PRIORITIZED PROJECT LISTS

After considering the inputs from the appropriate leadership and constituent groups, the Chief Technology Officer submitted his recommendations to the Chancellor's Staff, who made the final adjustment of priorities and finalized the rank order of project list. The finalized project list is presented in two parts (*Other Projects* and *Infrastructure Projects*), in Tables XX, XX, and XX.

LEGEND

Table 1: Project Size Codes for the Project List

Project Size Code	Project Size is:	if the Number of Skill Types needed is:	or the Duration lasts:	or the Implementation Cost is:
S	Small	> 1 <= 5	> 1 month & <= 2 months	> $10K <= $50K
M	Medium	> 5 <= 10	> 2 months & <= 4 months	> $50K & <= $200K
L	Large	>10	> 4 months	> $200K

Table 2: Criticality Rating Codes for the Project List (ETS Perception)

Criticality Rating Code	System Importance
C	Mission Critical
I	Important
N	Nice to have

OTHER PROJECTS

The projects in Table XX below are rank ordered according to their importance in descending order (as well as grouped by their criticality rating).

Table 3: Prioritized Project List for "Other" Category

Criticality	Project Size	Project Name	Goal	Impact - Outcomes	Project Director	Funding Source
C	S	SLO Database	Develop a data collection system for SLO development & implementation	Supports accreditation process	CHIEN	Colleges
C	S	Middlefield Internet Connection	Replace the AT&T leased line with a CENIC WAN link (FH)	Provide faster Internet speeds at Middlefield campus and for redundancy to main campuses	SHARON	Measure C College TBD
C	?	CashNet	Install CashNet system with Banner	Provide automation for students wishing to use a payment plan for tuition / fees	CHIEN	Colleges
C	?	ParSystem - ScanTron	Install new ScanTron system (DA)		CHIEN / SHARON	De Anza
C	M	Asset Management	Implement asset management functionality in EIS and support	Provide the ability to track the location and status of specified assets	CHIEN	TBD
C	S	Automation for Meetings	Provide an electronic environment to conduct meetings and facilitate access to information (CS)	Immediate access to meeting materials anywhere, anytime Increased efficiency	SHARON	TBD

Criticality	Project Size	Project Name	Goal	Impact - Outcomes	Project Director	Funding Source
C	L	Unified Messaging	Implement a messaging system for email, calendaring, fax, voice, etc.	Increase functionality & reliability	SHARON	TBD
C	M	District Web CMS	Deploy a content management system for the district Website (CS)	User friendly environment to update content on website	CHIEN	TBD
C	L	Universal ID	Implement a student / staff ID system with financial transaction capability	Students / staff have ID Students make financial transactions for services	CHIEN	TBD
I	L	Banner Workflow	Implement workflow functionality in Banner to automate business processes	Increased efficiency and accuracy in business processes	CHIEN	TBD
I	S	L7 / A8 Gig Connection	Install a gigabit connection from L-7 to A-8 (DA)	Provide better video streaming support services	SHARON	TBD
I	M	Tutorial Tracking & Mgmt	Develop system to schedule, track and account for student tutorial hours (DA)	Increase efficiency in tracking and scheduling student tutors	CHIEN	Title III Grant
I	L	Mobile Devices	Support selected mobile devices	Mobile access to current information on PDAs, smart phones, etc.	SHARON	TBD
I	L	Virtual Desktop Interface	Deploy VDIs for selected labs and users	Lower cost of computer refresh Possible lower time to deploy images	SHARON	Measure C Carryover TBD
I	L	Curriculum Mgmt System Integration	Build a real time interface for curriculum management systems into EIS	Provide instantaneous data exchange between systems	CHIEN	TBD
I	M	Single Sign-on	Implement single sign-on to access network services	Simplified access to electronic services for Banner and related applications Improved security	CHIEN	TBD
N	M	Reports for Productivity	Develop reports to improve productivity of administrative processes	Higher quality – better outcomes in administrative processes	ANDREW	Carryover
N	M	Student Tracking Automation	Replace STS / Red Canyon system with a more functional system (FH)	Provide automated tracking of student attendance	CHIEN	TBD
N	S	GIS	Geographic Information System for the District (CS)	Save time for staff/Police	CHIEN	TBD
N	M	Doc Imaging Workflow	Implement automated workflow for document imaging	Provide automation for document imaging processes	CHIEN	TBD
N	M	Student Email	Provide a FHDA branded email account to each student	Students can acquire vendor discounts	CHIEN	TBD
N	M	LMS Integration	Build a real-time interface for Catalyst into EIS (DA)	Provide instantaneous data exchange between systems	CHIEN	TBD
N	S	Remote Access	Provide users with access to district network services from off-campus	Work from remote sites with access to information	SHARON	TBD

