

Preparing for an ERP Notes:

Infrastructure Enhancements (2013 - 2016)

From 2013 to 2016 there was a lot of work done to improve the network infrastructure including installing new switches, running new fiber, upgrading Ethernet wiring in multiple buildings, etc. The positive results of this work were illustrated in a recent report (Dec '16) showing the overall up-time for network availability was 99.98% for the calendar year 2016. Some of the major areas of improvement include:

- Fiber to PSTC (Was previously bonded T1-~45mbps → Fiber has 1 Gig per second. This has resulted in more that 20x more bandwidth)
- ~ 30% switches upgraded
- ~ 20% IDF (Network Switch Closets) have Uninterrupted Power Supplies (UPS) installed

Network Monitoring Tool - Solarwinds (2014)

Orion SolarWinds networking and systems management tool was installed in 2014. This tool has provided the following enhancements.

- Modular, extensible, unified, and scalable platform
- Real-time monitoring and alerts via text and email – The Network Operations team can quickly identify a segment that has gone down
- Unified view from network to Web performance metrics for faster root cause identification and troubleshooting
- Centralized administration, access control, advanced alerting, and reporting

EMS Project - Data Integrity (Fall '16)

The EMS Project improved SIS data integrity immensely. This will be very important for data mapping to a ERP system

Network Security Enhancement Project (Scheduled Jan '17)

Beginning in Jan '17, there will be a major security upgrade project that will include upgrading our enterprise firewall, increased network monitoring and enhanced management tools. The enhancements will include:

- Cisco Identity Services Engine (ISE) - This will give real-time awareness of malicious cyber-attacks coming from the internet
- Cisco Firepower - This is the enterprise firewall (hardware and software) designed to quickly identify and stop threats
- Lancope Stealthwatch – This tool give management oversight and visibility to the network operations team.

Quality Focus Essay

Monterey Peninsula College has identified three Action Projects that will strengthen connections to student access and success and have a strong, positive effect on institutional effectiveness:

- 1) implementation of an enrollment management system (EMS),
- 2) implementation of TracDat, and
- 3) procurement and implementation of an Enterprise Resource Planning (ERP) system.

These three Action Projects support student access and success in the following ways:

	EMS	TracDat	ERP
Connection to ACCESS	<ul style="list-style-type: none"> ● Will provide reports to help the College determine whether it is scheduling classes appropriately (online, evening, weekend) to meet student needs 	<ul style="list-style-type: none"> ● Improves compilation of data used in program review and SLOs/SAOs assessment, leading to improvements in service delivery to students 	<ul style="list-style-type: none"> ● Will allow College to implement waitlists for courses and communicate waitlist information to students
Connection to SUCCESS	<ul style="list-style-type: none"> ● Allows the College to do “year ahead scheduling,” which helps students build schedules with program completion more firmly in mind 	<ul style="list-style-type: none"> ● Enables College to improve its use of SLO assessment results in planning to increase student success 	<ul style="list-style-type: none"> ● Will include a Degree Audit program, allowing both students and Student Services staff to more effectively track progress toward successful program completion

In addition, the three Action Projects will greatly improve institutional effectiveness:

	EMS	TracDat	ERP
Impact on IE	<ul style="list-style-type: none"> ● Will provide better productivity data, allowing improved efficiency in scheduling processes, in terms of both staff time and budget resources ● Will provide reports to support flexible response during scheduling (capturing the ‘what if’ factor) 	<ul style="list-style-type: none"> ● Streamlined data collection, assessment, and reporting practices ● Will generate reports in a consistent format for use in discussions about institutional resource needs (e.g., staff, equipment, facilities, technology, etc.) 	<ul style="list-style-type: none"> ● Improved data integrity ● Improved data collection and reporting capacity ● Improved availability of program completion data

