

HERUG: Solution Roadmap

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Berlin, May 2007





HER Solution Update 2007

HER Solution Direction

SAP Ecosystem Co-Innovation





A Stable Business Process Platform

With SAP ERP application, NetWeaver and Enhancement Packages

Higher Education & Research



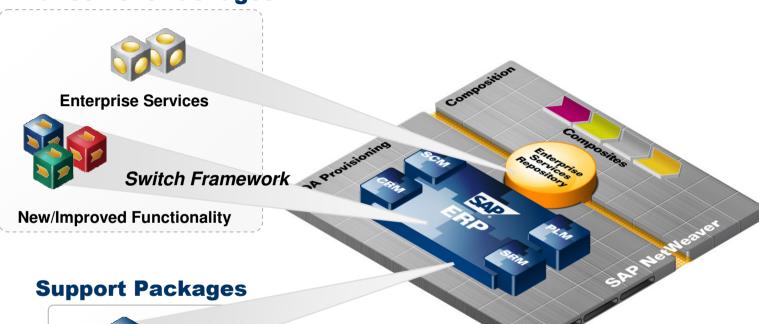
- * = Power By NetWeaver Certified
 - Evolutionary path to Enterprise SOA
 - Continuous innovation without disruption
 - Proven upgrade path for SAP R/3 Customers



Enhancement Packages Enabling customer to adopt innovation at their pace

Enhancement Packages

Optional Implementation



Mandatory Implementation





Introducing: Enhancement Packages

More innovation, more often, delivered in a more accessible way



- Provide choice in UI for a broad business user community
- Reduce upgrade, implementation, administration, and training effort



- Enable innovation without disruption
- Deliver service-enablement by end to end process



- Address market and customer priorities
- Extend competitiveness and addressable market



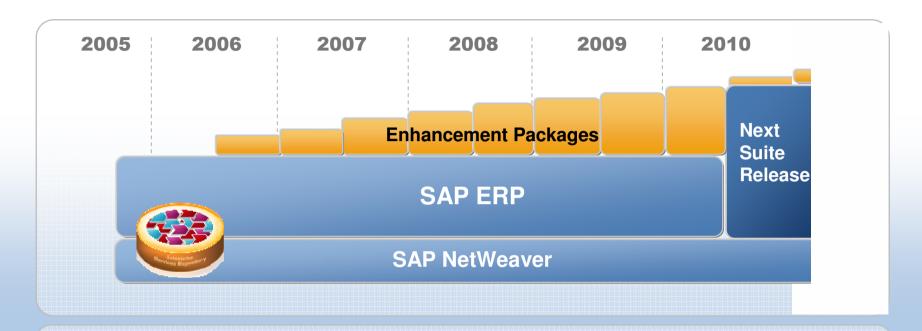


- Deliver industry-specific capabilities more quickly
- Innovation in each industry sector



Н

New SAP ERP application Release Strategy Delivering predictability and innovation without disruption



