health
	Schools	Central Office	Difference	
Security systems*	4	2	2	1
Student/Staff access cards*	4	3	1	2
Student Discipline System (as part of district SIS system)	N/A	3	3	3

2.3.3.1 Process Owner

If any of the interviews answered U, then the value is U (stops here).

If any of the interviews answered N, then the value is N (stops here).

If any of the interviews answered Y, then the value is Y (stops here).

2.3.3.2 Process Defined

Gives the average (excluding interviews that leave it blank).

2.3.3.3 Best Practice Used

Gives the average (excluding interviews that leave it blank).

2.3.3.4 Evidence of Best Practice

If any of the evidence are marked as N, then the value is N (stops here).

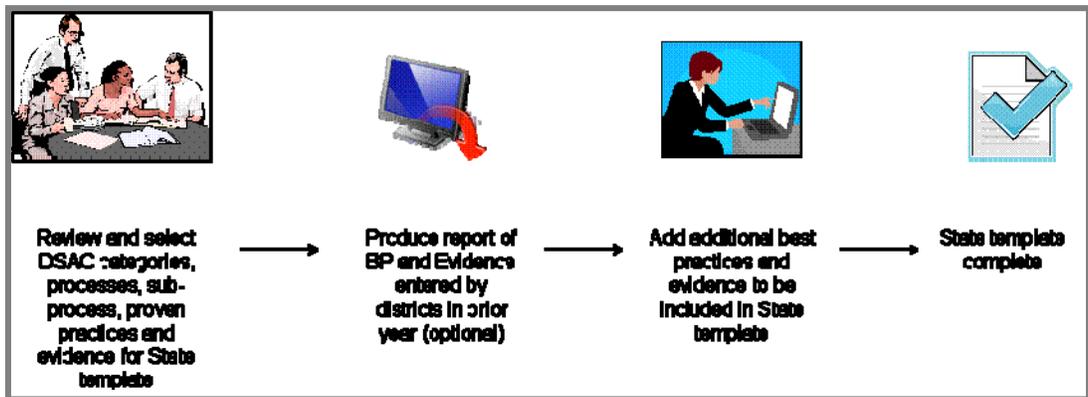
If any of the evidence are marked as Y, then the value is Y (stops here).

Otherwise, this is left blank.

3.0 The State DSAC II Interview Template

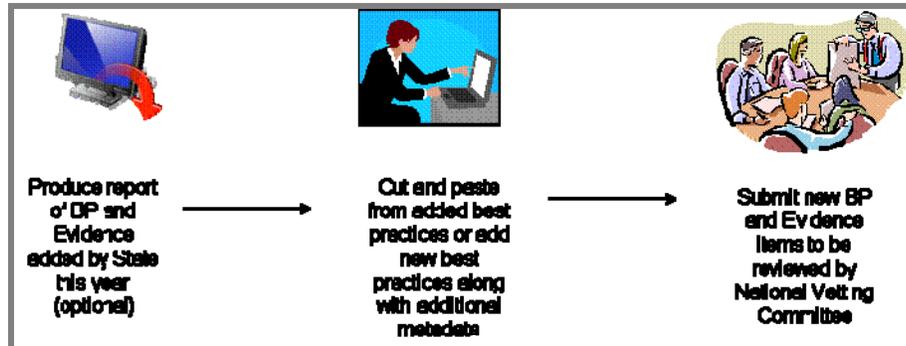
3.1 Creating a State DSAC II Template

The DSAC II Interview Tool provides the ability for each state to create a yearly template to be used for interviews by all districts in the state. The State Template Administrator role allows designated state personnel to review and select any of the categories, processes, sub-processes, best practices, evidence, technology applications, and functional requirements the state wants to include on the state interview template. The state administrator will have the ability to run a report which lists all the best practices and evidence entered by districts in the state in their previous interviews. That information is then available to the state administrator as additional best practices, evidence, or technology application functional requirements can be entered exclusively for the state template.



3.2 Best Practices Nomination

Any best practice and corresponding set of evidence added by the State Template Administrator can be submitted to the National Vetting Committee for inclusion into the Proven Practices Library. Additional metadata regarding the best practice will be collected prior to allowing the best practice to be nominated.