INFRASTRUCTURE PROJECTS

The projects in Table XX below are not rank ordered, but grouped by their *Criticality* ratings.

Table 4: Prioritized Project List for "Infrastructure" Category

Criticality	Project Size	Project Name	Goal	Impact - Outcomes	Project Director	Funding Source
C	L	Wireless Deployment	Deploy a wireless network at both colleges and district sites	Reliable wireless access to the Internet	SHARON	Measure C
C	L	Disaster Recovery	Provide a hot site disaster recovery capability for critical systems	Timely recoverability of email, calendaring, DNS & Web sites / applications	CHIEN	Carryover
C	M	DR Virtualization	Virtualize the Banner application	Improved disaster recovery capability	CHIEN	Measure C
C	L	Data Center / ETS Building	Construct new facilities for data center systems	Increased reliability & sustainability of operations Reduced support costs Consolidation of ETS functions	SHARON	Measures E & C
C	L	Network Rebuild	Deploy a fast, reliable network	Increased reliability & speed of network Preparation for successful VDI implementation	SHARON	Measure C
C	M	Oracle Upgrade	Upgrade Oracle to 11G from 10G version	10G vendor support going away	CHIEN	Staffing
C	S	Argos Migration	Migrate MAUI users to Argos environment	Reporting functionality for users of new Macs & PCs	CHIEN	B Budget
C	M	PCI Compliance	Survey systems and implement PCI security measures	PCI compliance systems across all campus credit card transaction processing operations	CHIEN	Business Office TBD
C	M	Perry Smith Audit *Red*	Ameliorate *red* security items	Acceptable response to Finance & Audit Committee Improved security	CHIEN	No funds required
C	M	SIG Audit *Red*	Ameliorate *red* security items	Acceptable response to Finance & Audit Committee Improved security	CHIEN	No funds required
C	L	End Point Data Encryption	Provide the technology & training to encrypt desktops and laptop user data	Increase the security of sensitive user personal data	SHARON	TBD
C	L	Academic History	Move pre-2000 academic history into accessible data store	Student services will have easy access into all electronic academic history	CHIEN	Measure C
C	L	Computer Replacement	Refresh computers on a 5 year cycle	Minimal acceptable functionality in lab and desktop computers	SHARON	Measure C
C	L	Multimedia New & Refresh	Refresh & install new multi-media classrooms	Up-to-date functionality for instructional delivery	SHARON	Measure C
C	L	Phone - PBX	Replace old phone system	Integration with unified messaging Support for emergency operations	SHARON	Measure C

Criticality	Project Size	Project Name	Goal	Impact - Outcomes	Project Director	Funding Source
C	S	Foothill/District Office Telephone Voice Mail System Upgrade	Upgrade FH/District VM System to match De Anza's to provide full interoperability	More reliable system with additional features which can be used with the planned new telephone system (current high risk for failure)	SHARON	Measure C
I	M	L7 Server Virtualization	Replace and consolidate servers in data center	Lower cost of support Increase reliability of systems	CHIEN	Measure C Carryover
I	M	Banner Batch Scheduling	Implement App Works in Banner	Assist in automating back-end data center operations	CHIEN	Measure C
I	M	Perry Smith Audit *Yellow*	Ameliorate *yellow* security items	Acceptable response to Finance & Audit Committee Improved security	CHIEN	No funds required
I	M	Prompt to Banner	Build a data exchange between Prompt & Banner	Reduced workload for Finance Office. Interest item from the Audit & Finance and the CBOC Committee	CHIEN	Measure C
I	M	SIG Audit *Yellow*	Ameliorate *yellow* security items	Acceptable response to Finance & Audit Committee Improved security	CHIEN	No funds required
I	M	User Data Storage	Provide centralized data storage / backup for user electronic data	Increased security of stored data	SHARON	TBD
I	M	ETS Web Redesign	Refresh look & feel and information on ETS Website	Self help information easily available to users	SHARON	TBD
I	M	Helpdesk Software	Replace Call Center software	Increase functionality and reporting capability of problem reporting system	SHARON	Carryover
I	M	Identity Management	Implement a common ID system to authenticate users for network based services	Lower cost of support Required improvement for single sign-on Required improvement of UID	CHIEN	Carryover
I	L	L7 Data Center Renovation	Renovate L7 facilities for data center systems	Increased reliability & sustainability of operations Reduced support costs of operations	CHIEN	Measure C

