Implementing PeopleSoft Campus Solutions: The Techlogix CSX Methodology

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Getting Campus Solutions Right: Introduction

Implementing PeopleSoft Campus Solutions is one of the biggest IT decisions a University can make. Rolling out Campus Solutions requires a sustained effort over many months by stakeholders across the entire University. Having embarked on this journey, it is vitally important that the University is able to complete it successfully.

So how do we do PeopleSoft Campus Solutions right?

This whitepaper shows why an optimized implementation methodology is essential for successful delivery of Campus Solutions by three key stakeholders:

- The Business Users within the University
- The University Project Team
- The University IT Team

An implementation methodology should cover the full lifecycle of implementing Campus Solutions. From Initiating the project to Planning the implementation, through the Analysis and Design phases, tracking progress during the Build cycle, Testing and finally to the Production rollout. The methodology should provide guidance on how to perform each step using specific tools and techniques and also prescribe how to measure success both during implementation and in the subsequent usage of Campus Solutions. And all of this should be done in a way that lays the foundation for continuous improvement by the University Team after deployment.

The CSX Methodology has been developed by Techlogix over the past 3 years and implemented at nine different universities. We have also successfully used the CSX methodology across multiple types and sizes of universities: from large, general public universities to small, private focused institutions. In this whitepaper, we present the elements of the methodology and illustrate the methodology in practice with a case study.

The Challenge of Delivering PeopleSoft Campus Solutions

Delivering PeopleSoft Campus Solutions is not simple. The difficulty arises from several factors.

The Complexity of Delivering Campus Solutions

First, delivering PeopleSoft Campus solutions is a complex project since it touches on almost all the core operations of the University. Many of the areas covered by Campus Solutions are also cross functional. This leads to a situation in which multiple stakeholders associated with the process may have conflicting ownership claims, turf to protect, and goals and priorities for improvement. And since the impacts generated by changing cross-functional processes typically ripple out over a large number of people, the solution design has to be undertaken with great care.

Secondly, the Campus Solutions delivery team must have the ability to master multiple skills and vocabularies. These include Business Analysis, Process Design, technical mastery over the PeopleTools platform, integration skills and IT infrastructure optimization. All of these need to drive a project design that not only maximizes business value creation but can also be executed within the cultural framework of a University. IT organizations frequently overlook the interdisciplinary nature of rolling out Campus Solutions and think of the problem largely in terms of acquiring coding skills on the PeopleTools platform. In this all too common scenario, the likelihood of problems and the risk of outright project failure rises significantly; so, a second dimension of Campus Solutions complexity has to do with the requirement for a new mix of skills within the Campus Solutions implementation team.

The difficulty of managing Campus Solutions projects

Managing the delivery of Campus Solutions projects is very difficult. This arises most directly from the fact that most IT staff have little prior experience in implementing enterprise wide solutions and if they do, these are typically in the Financials, HR or Supply Chain domains. This is coupled with the extended multi-month lifecycles of most Campus Solutions projects where a significant number of concurrent threads have to be successfully brought to closure at the same point in time.

Thus, most standard project management methodologies, such as PMI or Rational Unified Process (RUP) or even Oracle AIM, are not designed to address the Higher Education domain.

An additional difficulty is that there are no clear roadmaps on how to capture requirements in a Campus Solutions project. The traditional methods of Use Case Analysis or Functional Analysis are not relevant. The templates provided by Oracle AIM are also optimized for Financials, HR etc and do not apply, for the most part, to Campus Solutions.

Lacking a single consistent document where these requirements elements can be captured, most Campus Solutions development teams end up with the solution requirements split out over a number of documents and spreadsheets, etc. This lack of a single, consistent, canonical set of requirements makes solution delivery a real challenge for the development team, especially if it's geographically distributed.

This lack of a complete set of requirements poses an even greater challenge to the Quality Assurance (QA) team since they cannot easily develop a comprehensive set of test cases to ensure solution quality. The QA team is also faced with the complexity of testing a very large application that makes traditional QA processes and templates almost unusable.