4.0 Proven Practices Library

4.1 Overview

The Proven Practices Library (PPL) is designed to be repository of proven, best practices and key performance indicators that can be used by SEAs and LEAs for the purpose of assessing district and school performance and subsequent strategic planning around district and school improvement.

4.1.1 Steering Committee

A steering committee oversees the process for review and approval of the best practices. The steering committee includes representatives from the following organizations:

- Council of Chief State School Officers (CCSSO)
- TBD
- TBD
- TBD
- TBD
- TBD

4.1.2 Sponsors

A set of sponsors has been established who's responsibility is to maintain the quality of the library component(s) that they sponsor. Sponsors include:

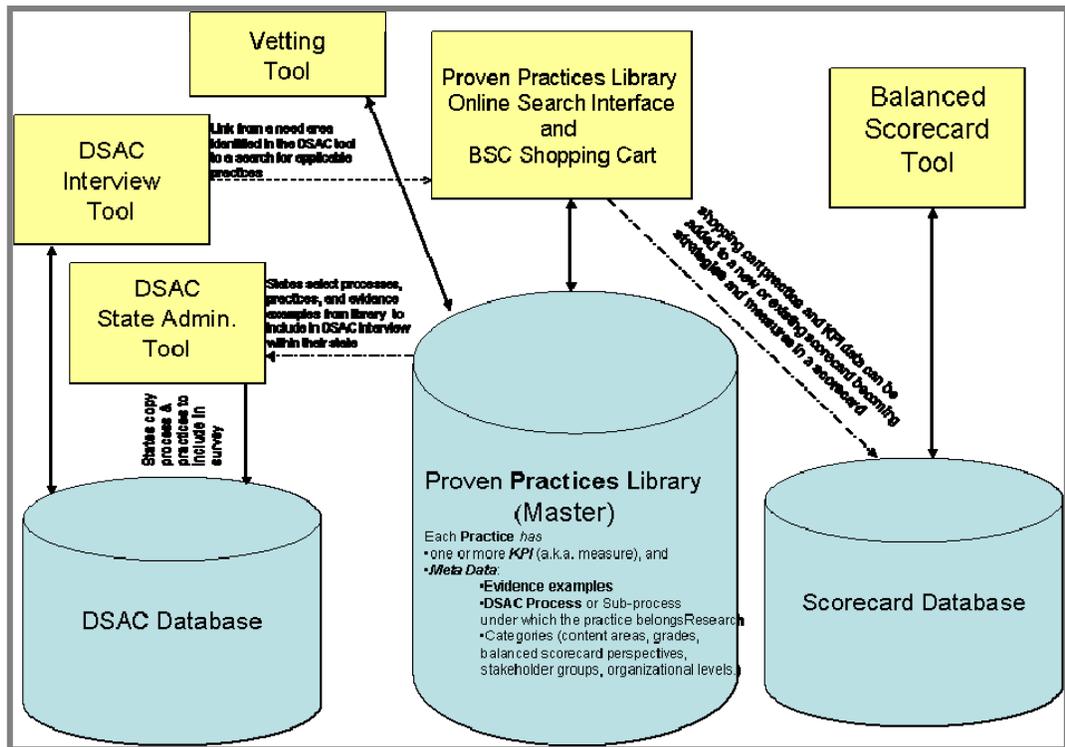
- CCSSO partners
- TBD
- TBD
- TBD
- TBD
- TBD

4.1.3 Partners

An established set of partners provide nationally recognized individuals or experts to assist with the vetting process. Partners may include SEAs, LEAs, non-profits, and universities.

Connecting several components together, the Proven Practices Library serves as the basis for both the components for use in the DSAC II Interview Template for each state, but also as a resource for developing strategies for the Balanced Scorecard process.

Shown below is a conceptual model of how the Proven Practices Library serves as a basis for both the DSAC II interview process and the Balanced Scorecard process.



4.2 The National Vetting Process

The Decision Support Architecture Consortium (DSAC II)'s Proven Practices Library tool provides a process for submitting, reviewing, and hosting of a public domain set of education proven practices and accompanying performance indicators based upon the DSAC II framework. Through the interaction of the steering committee, the sponsors, and partners, the process for vetting the best practices includes:

- Assigning a lead person to each of the eight DSAC II categories from the sponsoring organizations
- Designating a DSAC II team member to each of the eight categories to facilitate the process
- Creating criteria for designation of a proven practice to be approved by the steering committee
- Creating a process for reviewing each submitted best practice against the criteria
- Updating of the Proven Practices Library with new, vetted practices along with metadata about each practice.