Customers Adopt Innovation at their Pace



Process and User Interface Simplification



Industry-Specific Enhancements



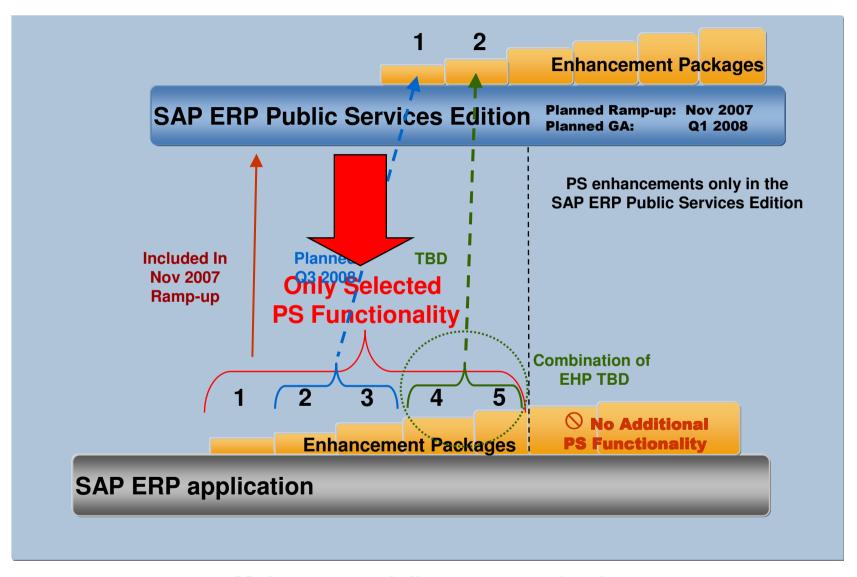
New Enterprise Services



Cross-Industry Functional Enhancements



SAP ERP Public Services Edition



Maintenance follows 5 - 1 - 2 rule





HER in SAP ERP and SAP ERP Public Services Edition

SAP ERP Public Services Edition includes SAP Campus Management & SAP Grants Management with

- The actual developed functionality planned with the initial release in November 2007 ("GM 7" & "CM 7")
- Additional planned functionalities for release until 2010. First release in first enhancement package planned in 2nd half of 2008.

SAP ERP includes SAP Campus Management & SAP Grants Management with

- a limited set of selected new functionalities
- a pilot release with strictly restricted shipment as CDP of the Implementation Accelerator Packages for CM





Release Strategy

HER Solution Update 2007

HER Solution Direction

SAP Ecosystem Co-Innovation



SAP ERP Public Services Edition

Enhancement Overview

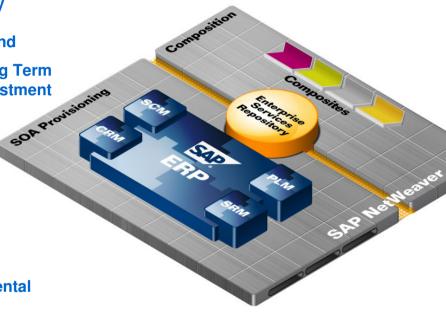
Treasury Integration

Visibility Of Liquidity Status In Cash Management Per Fund

 Management Of Long Term and Short Term Investment Pools



- Commitments on Rental Agreements
- Required Budget Amounts Calculated and Transferred in BCS



Grants Management

- **■** Grantee Enhancements
 - Budgeting
 - Overhead Calculation
- **Expenditure Certification**

Financial Enhancements

- BCS Hierarchical Budgeting
- **■** Enhanced General Ledger
 - New Cash Based G/L
 - Cash Based Availability Control
 - Support For Transition
 From A Cash Based To An
 Accrual Base
 Environment

Enhanced Payment Functionality

- Payment By Budgetary
 Entity Partial Payments
 Of Liabilities In A/P
- Payment Release List –
 Organize Payments In
 Complex Environment &
 Approval And Release
 Functionality For Invoices
 Planned For Final
 Payment
- Budget Account Assignment Derivation – Direct Value Based Account Assignment Derivations
- PS Collection &
 Disbursement (FI-CA)
 enhancements

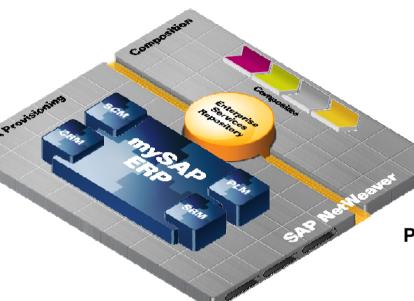
SAP ERP Public Services Edition Enhancement Overview - Continued

Accessibility

Enhanced Accessibility Functionality

Healthcare

- Workflow Based Clinical Solution And SAP Patient Management Integrated Into One Solution (a.k.a. Global Health Alliance With Siemens)
- Ability To Link Patient / Physician Information With CRM Market Campaigns
- Ability To UseOrganization ManagementSingle Point Of Entry
- Ability To Line SAP Patient Management To Non-SAP Systems Using Healthcare Industry Standards
- Outpatient Management Capabilities (a.k.a. SAP ACM) For Physicians