The perils of applying a standard project methodology

Here are some other key issues faced by development teams that try to use traditional IT project delivery methodologies:

- Estimation Models: How do we size the Campus Solutions projects to come up with cost and time commitments?
- Missing Templates: What do we use in place of standard IT project templates for Functional Requirements, Architecture, and Technical Design etc?
- Change Management: How do we control change in projects that are both cross-functional (leading to a high potential for conflict and delay in decision-making) and must be executed across tight timelines
- Project Metrics: How do we know if our project is on track? What metrics allow us to benchmark our performance both internally and externally?

The Techlogix CSX Methodology

The CSX Methodology has been developed by Techlogix specifically to address the shortcomings highlighted above. Various types of universities have successfully used CSX. Critically, the methodology has also been enhanced to support both onsite and distributed/offshore delivery models.

CSX Methodology Overview

This section describes the eight phases of our implementation methodology in detail.

Phase 1: Initiation

Description

This is the first phase of the project and it precedes the actual project kickoff. This phase focuses on a 10-day intensive pre-implementation training for the University Project Team with a view to helping the University Team understand the CSX methodology and milestones, take an overview of the functionality of Campus Solutions and highlight the criticality of data and people in delivering the solution to the University Team.

Phase 2: Planning

Description

In the Planning phase a comprehensive implementation and governance plan is developed which establishes the overall project organization (from a team, methodology, scope, dependencies and constraints perspective).

Planning: Primary Tasks

- Preparation of a detailed Project Plan
- Establishment of project scope and Critical to Quality (CTQ) deliverables

Phase 3: Analysis

The Analysis phase has two major aspects: Requirements Engineering and the collection of Master Data. Requirements Engineering uses a live Campus Solutions instance to discuss rules, policies and processes relevant to the Campus Solutions implementation. A secondary focus during Requirements Engineering is the study of existing systems that need to be either interfaced with or replaced during the rollout.

Analysis: Primary Tasks

Typical tasks carried out in this period include:

Functional and Technical Requirements

- Identify rules, policies and processes by subject area
- Identify functional gaps, if any, that are critical to university operations
- Identify all integration points relevant to PeopleSoft Campus Solutions
- Discuss the requirements document with stakeholders and identify any changes or additional requirements

Conceptual Architecture

- Study and Review existing systems and architecture
- Determine the requirements for Security, Scalability and Availability

Collection of Master Data

- Programs and Courses
- Faculty and Instructors
- Building and Facilities
- Committees and External Organizations

Analysis: Deliverables

The key deliverable of the Analysis phase is the Requirements Document. This document covers:

- Academic Structure (Programs, Grading Schemes, Level and Load Rules, Academic Calendar)
- Recruitment and Admissions (Criteria, Quotas, Entry Tests, Admission Lists)
- Student Records (Enrollment, Course Catalog, Pre and Co-Requisites, Repeat Policies, Transcripts, Transfer Credits, Probation, Honors, Instructors)
- Faculty and Student Self Service
- Grade Book
- Academic Advisement (Course, GPA and Unit Requirements)
  Student Financials (Fee Structure, Billing, Late Fee Rules, Scholarships, Waivers, Invoicing and Billing, Payment and Payment Plans)
- Campus Community

Phase 4: Design

Description

Configuration design is the major component of the Design Phase. If any extensions or integrations are required, these are also designed during this phase. Additionally, the Techlogix implementation team reviews master data for quality and completeness followed by establishing a plan for Data Cleansing if required. An additional review of the master data is performed to understand the variance across programs in rules and policies.