Overview of Action Projects

	EMS	TracDat	ERP Procurement
		Disparate data sources are used to house and locate information, making it difficult to find and use data. MPC chose to contract with TracDat in 2015.	Need for ERP documented in Title 5 grant applications, results of Business Process Analyses (in HR and Admissions & Records), Technology Plan (projects such as EMS and Laserfiche, eTranscripts, OpenCCCApply, OEI Pilot Program)
Spring 2016		<ul style="list-style-type: none"> ● Gather course and program data to input into TracDat ● Begin TracDat configuration 	Spring and Fall 2016: BPAs <ol style="list-style-type: none"> 1. Financial Aid 2. Fiscal 3. Student Success -- 3SP and Equity 4. Schedule Development
Summer 2016	Pilot in AA Office	<ul style="list-style-type: none"> ● Develop Instructor and Program Reflections Templates 	
Fall 2016	Train those involved in scheduling	<ul style="list-style-type: none"> ● Implement Course SLOs into TracDat 	Investigate funding sources
Spring 2017		<ul style="list-style-type: none"> ● Program Review ● Program-of-study Learning Outcomes 	<ul style="list-style-type: none"> ● Develop RFP based on BPA results ● BPA group to be hired to be part of RFP process. -- not yet scheduled
Fall 2017	Evaluate effectiveness of implementation	<ul style="list-style-type: none"> ● Connection to Planning and Resource Allocation Process ● Evaluation of TracDat implementation 	
Spring 2018	Evaluate effectiveness of implementation, develop recommendations for any warranted improvements	<ul style="list-style-type: none"> ● Evaluation of TracDat implementation 	
Fall 2018	Implement improvements based on evaluation	Implement improvements based on evaluation	
Spring 2019			Explore additional modules (e.g., Starfish)

Action Project 1: EMS

Background

Since the 2013-14 academic year, the College has been engaged in efforts to review and revise scheduling processes to meet student needs, improve success and retention, and increase average class sizes. This is consistent with the College's Institutional Goals and Objectives (see Institutional Goal 1, Objective 1.7). The College also examined scheduling practices during its institutional self-evaluation; specifically, Standard II.A.6 addresses the college's course scheduling as it relates to scheduling courses to facilitate degree completion. During the self-evaluation, the College recognized that its current Student Information System (SIS) had become a barrier to effective scheduling practices, and College personnel have difficulty generating data needed to inform scheduling decisions in an efficient manner. As a result, current scheduling practices are often based on a "rollover" of the previous schedule, rather than on analysis of data that would lead to more strategic schedule-building.

In summer 2015, an *ad-hoc* group comprised of the College president, the three vice presidents, three deans of instruction, scheduling technician, support staff from the Office of Academic Affairs, admissions director, programming manager, and institutional researcher came together to discuss the barriers to producing timely enrollment reports and to brainstorm solutions for improved practices. The need for an Enrollment Management System (EMS) emerged from these discussions. Once implemented, EMS will increase access to course enrollment data and provide the ability to examine enrollment from the level of the entire College to the level of individual course sections. EMS interfaces with the College's current Student Information System (SIS) and presents data elements (e.g., enrollments, full-time equivalent students (FTES), load, productivity, cost) in a spreadsheet format so it can be easily examined and discussed. EMS will enable the College to efficiently analyze the schedule, as well as plan for and manage future years' schedules, thereby improving support for student success. Integration between EMS and SIS will improve the accuracy and timeliness of data used in scheduling.

In preparation for the implementation of an EMS, the MPC is reviewing and revising its scheduling practices to provide students with a more consistent and predictable schedule. As of the 2015-16 year, a block scheduling practice is now implemented in most areas of the college. The blocks have been revised and will be implemented in the spring 2017 schedule. The College is moving towards FTEF allocation and productivity targets for programs and Divisions. The EMS Timeline Table below outlines how the institution plans to continue the implementation and evaluation of EMS over the next two years.

TIMELINE
Action Project 1: EMS

Project Objective: Increase effectiveness of scheduling and enrollment management practices by providing greater access to and coordination of enrollment data			
Specific Tasks/Activities	Outcome for each task	Target Completion Date	Responsible Parties
Create algorithm tables, based on historical demand for classes, contractual definitions of load, as well as on current enrollment patterns and expectations	Set of functional algorithms for every type of course and apportionment method	Currently, spring 2016 (nearly complete as of 4/5/16)	<ul style="list-style-type: none"> • Office of Academic Affairs • MPC EMS workgroup • Vendor implementation team
Develop taxonomy by: <ul style="list-style-type: none"> • College • Division • Department • Discipline • Emphasis 	<ol style="list-style-type: none"> 1. Comprehensive spreadsheet that includes every course identified by: college, division, department, discipline, emphasis. 2. Taxonomy run against algorithm tables 3. Identification of “outlier” courses 	Spring 2016	<ul style="list-style-type: none"> • Office of Academic Affairs • Vendor implementation team
Develop taxonomy by location: <ul style="list-style-type: none"> • Monterey • Fort Ord • Distance Ed 	<ol style="list-style-type: none"> 1. Comprehensive spreadsheet that includes every course identified by location. 2. Taxonomy run against algorithm tables 3. Identification of “outlier” courses 	Spring 2016	<ul style="list-style-type: none"> • Office of Academic Affairs • Vendor implementation team
Develop programming to implement algorithm tables and taxonomy	Functional EMS program that allows college personnel to predict enrollments (FTES) and FTEF at any level of the College	End of spring 2016	<ul style="list-style-type: none"> • MPC IT • Vendor implementation team
Pilot EMS program to develop scheduling for Summer 2017, Fall 2017, and Spring 2018	Data available for development of schedule for Summer 2017, Fall 2017, and Spring 2018	Summer 2016	<ul style="list-style-type: none"> • Office of Academic Affairs • MPC EMS workgroup • Vendor implementation team