The vetting process allows Best Practices to be designated to a particular category based on the set of criteria. Possible categories for best practices include:

- Level 0** – Suggested practice – This would be the default for all best practices entered by an individual district, SEA, or DSAC II team member
- Level 1** – Recommended practice – A panel of no less than 3 nationally recognized practitioners, as approved by the steering committee, agree to recommend this practice
- Level 2** – Proven practice – The practice is a recommended practice and research is available to support it. The research must:
 - be scientifically based according to USDOE criteria.
 - support specific leading and lagging indicators.
 - support the context of the claim.

Level 3 – Best practice – The practice must:

- be either a recommended or proven practice.
- have at least 70% of the district in the DSAC II database claim to use the practice.
- have data from district scorecards showing a correlation between use of the best practice and improved results on lagging indicators.
- employ the Balanced Scorecard Process.

5.0 The Balanced Scorecard Process

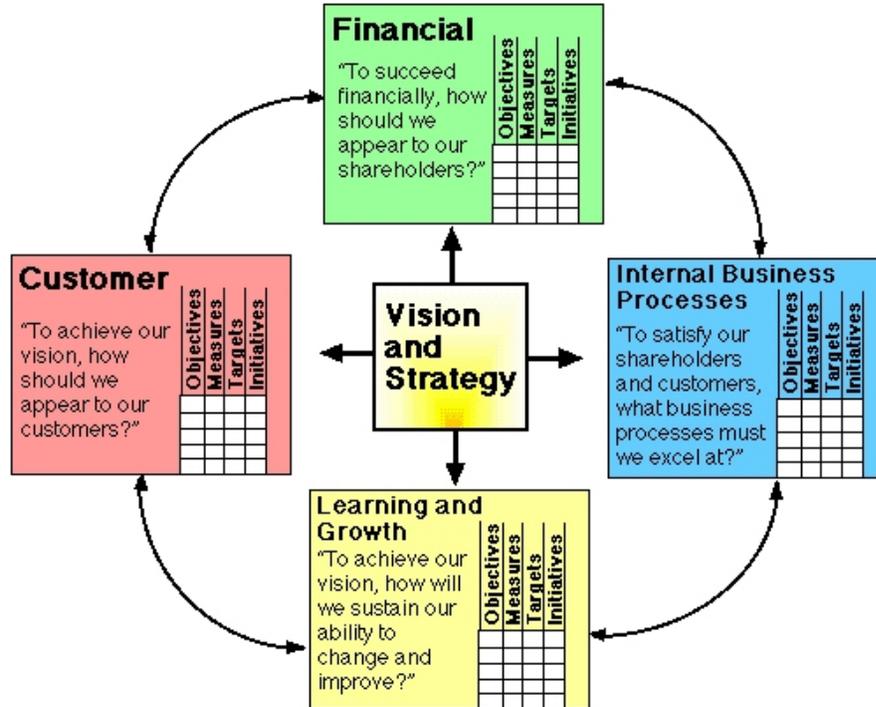
5.1 Introduction

The Balanced Scorecard is an approach to strategic management developed in the early 1990's by Drs. Robert Kaplan of the Harvard Business School and David Norton. The technique involves defining key strategies for achieving an organization's vision and key performance measures to manage and improve execution on that vision. The Project Management and Oversight Process is a technique for managing ongoing large projects. By combining the two, organizations can turn their vision, mission, and goals into a set of performance measures that provides the framework for implementing its strategy.

"Recognizing some of the weaknesses and vagueness of previous management approaches, the balanced scorecard approach provides a **clear prescription** as to what companies should measure in order to "balance" the financial perspective. The balanced scorecard is a **management system** (not only a measurement system) that enables organizations to clarify their vision and strategy and translate them into action. It provides feedback around both the internal business processes and external outcomes in order to continuously improve strategic performance and results. When fully deployed, the balanced scorecard transforms strategic planning from an academic exercise into the nerve center of an enterprise."¹

¹ The Balanced Scorecard Institute Website

The Scorecard is a balance across four perspectives as shown below:



For use in education, the four perspectives might be renamed as follows:

1. **Financial** – District/School Budget
2. **Employees** – Administrators, Teachers and Staff
3. **Learning & Growth** – Curriculum/Instruction and supporting processes
4. **Customers** – Students/Parents

5.1.1 Value to an Organization

- Defines the strategies needed to achieve the organization's vision, as well as the measures for determining whether the strategies are effective.
- Ensures strategies are properly balanced between the critical perspectives necessary to ensure long-term, sustainable results.
- Identifies the current performance against the measures (baseline data) and the target performance desired at predetermined points.
- Identifies the specific projects needed to accomplish strategic objectives.