Human Resources*

- Enhancements to Concurrent Employment
 - Functionality
 - User Experience
- * Dependent upon localization

Higher Education & Research

- Campus Management
 - Student Advisor Workbench
 - Enhancements For Implementation Simplification
 - Enhanced BI Content And Extractors
 - Framework For Event Triggered Process Integration

PS Procurement*

- Hierarchical Line Items in Purchasing Documents
- Complex Pricing
- Mixed Contract Types
- PR Enhancements SRM Shopping Cart Commits Funds in FM
- Incremental funding on PRs
- Options

* Dependent upon SRM 6.0





Student Life Cycle Management

Research

Enterprise Management & Support

Institutional Development & Relationship Management

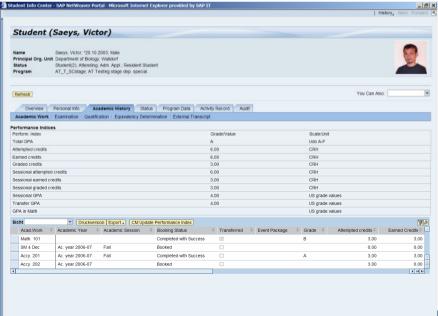
Academic Advising

Student Advisor Workcenter

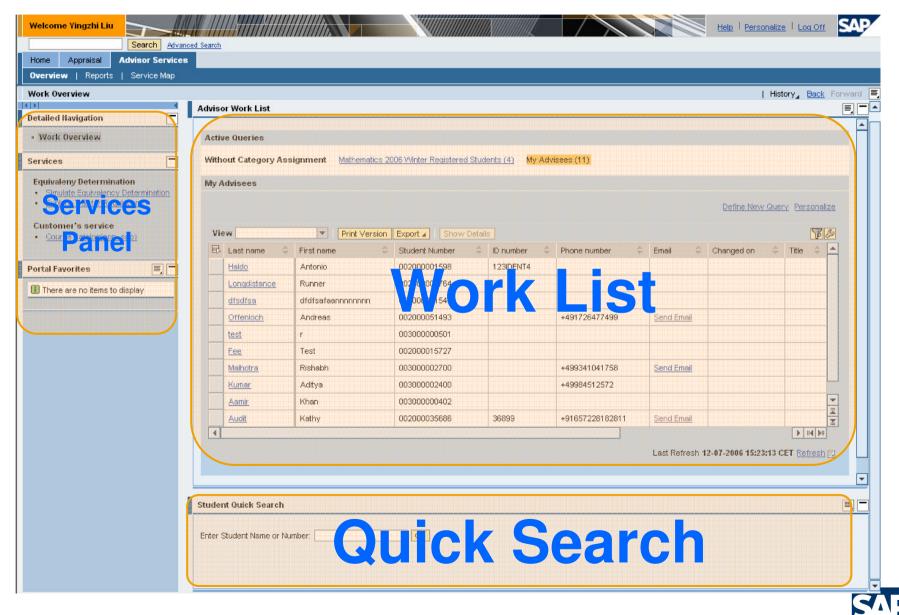
Products: SAP Campus Management, SAP Enterprise Portal

- User-friendly: The Advisor UI has been designed in a "User Centric Design" process together with advisors at their workplace
- Advisors can access all the required functions and services, some of which might be from different backend systems, with a single entry into the portal
- Advisors can fetch the most up-to-date student information in real time, and provide a highly efficient advising service for students
- The Advisor UI can be easily configured, customized and enhanced to meet the individual institutions and users needs