Design: Primary Tasks

Typical tasks carried out in this period include:

- Design the system configurations required to meet the requirements
- Design integrations, if required, with external systems
- Develop the strategy for Data Migration including Data Cleansing if required

Design: Deliverables

The key deliverables in the Design phase is the Solution Design Document that details:

- Specific Configurations made in the areas covered during the Analysis Phase
- Functional gaps identified in the overall solution and the design proposed to address them
- Changes in business processes, if any, from the defaults built into Campus Solutions

Phase 5: Build

Overview

The Build phase begins with the completion of the technical design and finishes with the solution being completed and run through unit testing. The Build phase involves the configuration of the solution as per requirements, the loading of master data and the building out of any extensions and interfaces.

Build: Primary Tasks

Typical tasks carried out in this period include:

- Load Master Data into the PeopleSoft environment
- Configure Campus Solutions as per the Solution Design
- Develop the solution extensions (if any) according to design including Forms and UI
- Code Review
- Preparation of Test Plans
- Unit Testing

Build: Deliverables

Deliverables in the Integration Development phase include:

- Application build
- Test Data Strategy
- Test Plans for the subsequent phase

Phase 6: Test

Overview

The test phase covers the functional and load testing of the built application by cycling through the various test scenarios. The Test phase incorporates both the User Acceptance Testing and the System Integration Testing.

Test: Primary Tasks
Typical tasks carried out in this period include:
- Perform system integration testing using the available QA environment
- Perform User Acceptance Testing

Test: Deliverables
Deliverables in the Integration Development phase include:
- Tested application build

Phase 7: Deliver

Overview
This phase begins with the completion of the user acceptance testing and rollout of the process in a production system and ends with the deployment of the built solution in the production environment.

Deliver: Primary Tasks
Typical tasks carried out in this period include:
- Deploy system onto production environment

Phase 8: Rollout

Overview
This phase begins with the production rollout of the completed solution.

Rollout: Primary Tasks
Typical tasks carried out in this period include:
- Deploy system onto production environment

Key Roles and Responsibilities

The table below describes the team structure used for Campus Solutions implementations in more detail.

Role	Responsibility
Project Manager	Typically person with 7-10 years experience. Tasked with understanding the delivering the project end to end. Typically also acts as the Functional Lead for the project.
Solution Architect	Typically a person with 5+ years of experience and significant domain knowledge in Higher Education. The Solution Architect leads the Analysis and Design process and is responsible for every aspect of these phases covering both PeopleSoft and external systems.
Solution Analysts	Solution Analysts are responsible for documenting the requirements for and designing the solution for addressing Rules & Policies and coding schemes for various master data elements.

	Additionally, they assist the Solution Architect in Configuration Design. Finally, the Analysts lead the Developers during the Build phase.
Developers	Once the work of the Design Team is completed, the Developers work on configuring the solution and building any external interfaces and reports as needed.
Platform Architect	Ensures that the platform is being utilized in an optimal manner.
QA Lead	The quality engineer studies, understands, and helps in the improvement of the requirements of the project. The quality engineer develops the test plan. The quality engineer develops and executes test scripts. This person records test results during testing activities and documents test faults in the defect log.

CSX Methodology Templates

A key part of the CSX methodology is a set of templates that are used across all aspects of the solution delivery lifecycle. Some key templates include:

- Estimation Model
- Resourcing Model and Team Structure
- Requirements Document
- Master Data Capture Sheets
- Solution Design
- Test Scenarios
- Change Management Plan
- Project Progress Metrics
- Solution Usage Metrics

Value for Stakeholders

What does the CSX methodology deliver for key stakeholders?

The Business Owner

For the business owner, the CSX Methodology provides the following:

- Ensure quality of delivery
- Improve speed of delivery (no re-invention)
- Ensure benefits are realized through controls and metrics
- Ensure University strategic goals and IT solution are aligned

The Campus Solutions Project Team

For the Campus Solutions Project Team, the CSX Methodology provides the following:

- Standardized project execution with a roadmap on how to deliver the solution
- Codify best practices in Campus Solutions across the enterprise for future extensions

The IT Team

For the IT Team, the CSX Methodology:

- Facilitates project delivery with defined interaction points and roles with IT
- Works with IT landscape by specifically designing for integration points