Recommended Modifications of Project Priorities

The following changes were to project priorities were proposed by groups as indicated:

Table 5: Recommended Changes to Project Priorities

Group / Project	Educational Technology Advisory Committee (ETAC)	Technology task Force - De Anza College	Technology task Force - Foothill College	Senior Staff
Wireless				nc C (Christina/Judy)
ParSystem - Scantron	More info needed	C (Letha)		C (Christina)
Cashnet	More info needed	C (Letha / Greg)		C (Letha)
SLO Database-TracDat	More info needed	C (Letha / Greg)		C (FH & DA)
Unified Messaging	nc C	nc C (Kevin)		nc C (Kurt)
Universal ID		↑ C (Letha / Greg)	↑ C (Pam)	↑ C (Letha)
Upgrade Middlefield Network Connection			↑ C	
User Data Storage		↑ C (faculty)		
Asset Management				↑ C (Kevin / Judy)
Banner Workflow	nc I			↑ C (Dorene)
Middlefield WAN (New)				C (Denise)
Curriculum Mgmt System Integration	nc C[1]			
Single Sign On	↓ I			↓ I (Christina /Judy)
Student Email		↓ N (Marty / students)		
L7 / L8 Gig Connection	N			I (Christina)
Ride Sharing Portal	N			
Student Tracking Automation			↓ X (Peter) nc I (Pat)[2]	
Foothill GIS			↓ N	↓ N (Judy)
KJ's Satellite Cafe				↓ X (Judy)
Video Production (FH)				↓ X (Judy)

Symbol	Rating
C	Critical
I	Important
N	Nice to have
X	Not needed
↑	**Increased in priority**
↓	**Decreased in priority**
nc	**No Change in priority**

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[1] Study possible move to CurricUNet?

[2] Global solution across both colleges is important

PROJECT PRIORITIZATION PROCESS REFINEMENT

THE ISSUE

Prior to this technology plan, the process that employees used to request system functionality improvements, new systems, and/or technology services was very decentralized and did not involve any preprocessing (e.g. filtering, prioritizing) of requests at the department or college level before they were submitted directly to ETS. These requests frequently asked for short project completion times regardless of whether or not the department had previously involved ETS in the process of choosing and purchasing the application. User expectations that all submitted projects could be completed by ETS within requested timeframes did not take into consideration either the current workload of ETS teams or the importance of some projects over others. Initiating new projects often caused a cycle of disruption and inefficiency as ETS developers / technicians were pulled off projects in midstream to begin work on other "higher priority" projects. The result has been excessively long project implementation times and much frustration on both sides.