Advisor Work Center



Degree Audit in Academic Advising

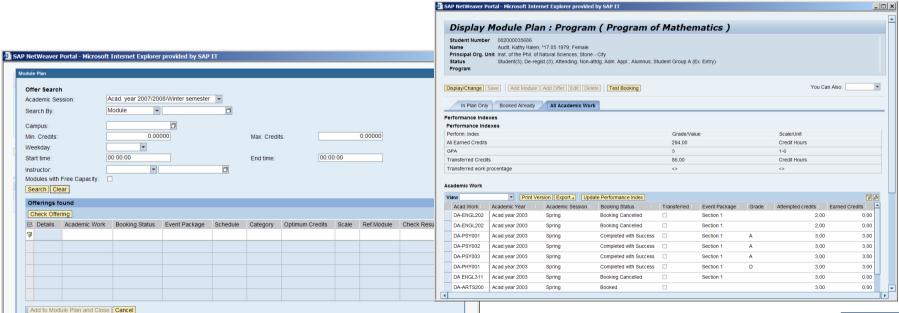
Degree Audit: Program of Study (DA471 Bachelor of Modern Latinum) Profile Type To be appoved Requirement Profile VA 002 **Execution Mode** Official Run **Student Number** 002000035686 Audit Result Not Fulfilled Released Created On 2004.01.05 Name Audit, Kathy; *1979.05.17; Female Created by Yingzhi Liu You Can Also: **Audit Details** To Be Booked Academic Work Usage | Calculation Details | All Details DA Major requirements Requirements Not Fulfilled Overall Result DA Gen.Education Requirements DA: 2x / 6 CP in Soc.Scie Fulfilled Credits for Reg = 10 Academic Work Used • 🍎 DA: Take ENG202 Grade symbol Attm. credits Earned Credits Academic Work | Academic Year Academic Session Event Package Status DA: 1 Course in Arts DA-PSY001 Acad.year 2003 Spring Section 1 Completed with Success 3,00 3,00 DA Gen.Graduation Requirements DA-PSY003 3,00 Acad.year 2003 Spring Section 1 Completed with Success 3,00 A Courses for Req. Completed with Success 3.00 3,00 DA-PSY002 Acad.year 2003 Spring Section 1 DA: all mandatory courses Column 1 of 26 D D M DA: GPA >= 2.0 DA Program requirements DA: 3 credits in Writing Not Fulfilled DA: 6 CP Senior Seminar a DA: 1x of Fac.of Nat.Sc DA Major requirements A: 2x / 6 CP in Soc.Scie

Course Module Registration

Booking Plan

Products: SAP Campus Management

- Allows students and advisors to better plan for successful program completion
- Flexible search capabilities allow users to find the courses that fit their needs (e.g. Credits, Day/time, Instructor)
- Seamless integration with Degree Audit and Advisor UI
- Reduces the time it takes for students to register for courses



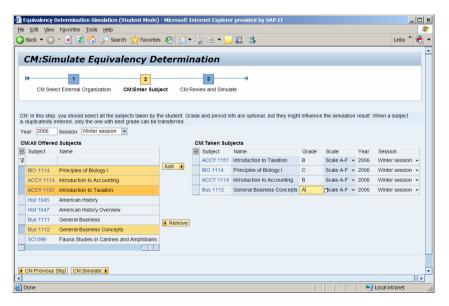


Student Self-Services

Transfer Equivalency Self-Service

Products: SAP Campus Management

- User-friendly: Web-based user interface allows prospective transfer students to easily see what credit they will receive at a University
- Allows admissions officers to focus on exception cases only, not routine inquiries
- Fully-delivered, ready-to-run application provides a "quick win" for implementation projects
- Anonymous web interface for transfer equivalencies is becoming a mandate for higher education institutions in more and more jurisdictions





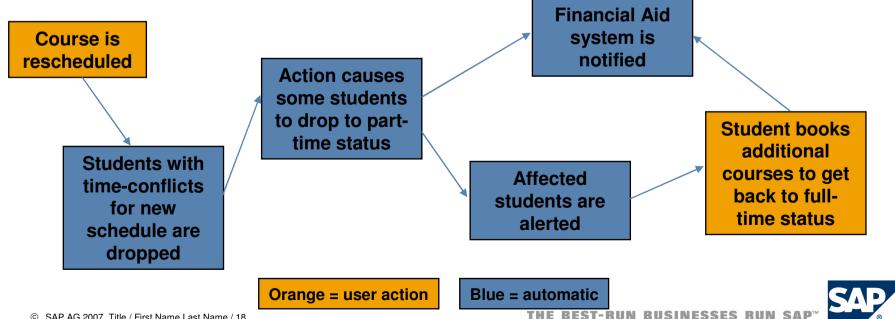


Enterprise SOA by Evolution

Academic Post-Processing Framework

Products: SAP Campus Management, SAP Exchange Infrastructure

- Flexible framework allows for intelligent 'daisy-chaining' of activities
- Automatic follow-up actions to academic events provides for a truly automated Student Lifecycle
- Paper processes, report-based processing, and time lags of 'handoffs' can be largely eliminated for the most efficient academic processes
- Integration with SAP XI allows integrated processes to include non-SAP applications