LUMS goes live with PeopleSoft Campus Solutions

The Challenge:

LUMS, Lahore university of Management Sciences (www.lums.edu.pk) is one the leading universities in Pakistan. It has grown very rapidly since its inception in 1985 with today a student body of 3000 and three schools: Suleman Dawood School of Business, School of Humanities, Social Sciences and Law and the recently formed School of Science and Engineering. Insofar as information systems are concerned, a number of home grown systems were put in place at LUMS for course registration, grading and printing transcripts. These systems were developed on different platforms using different approaches (home-grown, out-sourced, commercial-off-the-shelf products). These systems were either not integrated, or linked loosely. The time had come for change.

Implementing Campus Solutions using CSX:

The task of implementing Campus Solutions was not simple:

- The user community at LUMS had to grapple with the unlearning/relearning cycle which is always painful. The existing enrollment process was batch based and it took some doing to get used to real time enrollment.
- The management wanted the Campus Solutions implementation to bring in best practices. There were then necessarily some changes made in the way things were done. Those changes also caused some turbulence.
- The biggest challenge the institution faced was the transition from a Quarter to a Semester system. This change was made a year after Campus Solutions had been rolled out and had to be completed in a 90 day window.

The use of the CSX methodology allowed Techlogix to deliver the LUMS solution on time and within budget. It also enabled the complex Quarter to Semester transition to be delivered in a very short time window.

Techlogix has a thriving relationship with LUMS in that the institution has been provided with a number of bolt-on extensions (e.g. residence management, faculty evaluation, etc.) for Campus Solutions. Techlogix is also working closely with LUMS in revamping their existing on-line admissions application as well as modifying the engine that helps the institution in filtering student groups, according to different criteria, prior to considering them for admission.

Campus Solutions Done Right.

The true test of a methodology is not a single project success but a record of success. Techlogix has delivered PeopleSoft Campus Solutions successfully at nine universities in an **on-time, fixed-price delivery model**. Our ability to delivery fixed-price is predicated on our success in managing the process of solution delivery using CSX.

Conclusion

Implementing PeopleSoft Campus Solutions is a process. The likelihood of success depends on the fitness of the process and how well it is executed. As we have seen, standard IT project methodologies are not a good fit for Campus Solutions projects. The CSX Methodology has been designed to address these gaps. It comes with a specialized, comprehensive tool set and has evolved over time to support Campus Solutions implementations and the use of either onsite or geographically-distributed delivery teams. The end goal – proven in practice with numerous Universities – is Breakthrough Performance.

Engaging with Techlogix

If you would like to consider using the CSX Methodology in your Campus Solutions project, Techlogix offers a number of ways to do so:

Model	Duration	Description
CSX Methodology Overview	1 day	A detailed day long deep dive into the CSX Methodology. The Overview helps build internal momentum for the embarking on a Campus Solutions project by highlighting its specific advantages over a generic implementation process and how these translate into a lower degree of project risk.
CSX Methodology Workshop	10 days	This is a detailed instructor led workshop geared towards enabling an in-house Campus Solutions project team in the CSX methodology to prepare for a full Campus Solutions implementation. The Workshop provides all the CSX artifacts and templates and walks the team through the process of using them.
Campus Solutions Project Implementation	NA	You can also engage Techlogix to execute Campus Solutions projects end-to-end. This allows a Techlogix Campus Solutions team, thoroughly trained and experienced in the CSX Methodology, to implement, upgrade or enhance PeopleSoft Campus Solutions at your university. Our Campus Solutions teams can work both onsite and use global delivery leveraging our offshore development centers. The CSX Methodology allows us to deliver projects in a fixed-price model.

About Techlogix

Techlogix is a global Consulting and IT Services company. With over 300 consultants in the US and Asia, Techlogix delivers solutions for the Higher Education, Financial Services and Telco verticals in the following practice areas:

- Enterprise Solutions
- Business Intelligence and Data Warehousing
- Business Process Management
- Enterprise Application Integration

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