TIMELINE
Action Project 1: EMS

Specific Tasks/Activities	Outcome for each task	Target Completion Date	Responsible Parties
Train department/division chairs how to use filters, run reports, etc.	All department and division chairs will demonstrate ability to use filters, run reports, etc.	Fall 2016	<ul style="list-style-type: none"> • Office of Academic Affairs • MPC EMS workgroup • Vendor implementation team
Implement new scheduling practices for 2017-18 year	New practices used to develop Fall 2017 schedule	Fall 2016	<ul style="list-style-type: none"> • Office of Academic Affairs • Department and Division Chairs • MPC EMS workgroup • Vendor implementation team
Evaluate effectiveness of EMS implementation (and supporting processes)	Analysis of what works well, and what improvements could be made in order to increase effectiveness of the implementation	2017-2018 Academic Year	<ul style="list-style-type: none"> • Office of Academic Affairs • Department & Division Chairs • MPC EMS Work group
Implement improvements to EMS (or supporting processes) based on results evaluation		Fall 2018	<ul style="list-style-type: none"> • Office of Academic Affairs • Department & Division Chairs • MPC EMS Workgroup

Action Project 2: TracDat

Background

Monterey Peninsula College designed its planning and resource allocation process to support student learning and achievement. In practice, however, the process does not always work as effectively as intended, because the tools MPC uses to collect and assess data are not effectively integrated with each other. The information and data used in the planning and resource allocation process are housed in different systems with varying accessibility and formats. The institutional self-evaluation revealed that campus personnel have difficulty--and in some cases are prevented from--seeing data elements of one process when it is time to support the next, making the College's evaluation and planning processes overly cumbersome and inefficient. For example, it is difficult to access results of SLO assessment in a timely manner when conducting program review or writing justification for resource allocation requests. The findings from the institutional self-evaluation led to the development of an Actionable Improvement Plan related to Standards I.B.4, I.B.7, I.B.8, and I.B.9. This AIP also aligns with the College's Institutional Goals: Objective 2.1 of the Institutional Goals--Improve Institutional Effectiveness, which identifies the need to "implement systems for easier access to data."

In fall 2015, MPC decided to implement the TracDat system in order to strengthen connections between data elements of SLOs, program review, planning, and resource allocation; once implemented, TracDat will connect these elements to each other and to the College's Institutional Goals. Using TracDat to improve the practical connections between the components of the planning and resource allocation process will allow the institution to improve institutional effectiveness and make better decisions in support of student success. For example, when departments have easier access to student achievement and student learning data, they will be able to better define instructional needs, and the College will be able to make more informed resource allocation decisions. TracDat directly enables institutional effectiveness, connecting student learning and success to the institutional processes designed to support those student needs.

The TracDat Timeline below outlines how MPC plans to implement TracDat over the next two years. Some tasks are in progress as of spring 2016. The project will proceed in three phases: course SLO assessment, program SLO assessment, and program review. Effectiveness of the system will be evaluated during the 2017-2018 academic year, and the results of the evaluation will be used to make improvements to the system and its support resources during 2018-2019.