THE SOLUTION

The size of the district, with two colleges and the Central Services departments, necessitates that the district adopt a formal technology project prioritization process that continuously sets and revises project priorities. This new process must be responsive to college and districts needs allowing for the inclusion of new projects as well as the elimination of existing projects (which may have fulfilled their objectives or no longer have a purpose). Accordingly, the following project prioritization process is proposed.
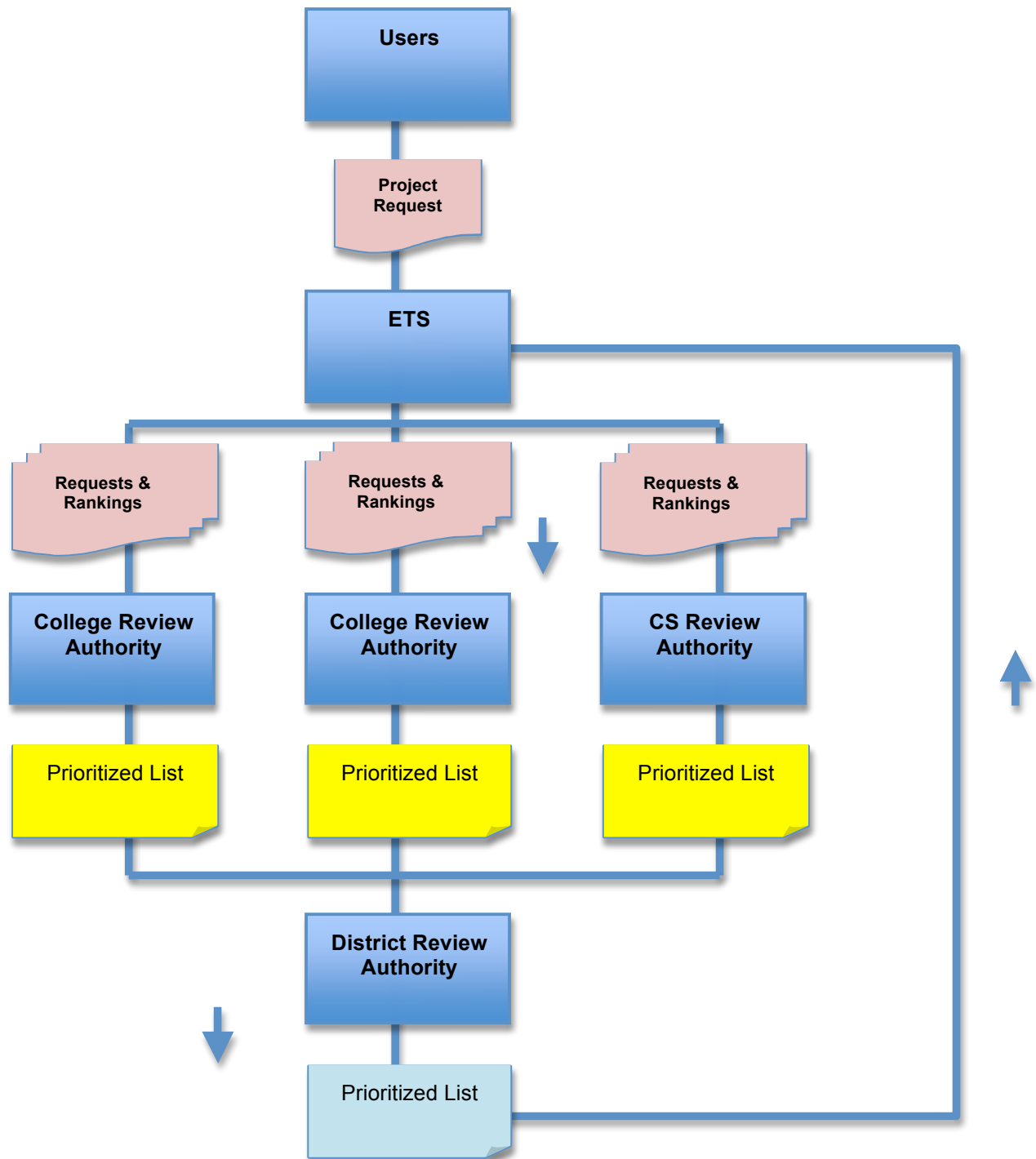
Process Steps

1. Users submit project requests to the appropriate technical organization (normally to ETS but could also be to the Technology Resources Group at De Anza College or Foothill College).

   o Technical teams are brought in early in the project definition process and work with users to define system requirements and develop potential solutions

   o Technical representatives work with users to estimate the scope, cost, and ranking[3] of projects

2. ETS will submit each project request to the appropriate college or Central Services *review authority* along with an interim ranking based on an analysis of project attributes

   o Each college and the Central Services organization will appoint a *review authority* to locally review and prioritize internally generated projects. The *review authority* is either a committee or a person who has the responsibility and authority to act as a central clearinghouse and decision maker for all projects requested by the organization.

   o Each *review authority* will create a prioritized list of projects based on the initial ranking by ETS as well as other relevant information