5.2 Development of Organizational Mission and Vision

The Balanced Scorecard process all begins with the organization's Mission and Vision.

A **mission** is a concise statement that describes the reason the department, program or unit exists, what services it offers, and to whom. A sample mission statement may be as follows:

"Provide high quality educational opportunities that will inspire all students to acquire and use the knowledge and skills needed to succeed in a culturally diverse and technologically sophisticated world."

A **vision** is a statement of where and what the organization wants to be in the future. This statement captures a picture of the future along select dimensions. Departmental statements should be aligned with district vision. A sample vision statement may be as follows:

"Every student will graduate with the knowledge and the skills to be successful in post-secondary education/or the workforce."

The Balanced Scorecard process uses the Vision, Mission, and Goals of the organization as the foundation for a set of management systems that work together to create a cohesive whole as illustrated below:



5.3 Defining Goals

Following the development or review of the organization’s vision and mission, a set of goals are agreed upon that will move the organization towards its vision. A **goal** is a broad statement that describes a desired outcome for a department, program, or unit. The goal or desired outcome establishes the department’s long-term priorities and influences the development of short-term objectives.

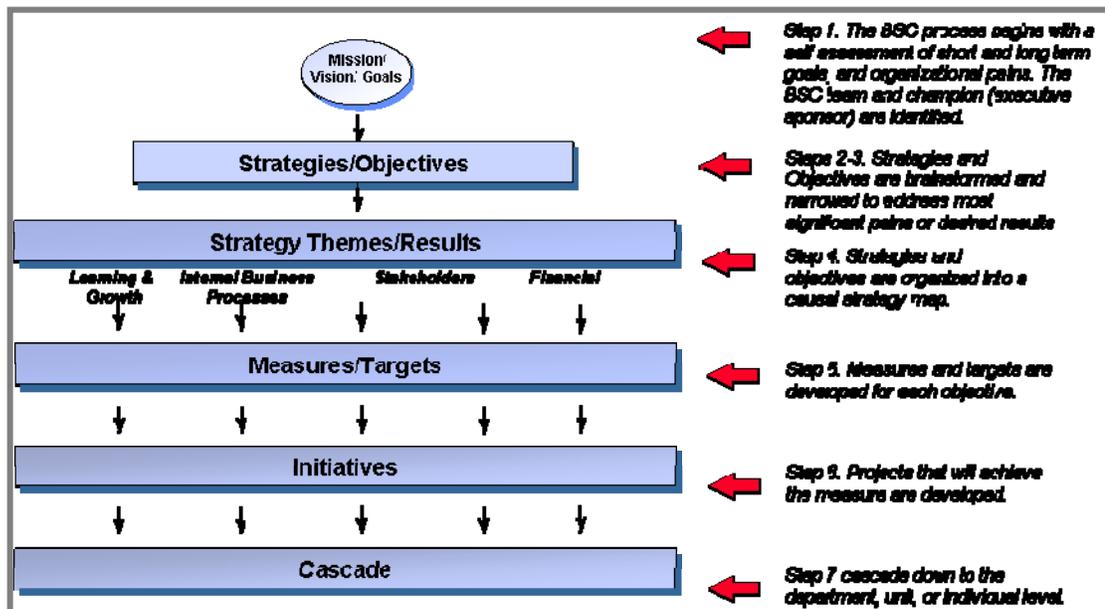
A possible example of a school district goal may be to:

“Increase student achievement”

5.4 Developing Strategies and Strategic Objectives

Once the vision, mission, and goals of the organization are agreed upon, the Balanced Scorecard process is a six-step approach designed to develop initiatives that address organizational pains and are aligned with objectives, strategies, measures, and desired results.

This six-step approach is shown below:



A **strategic objective** is a measurable statement that defines an end result that is expected to be accomplished in a given period of time.