TIMELINE
Action Project 2: TracDat

Project Objective: Improve operational connections between student learning and achievement data, planning, and resource allocation processes to improve effectiveness of decision-making processes.			
Specific Tasks/Activities	Outcomes for Each Task	Target Completion Date	Responsible Parties
Data entry and configuration for course assessment & program reflections	<ol style="list-style-type: none"> 1. Programs, courses, & SLOs entered into TracDat 2. Instructor Reflections interface established 3. Program Reflections interface established 	Spring 2016	TracDat Team
Develop user training & support resources for course assessment and program reflections tools	<ol style="list-style-type: none"> 1. User guide for Instructor Reflections 2. User guide for Program Reflections 	Spring/Summer 2016	<ul style="list-style-type: none"> • TracDat Team • Learning Assessment Committee
Launch Course Assessment and program reflections tools	Course and program assessment transitions into TracDat (Sharepoint system retired)	Flex Day, Fall 2016	<ul style="list-style-type: none"> • TracDat Team • Learning Assessment Committee
Data entry and configuration for program assessment (program of study)	<ol style="list-style-type: none"> 1. Program outcomes entered into TracDat 2. Program of study interface established 	Spring/Summer 2016	TracDat Team
Develop user training & support resources for program assessment	<ol style="list-style-type: none"> 1. User guides for course → program outcome mapping 2. Support resources for outcome mapping (including training sessions) 	Summer/Fall 2016	<ul style="list-style-type: none"> • TracDat Team • Learning Assessment Committee
Data entry and configuration for Action Plans	<ol style="list-style-type: none"> 1. Action Plan interface established 2. Action Plan reports established and tested 	Summer/Fall 2016	TracDat Team

Specific Tasks/Activities	Outcomes for Each Task	Target Completion Date	Responsible Parties
Develop user training & support resources for Action Plans	User guides for action plans	Fall 2016	<ul style="list-style-type: none"> TracDat Team Learning Assessment Committee
Launch Program Assessment and Action Plan tools	<ol style="list-style-type: none"> Program of study assessment transitions into TracDat Action Plans transition into TracDat (Word forms retired) 	Spring Flex, 2017	<ul style="list-style-type: none"> TracDat Team Learning Assessment Committee
Data entry and configuration for Program Review (Comprehensive and Annual Updates)	<ol style="list-style-type: none"> Program Review templates for Academic Affairs, Student Services, Administrative Services, President's Office established in TracDat Institutional and program-level achievement data configured in Action Point/Planning Point 	Spring 2017	<ul style="list-style-type: none"> TracDat Team Office of Institutional Research
Develop user training & support resources for program review	User guides for Program Review	Spring 2017	<ul style="list-style-type: none"> TracDat Team Office of Institutional Research
Launch Program Review tools	Program Review transitions into TracDat (Word templates retired)	Fall 2017	<ul style="list-style-type: none"> TracDat Team Vice Presidents Office of Institutional Research
Evaluate TracDat and use results of evaluation to make improvements to process	Recommendations regarding effectiveness and potential improvements to TracDat and processes it supports	Evaluation conducted 2017/2018 AY	<ul style="list-style-type: none"> College Council TracDat Team

Action Project 3: ERP

Background

Monterey Peninsula College is one of only six colleges in the California Community College system that does not currently use an Enterprise Resource Planning (ERP) system to manage its operational data. Currently, MPC uses the Student Information System (SIS) developed by Santa Rosa Junior College. However, SIS no longer meets the needs of the College. SIS does not integrate the vital data functions of the College, as an ERP would do. As a result, MPC uses multiple systems in parallel. Reporting capabilities vary from system to system, as does the quality of reports. Systems may or may not integrate well with each other, leading to a reliance on manual entry and greater opportunities for error. For example, the Fiscal Services Department relies heavily on the Escape financial management system, provided by the Monterey County Office of Education; Escape has not been set up to integrate with SIS. Likewise, the Student Financial Services Department uses Financial Aid Management Systems (FAMS), which is being phased out by its vendor. Because FAMS, Escape, and SIS are not integrated, the College has had to invest in a separate stand-alone program (PowerFaid) to replicate FAMS functionality. In addition, SIS has programming constraints that make it difficult and fiscally unfeasible to add student-focused services that are standard to higher education and desired by MPC students (e.g., waitlists, degree audit program).

An ERP would greatly expand the institution's effectiveness and efficiency with regard to its operational data, as well as allowing for efficiency and expansion of services to students. The need to transition to an ERP has been a topic of institutional discussion since 2013, and has been documented in the MPC Technology Plan 2013-2016, in the Institutional Goals and Objectives (see Objective 4.2), and in the Self-Evaluation Report (see Standards I.B.8, II.A.6, and III.C.2). Discussions about the most effective way to finance the implementation and ongoing licensing costs of an ERP are in progress as of spring 2016. In the meantime, the College has begun to plan for an ERP implementation (see Institutional Objectives 4.2a-4.2c). Business Process Analyses (BPAs) have been completed related to student enrollment and employee onboarding processes; additional analyses are scheduled for Fiscal Services, Student Financial Aid, and other areas. Results of the BPAs will inform the configuration of the ERP, to ensure that the implementation enables increased institutional effectiveness and expanded support for students.