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[3] Refer to Appendix K for an example of a prioritization tool

3. After prioritizing, the colleges' / Central Services *review authorities* will submit their prioritized lists to the district *review authority*.
   - The district review authority shall be made of a senior staff member from each college and central services and the Chief Technology Officer.
   - The district *review authority* shall convene on a quarterly or other to-be-determined frequency to consolidate projects from all three lists into one district prioritized list.
   - New or existing projects may be placed in front of previously prioritized projects that have not already been started.
   - ETS and other appropriate technology organizations will develop schedules and refine the cost estimates for highly ranked projects

4. Technical teams will begin work on projects according to the schedule
   - New projects must have both a source of funding and a point of contact (POC) before projects will be initiated. The point of contact is a person who has the authority and responsibility to make decisions about the project representing the user perspective (e.g. articulating requirements, setting dates for when functionality is needed, approving designs, signing off final products, etc.)
   - Once work has begun on a project, the technical team will continue to work on the project until it is completed (e.g. projects, which have already started, will not be disrupted by other projects except in emergency situations).
   - Technical teams may elect to work on projects that require minimal resources and can be completed in a short period of time without waiting for prioritization from the district *review authority*.

5. Technical teams shall report progress on project completion on a quarterly basis.

Users

Project Request

ETS

Requests & Rankings

Requests & Rankings

Requests & Rankings

College Review Authority

College Review Authority

CS Review Authority

Prioritized List

Prioritized List

Prioritized List

District Review Authority

Prioritized List

Figure 5: Project Prioritization Process

Project Evaluation Tool

ETS adapted a tool initially developed by Butte College for technology project prioritization, which displays scores for project impact versus project effort for each project so that comparisons can be made. The tool is used by completing a questionnaire on each project covering 19 factors, three of which are shown in Figure XX as an example.[4]
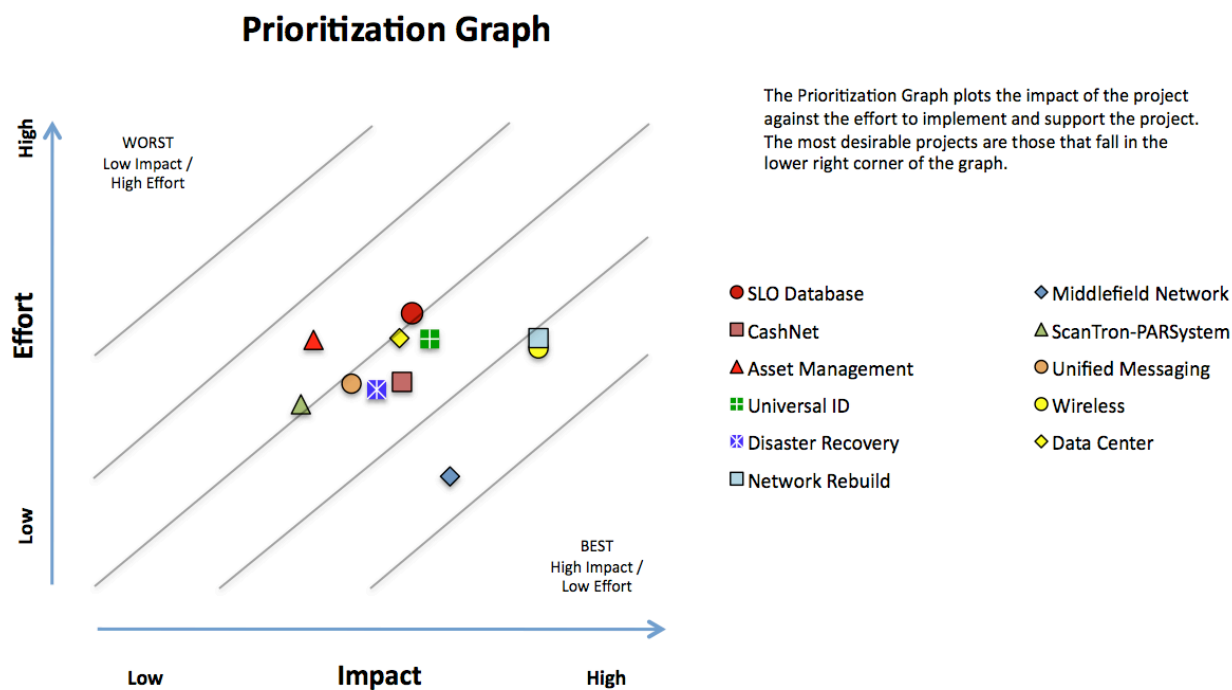
Figure 1: Project Evaluation Tool Factors for Evaluating Projects (3 shown)