A strategic objective of the above goal might be:

“Increase each middle school student’s literacy scores.”

Strategies explain how we intend to reach the strategic objectives. A **strategy** is a statement of action that describes the means to be used to achieve the goals and objectives.

Strategy Themes may be created under which strategies may be grouped or clustered.

Sample strategies for reaching the literacy goal and objective above may be:

- Use formative assessments to assess progress
- Increase the individualized instructional time provided to students with scores in the bottom quartile

These strategies could be grouped under a Strategy Theme of *“Improve Literacy”*.

5.5 Defining Measures, Key Performance Indicators, Setting Baselines and Targets

5.5.1 Measures

There is an old adage that states, "We can only manage what we can measure."

In order to monitor progress towards the strategic objective, it is necessary to define how we will measure that progress. A **measure** is a quantifiable representation of activities performed by a department, program or unit in pursuit of an objective. Typical measurement categories include outcomes, outputs, efficiency, and productivity.

Sample measures for the above strategy might include:

- Formative assessment results on reading
- Reading scores by sub-strand by ethnic group
- Minutes of individualized remediation per bottom quartile student

A **key performance indicator** (KPI) quantifies the measure, such as:

- % of students who can draw conclusions, make inferences, and deduce meaning from texts
- % of students who can interpret information in new contexts
- % of students who can identify the main idea of a text and author's point of view and purpose
- % of students who can analyze the style or structure of a text

5.5.2 Baselines

Once the measures and KPI's are determined, it is important to understand the current status of each measure, a baseline. The **baseline** is the current level of standing for the measure to be used. Sample baselines might include:

- 65% of fourth graders are reading on grade level
- 10 minutes of individualized instruction is available for each fourth grader
- One (1) reading assessment is given per year

5.5.3 Targets

The next task is to decide on how much increase to the baseline is desired. A **target** is the desired level of performance of a performance measure at specified period of time. Sample targets for the above baselines might be:

- 90% of fourth graders are reading on grade level
- 30 minutes of individualized instruction is available for each fourth grader
- Four (4) reading assessments are given per year

5.6 Defining Projects or Initiatives and Developing Charters

Once the organization's strategies are defined with targets set, projects or initiatives are defined to achieve the stated measures. Several management tools are available to organize and manage the progress of these projects, spanning from simple spreadsheets to powerful tracking tools such as Microsoft Project. No one method is the best fit for all organizations.

One tool that can be used for a successful design, launch, monitoring, and completion of a project is a Project Charter. A Project Charter outlines the major deliverables, timeframes, and estimated costs for each project. Project sponsor, project directors, and others are identified to assign responsibility for a successful completion. Risks and assumptions are identified beforehand in order for all to be realistic in anticipating results.

A sample Project Charter is shown below:

5.6.1 Introduction

(A brief description of the need and rationale to be inserted here.)

Project Organization

Role	Description	Assignment
Executive Sponsor	Has ultimate authority over and is responsible for a project and/or a program, its scope & deliverables.	
Project Sponsor	Assists in developing the project charter and project plans, executes project reviews, & disposes of issues and change requests.	
Project Manager	Develops and maintains project charter and project schedules, executes project reviews, tracks & disposes of issues & change requests, manages the budget, and is responsible for overall quality of the deliverables.	
Project Team	Is responsible for performing the activities necessary for implementation of the project.	
Key Customer(s)	Provides expert business understanding of the organization, and represents area for which the project is intended to support/serve.	

Value Statements

Improvement Area	Major	Minor	None	Value Statement (in support of the improvement)
1. Meet Strategic Objective(s)				
2. Increase Student Achievement				
3. Increase Efficiency				
4. Increase Productivity				
5. Improve Responsiveness				
6. Improve Customer Service/Value				
7. Decrease Cost				
8. Reduce Risk				
9. Improve Quality				

Project Risk

Risk Management Matrix (Updates continue throughout life of project.)

Potential Risk	Description of Risk	Resolution
Technology		
Financial		
Security		
Political		
Staffing		
Regulatory		
Skills		
Operational Readiness		
Other (explain)		

Project Assumptions/Dependencies

(Any assumptions and dependencies that could significantly affect the project depending on their outcomes, are documented here.)