The ERP Timeline Table below outlines how MPC plans to prepare for an ERP implementation over the course of the next two years. As some of the specific tasks/activities in the plan are dependent on funding that has not yet been identified, the plan includes the College's best estimate for the length of time the activity would take to complete. Firm completion dates will be added to the plan once funding has been established.

TIMELINE
Acton Project 3: ERP

Project Objective: Implement an Enterprise Resource Planning system to improve integration of operational data, increase institutional effectiveness with regard to use of operational data, and support expansion of student-focused services that rely on operational data			
Specific Tasks/Activities	Outcome for Each Task	Target Completion Date	Responsible Parties
Complete Finance BPA	Assess current process, design optimal processes.	Spring 2016	<ul style="list-style-type: none"> • VPAS (CBO) • Controller
Complete Financial Aid BPA	Assess current processes, design optimal processes	Spring 2016	<ul style="list-style-type: none"> • VPSS • Director, Fin Aid
Develop ERP funding strategy	Identify funding sources	TBD	<ul style="list-style-type: none"> • Superintendent/President • VPAS (CBO)
Complete Student Success BPA	Assess current processes, design optimal processes	Fall 2016	VPSS
Complete Schedule Development BPA	Assess current processes, design optimal processes	Fall 2016	<ul style="list-style-type: none"> • VPAA • Academic Affairs Deans
Develop ERP Request for Proposal (RFP)	Use the data gathered in the BPA's and other sources to develop the specific criteria for the RFP	TBD based on funding (2-4 month goal)	<ul style="list-style-type: none"> • VPAS (CBO) • Controller • Director, Information Systems • ERP Steering Committee

Specific Tasks/Activities	Outcome for Each Task	Target Completion Date	Responsible Parties
Implementation planning	Develop timelines and address resource needs for 2 year project	TBD (6-month goal)	<ul style="list-style-type: none"> • Superintendent/President • VPAS (CBO) • Director, IS • ERP Steering Committee
Implementation of ERP	Full implementation of relevant modules	TBD (24-30 month goal)	<ul style="list-style-type: none"> • VPAS (CBO) • Director, Information Systems • ERP Steering Committee

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**Monterey Peninsula College
ERP Implementation Schedule**

**33 - 36 months
Duration**

Jan- Mar '17

July '17

Year 1 (01/17- 01/18)

Year 2 (01/18 - 01/19)

Year 3 (01/19- 01/20)

July '18

Parallel.... Implementation.....Go Live.....

**Develop RFP, Advertise, Accept winning
Proposal**

3 months



**Hardware Installation and Configuration
Portal**

2 mos
10 mos



ERP Project Planning

4 mos



Project Monitoring and Reporting

Finance (14 months)

14 mos

Chart of Accounts Development

9 mos



COA Definition

100%

Use of Activity Codes

100%

Use of Indexes

100%

Account Crosswalk Table

100%

General Ledger/General Accounting

9 mos



Budgeting & Position Control

9 mos



Purchasing

12 mos



Accounts Pay/Fixed Assets

9 mos



Rules and Approvals

6 mos



Accounts Receivable

6 mos



Data Conversion/Data Interface

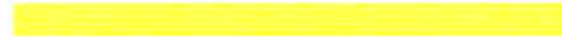
12 mos



Student (18 months)

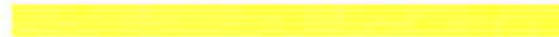
Recruiting and Admissions

12 mos



Catalog, Schedule, Faculty Load

12 mos



Student Records & Registration

15 mos



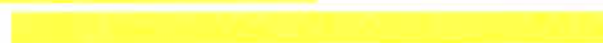
Accounts Receivables/Billing

12 mos



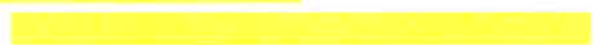
Academic History

12 mos



Degree Audit - Interface

12 mos



Financial Aid (15 months)

Tracking, Budgeting, Funds Mgt, Packaging

9 mos



Disbursement, Loan Processing, Work Study

9 mos



Reconciliation

6 mos



Human Resources (15 months)

Payroll

12 mos



Benefits Administration

12 mos



Compensation

12 mos



Position Management

9 mos



Employee Administration

6 mos