Factors	Score	Weight	Max Value	Percentage Impact
PROJECT IMPACT				
Section 2: Project Objectives and Criticality (affects Impact axis)				
Relationship to Strategic Plan Elements (Goals, Commitments, Objectives & SLOs)				
Not Aligned With Any	0			
Supports / Enhances Achievement of a few	5			
Supports / Enhances Achievement of several	7			
Critical to Achievement of one or more	10	1	10	9%
Enhancement				
Will not enhance business, student, or instructional services	0			
Will moderately enhance business, student, or instructional services	3			
Will significantly enhance business, student, or instructional services	5			
Is critical for infrastructure improvement	9			
Is critical for Health, Life, or Safety	10			
Is necessary to comply with Regulatory / legal mandate	10	2	20	18%
Sponsor's Priority				
Low	0			
Medium	5			
High	10	1	10	9%

The tool automatically calculates scores for *Project Impact* and *Project Effort*. When several projects have been evaluated using the 19 factors, the summary is a graph that plots project impact versus project effort, which clearly depicts the relationship among them. See Figure XX.

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[4] Model adapted with permission of Andy Miller, Butte College, 2010

Figure 2: Project Evaluation Tool Graph Showing Project Distribution

Prioritization Graph

The Prioritization Graph plots the impact of the project against the effort to implement and support the project. The most desirable projects are those that fall in the lower right corner of the graph.

Legend:
- ● SLO Database
- ■ CashNet
- ▲ Asset Management
- ▦ Universal ID
- ▨ Disaster Recovery
- ▢ Network Rebuild
- ◆ Middlefield Network
- △ ScanTron-PARSystem
- ○ Unified Messaging
- ○ Wireless
- ◇ Data Center

The tool can be used in the initial ranking of projects as well as to compare a new project with an existing portfolio of projects to determine if the new project should replace an existing project in priority. Please note that the factors for the Project Evaluation Tool, as depicted in the examples above have not been fully adjusted for Foothill De Anza Community College District. As such, project distribution may be different when the factors are adjusted.

The Project Evaluation Tool is only a starting point for determining projects prioritization and should be used in conjunction with collaborative discussion in finalizing project priorities.

The following three pages specify the project evaluation criteria…

Factors	Score	Weight	Max Value	Percentage Impact	Cell Range Names
PROJECT IMPACT					
Section 2: Project Objectives and Criticality (affects Impact axis)					
Relationship to Strategic Plan Elements (Goals, Commitments, Objectives & SLOs)					StrategicAlignment
Not Aligned With Any	0				ScoreStrategicAlignment
Supports / Enhances Achievement of a few	5				
Supports / Enhances Achievement of several	7				
Critical to Achievement of one or more	10	1	10	9%	
Enhancement					Criticality
Will not enhance business, student, or instructional services	0				ScoreCriticality
Will moderately enhance business, student, or instructional services	3				
Will significantly enhance business, student, or instructional services	5				
Is critical for infrastructure improvement	9				
Is critical for Health, Life, or Safety	10				
Is necessary to comply with Regulatory / legal mandate	10	2	20	18%	
Sponsor's Priority					SponsorsPriority
Low	0				ScoreSponsorPriority
Medium	5				
High	10	1	10	9%	
Section 3: Project Benefits (affects Impact axis)					
Students Who Could Benefit (directly)					Students
Doesn't Affect Students	0				ScoreStudents
Affects few Students	2.5				
Affects Many Students	5				
Affects All students at one college	7.5				
Affects All students at both colleges	10	2			
Employees Who Could Benefit (directly)					Employees
Doesn't Affect Employees	0				ScoreEmployees
Affects Few Employees	2.5				
Affects Many Employees	5				
Affects All employees at one college	7.5				
Affects All employees at district	10	1			
Expected Client Satisfaction					ClientSatisfaction
Minimal increase		0.2			ScoreClientSatisification
Moderate increase		0.6			
High increase		1	30	27%	
Financial Impact (annual net income increase):					FinancialImpact
Increase is < $5k	0				ScoreFinancialImpact
Increase is between $5k and $25k	2.5				
Increase is between $25k and $50k	5				
Increase is between $50k and $100k	7.5				
Increase is > $100k	10	1	10	9%	