Assumption	Description

Project Scope and Schedule

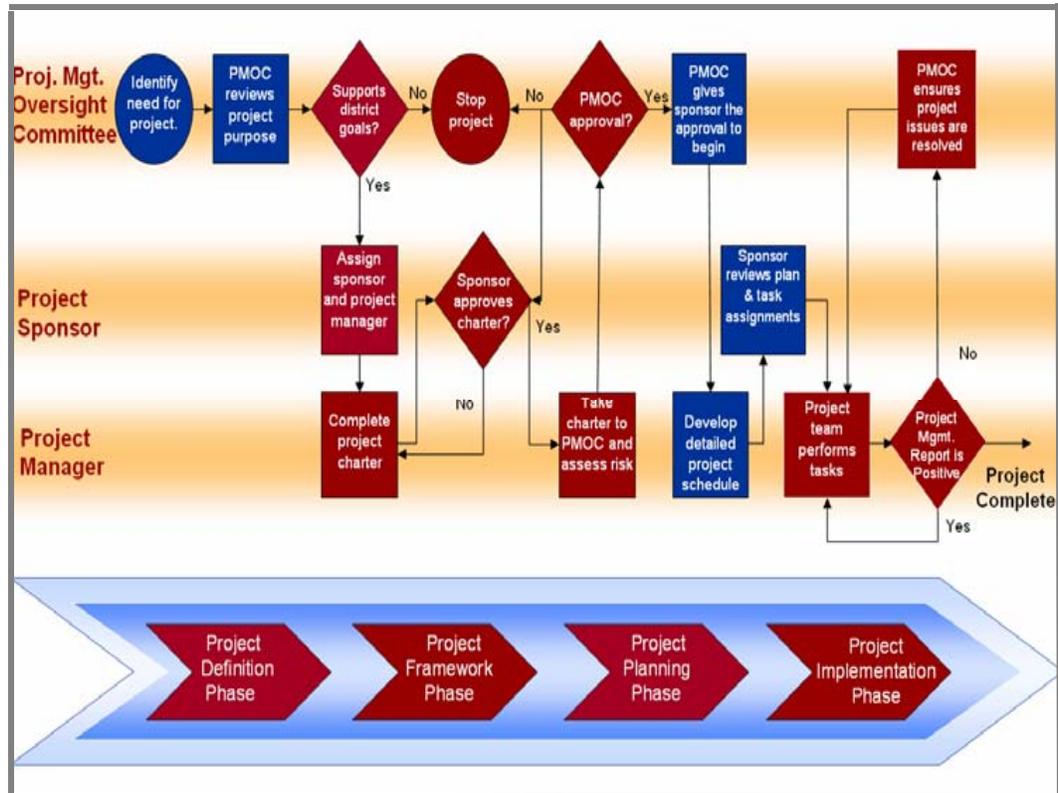
Deliverables	Start	Finish
1.	xx/xx/xx	xx/xx/xx
2.	xx/xx/xx	xx/xx/xx
3.	xx/xx/xx	xx/xx/xx
4.	xx/xx/xx	xx/xx/xx
5.	xx/xx/xx	xx/xx/xx
6.	xx/xx/xx	xx/xx/xx

Project Budget Summary

BUDGET	
Deliverable	Amount
1.	\$
2.	\$
3.	\$
4.	\$
5.	\$
6.	\$
Total	\$ xx,xxx

5.7 Monitoring Progress – Project Management and Oversight (PMOC)

The Project Management and Oversight process provides proven management tools to ensure that projects are formally and structurally launched with clarity of purpose, scope, expectations, and responsibility for ownership.



The Project Management and Oversight process also provides a forum, format and tools for tracking these projects to a successful completion.

6.0 Appendices

6.1 Appendix A: Definitions

Balanced Scorecard	A management process that clarifies the strategies necessary to achieve the vision, mission and top goals of an organization. The process defines the top-level strategies that the organization will pursue along with the key performance indicators (or measures) that are to be monitored to ensure the strategies are effective. The process typically “balances” the strategies and measures across four perspectives: Financial, Customer, HR Learning & Growth and Internal Process.
Goal	A broad statement that describes a desired outcome for a department, program, or unit. The desired outcome establishes the department’s long-term priorities and influences the development of short-term objectives
Measures (or Performance Indicators)	Quantifiable representations of activities performed by a department, program, or unit in pursuit of an objective. Typical measurement categories include outcomes, outputs, efficiency, and productivity
Leading Indicator	A key performance indicator that is a predictor of the ultimate outcome of a final desired result. For example, formative assessments are a leading indicator for summative assessments.
Lagging Indicator	A key performance indicator that defines final desired or end result.
Mission	A concise statement that describes the reason the department, program, or unit exists, what services it offers, and to whom.
Objective	A measurable statement that defines an end result that is expected to be accomplished in a given period of time. Objectives further define the goals.
Performance Indicators) or Measures)	Quantifiable representations of activities performed by a department, program or unit in pursuit of an objective. Typical measurement categories include outcomes, outputs, efficiency, and productivity
Process	A structured method focused on obtaining desired results. It is any activity or group of activities that takes an input, adds value to it, and provides an output to an internal or external customer. For example, developing a budget for the district is a process, as is developing curriculum.

Process Owner	The individual within the organization who is responsible for designing the process steps, training district personnel on the process, monitoring Evidence of Best Practices for the process to ensure it is running well, and continuously improving the process. For example, the budget director is the process owner of the budget process. The curriculum director is responsible for the curriculum development process.
Project	Initiatives with clearly defined scope and discernable beginning and end to help implement a new/revised process or tool.
Strategy	A statement of action that describes the means to be used to achieve the goals and objectives.
Target	The desired level of performance of a performance measure at specified period of time.
Vision	A statement of where and what the organization wants to be in the future. This statement captures a picture of the future along select dimensions.

6.2 Appendix B: Acronyms for DSAC II Framework

Acronym	Extension
ADS	Analytical Data Store
ANOVA	Analysis of Variance
AP	Advanced Placement
ATM	Automated Teller Machine
BI	Business Intelligence
CD	Compact Disc
CWMI	Common Warehouse Metadata Interface
CPU	Credit Point Units
CTE	Career and Technical Education
DMWG	Data Management Working Group
DSOP	District Standard Operating Procedures
DSS	Decision Support System
EDW	Educational Data Warehouse
ELL	English Language Learners
ETL	Extract, Transform, and Load (data)
FERPA	Family Educational Rights and Privacy Act (Buckley Amendment)
FLSA	Fair Labor Standards Act
FTE	Full Time Equivalent
GED	General Equivalency Diploma
GIS	Geographic Information Systems
GPA	Grade Point Average
GT	Gifted and Talented
GUI	Graphical User Interface
HIPAA	Health Insurance Portability and Accountability Act
HQT	Highly Qualified Teachers
HR	Human Resources
ID	Identification
ISTE	International Standards of Technology in Education
IT	Information Technology

Acronym	Extension
KPI	Key Performance Indicators
LDAP	Lightweight Directory Access Protocol
LEA	Local Education Agency (is)
LSC	Local School Council
NIMS	National Incident Management Structure
NSSE	National Study of School Evaluation
OABD	Off-Axis back screen/mirror visual display system
ODS	Operational Data Store
OJI	On the Job Injury
OLAP	Online Analytical Processing
PAC	Parent Advisory Council
PDA	Personal Digital Assistant
PIO	Public Information Office
PLC	Professional Learning Community(is)
PMO	Project Management Office
PO	Purchase Order (s)
PTA-PTO	Parent Teacher Association – Parent Teacher Organization
RSS	Rich Site Summary or Really Simple Syndication
SAAD	Students Against Drunk Driving
SARB	School Attendance Review Board
SEA	State Educational Agency
SIF	School Interoperability Framework
SIP	School Improvement Plan
SIS	Student Information System
SOA	Services Oriented Architecture
SOP	Standard Operating Procedure
SRO	School Resource Officer
SWD	Students with Disabilities
U.N.	United Nations
VRU	Voice Recognition Unit
W ³	World Wide Web

6.3 Appendix C: List of User Manuals

The following separate manuals are available for use based on authorization:

- DSAC II Interview User Manual
- DSAC II System Administrator Manual
- State Template Administrator Manual
- Proven Practices Library Administrator Manual
- Proven Practices Vetting Process Manual
- Balanced Scorecard User Manual

Activity Description Table

ACTIVITY #:		ACTIVITY TITLE:	
ROLE TITLE:			
INPUT			
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ACTIVITY DESCRIPTION			
<ul style="list-style-type: none"> • • • • 			
OUTPUT			
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SKILL SETS NEEDED			
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ASSUMPTIONS			
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RULES			
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