Factors	Score	Weight	Max Value	Percentage Impact	Cell Range Names
Time Savings					TimeSavings
Saves < 10 hrs per week	0				ScoreTimeSavings
Saves 11 to 25 hrs per week	2.5				
Saves 25 to 50 hrs per week	5				
Saves 50 to 75 hrs per week	7.5				
Saves > 75 hrs per week	10	1	10	9%	
Probability of Realizing Benefits					Benefits
Low Probability	0				ScoreBenefits
Even Probability (50/50)	3				
High Probability	10	1	10	9%	
Unique or duplicated services					UniqueServices
Will duplicate most functionality of an existing system(s) at either college	0				ScoreUniqueServices
Will duplicate some functionality of an existing system(s) at either college	2				
Will replace all existing systems which have similar functionality	10				
Will provide unique functionality	10	1	10	9%	
	Total Points		110	100%	

PROJECT EFFORT

Section 4: Project Effort (affects Effort axis)

Factors	Score	Weight	Max Value	Percentage Impact	Cell Range Names
Departments Involved in Implemenation					Departments
Single Functional Department / Academic Division	1				ScoreDepartments
Multiple Functional Departments / Academic Divisions at one college	3				
Multiple Functional Departments / Academic Divisions at both colleges	7				
Involves most departments across the district	10	1	10	7%	
Business Process Changes Required					BPC
No business process will need to change as a result	0				ScoreBPC
A few business processes will need to change as a result	3				
Several business processes will need to change as a result	7				
Many business processes will need to change as a result	10	1	10	7%	
Additional Ongoing Support Required (functional departments)					NonIT_FTE
Less than .25 FTE	1				ScoreNonIT_FTE
Between .25 and .50 FTE	2.5				
Between .50 and .75 FTE	5				
Between .75 and 1.0 FTE	7.5				
More than 1.0 FTE	10	2	20	15%	
Additional Ongoing Support Required (IT)					FTE
Less than .25 FTE	1				ScoreIT_FTE
Between .25 and .50 FTE	2.5				
Between .50 and .75 FTE	5				
Between .75 and 1.0 FTE	7.5				
More than 1.0 FTE	10	2	20	15%	

Factors	Score	Weight	Max Value	Percentage Impact	Cell Range Names
Implementation Hard Costs (one time)					Cost
Cost is < $5k	0				ScoreCost
Cost is between $5k and $25k	2.5				
Cost is between $25k and $50k	5				
Cost is between $50k and $100k	7.5				
Cost is > $100k	10	1	10	7%	
Additional Ongoing Hard Costs (annual)					CostOngoing
Cost is < $5k	0				ScoreCostOngoing
Cost is between $5k and $25k	2.5				
Cost is between $25k and $50k	5				
Cost is between $50k and $100k	7.5				
Cost is > $100k	10	1.5	15	11%	
Time to Implement (includes all IT and functional deparment work)					Time
Time is < 1 week total	0				ScoreTime
Time is between 1 week and 2 weeks total	2.5				
Time is between 2 weeks and 1 month total	5				
Time is between 1 month and 6 months total	7.5				
Time is > 6 months total	10	2	20	15%	
Complexity of Implementation:					Complexity
Minimal reconfiguration of tables etc. on existing system	0				ScoreComplexity
Simple vendor interface, no data migration	3				
Some vendor interfaces, multiple system relationships, multiple dependencies	7				
Substantial vendor interfaces, complex system relationships, data migration	10	2	20	15%	
Hardware / Application Hosting by Vendor					Hosting
Available	0				ScoreHosting
Not applicable	5				
Not available	10	1	10	7%	
			135	100%	