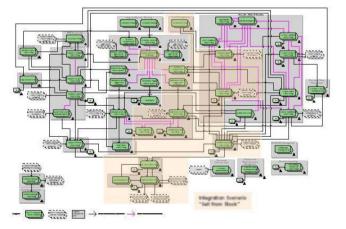


Enterprise SOA by Evolution

First Enterprise Services for Course Approval Process (also in CM 6.00) & Learning Management System Integration

Products: SAP Campus Management, SAP Exchange Infrastructure

- Allows "Composition" of approval processes for new academic course modules
- Re-useable web-services
- Event-triggered integration of students registrations to learning activities
- Standardized Integration scenario based on web-services





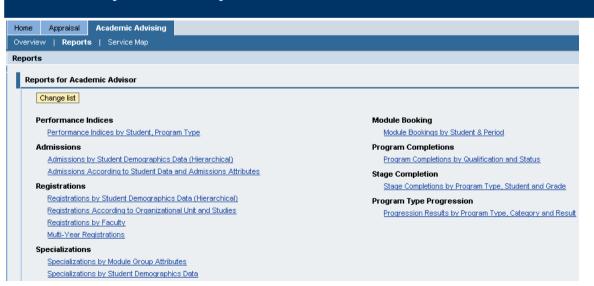


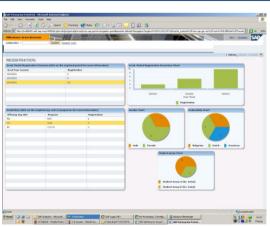
Business Intelligence

Campus Management BI Content & Extractors

Products: Campus Management, SAP Business Intelligence, SAP Enterprise Portal

- New extractors/content for CM data speed implementation of analytical reports:
 - Module bookings
 - Event offerings
 - Program and Stage completions
 - Progression
 - Performance Indices (requires ERP Public Services Edition)
- Extractors (except Performance Indicators) are backwards-compatibility to CM 6.0 provide for immediate use and adoption by current customers (via CM6.0 SP8)
- New Netweaver framework tools such as Visual Composer provide for dynamic, user-friendly UI for analytics







Student Accounting & Financial Aid

Student Accounting Continuous Enhancements

Details:

- Enhanced revenue distribution capabilities allow for precise allocation of tuition and fee revenue to various academic units and cost centers
- Enhanced Financial Aid capabilities provide for Estimated/Anticipated aid that can be easily viewed by students on Biller Direct, along with providing historical tracking
- Services for real time integration with Financial Aid Systems
- Ease of use & implementation
 - > Fee Calculation to pick up period rather than key date
 - Grant Evaluation to pick up period rather than key date
 - Customizing which credit value should be used in pricing and mapping of booking status for pricing
 - Default templates for Grant Details of internally-managed aid greatly speeds data entry for scholarship/grant administrators
- General Enhancements in FI-CA/ PSCD such as
 - New Mass-Activity Framework from FI-CA
 - > FI-CA document management



Other Campus Management Enhancements

Other Campus Management Enhancements

Details:

- Multiple Advisors: Context-sensitive advisors (e.g. Overall, Program-specific, Athletic) can be assigned, allowing for better advising of students
- Enhanced Functionality & Usability in Event Planning UI: Provides better ease-of-use for scheduling of classes
- Mass-booking: Enables efficient and consistent course registrations for student cohorts
- Module-based correspondence: Allows for better student service when a module is completed, booked, re-scheduled, completed etc.
- Continuous Enhancements for Cohorts
- Highest Composite Test Scores: streamlines admissions processes by automatically calculating and storing the highest combined scores (and individual sub-scores) for tests
- Stored performance indices: Provides ease-of-reporting vs. dynamic-only performance indices
- Registration to specializations per stage
- Grading of modules taking into account grades of other modules
- Technical Enhancements:
 - Completion of Student BAPIs
 - RFCs for Equivalency Determination
 - Data Migration for Transfer Agreements
 - Scale enhanced to 4 decimal places
 - Completion of Archiving roadmap





Student Life Cycle Management

Research

Enterprise Management & Support

Institutional Development & Relationship Management

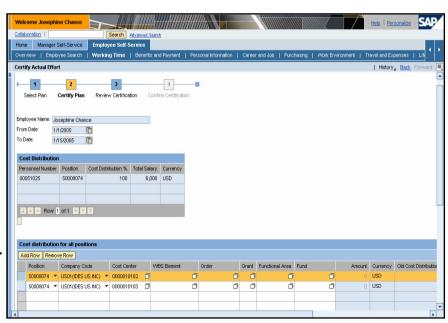
Research

GM – Grantee solution

- Usability enhancement for Grant Master Data and Budget Workbench
- Budget entry on total Project Costs or Direct Cost basis
- Indirect Cost calculation
- Automated Accrual/Deferral calculation and posting for Sponsor receivables
- **■** Currency Revaluation enhancements
- Service Enablement of Grant Master Data

Effort Certification & Reporting

- **■** Bundling functionality
- Wage Type assignment and grouping
- **■** Tolerance checking
- Usability updates:
 - MSS transaction
- BAdl for determining alternate Workflow Approver
- Cost Assignment valid from/to dates







Student Life Cycle Management

Research

Enterprise Management & Support

Institutional Development & Relationship Management



Enterprise Management & Support Update (Highlights)

SRM

- Accessibility enhancements
- HealthCare procurement services
- Procurement for Public Services (PPS)
 complex procurement processes
 - Line Item Hierarchies
 - Mixed Contract Types
 - Incremental funding of Line Items

Position Budget Control

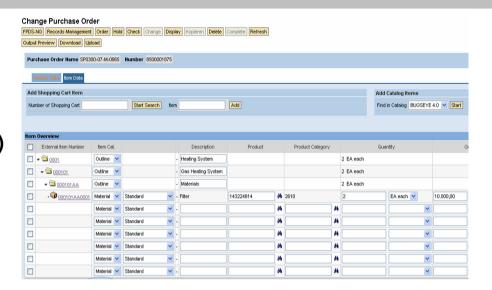
■ Enhanced integration with GM-Grantee – multi-year commitment processing

Funds Management & Treasury Integration

- Basis of Endowment functionality
- Enhancements to Transaction Manager, Cash Management and Average Daily Cash balance

Materials Management

- Multiple Account Assignments with Valuated Goods Receipt
- Amount Based Distribution of Account Assignments





PS Procurement - Maximize Purchasing Power



SAP Government Procurement Capabilities

Public Tendering

- Bidder Prequalification
- Multi-Round Bidding / Tendering
- Bid Evaluation
- Electronic File Creation

Contract Management & Administration

- Versioning (Changes)
- Complex Document Generation (RFx / contracts)
- Contract Development, Execution & Monitoring

Operational Procurement

- Requisitioning
- Order Management
- Receiving
- Financial Settlement

Procurement Services

- Processing of External Requirements
- Third Party Processing
- Inventory Management and Delivery from Stock

Supplier Enablement

- Supplier Self-Service / Portal
- Document Exchange
- Supplier Collaboration

Sourcing

- Category Management
- Supplier Qualification
- Supplier Negotiation
- Live Auction

Catalog Content Management

Benefits Delivered

- Improve compliance and spend control
- Reduce sourcing cycle times 5% 15%
- Leverage cross-agency demand consolidation to lower unit prices and increase negotiating power
- Support varied procurement categories, across assets, maintenance and projects
- Reduce off-contract spending up to 20%
- Accelerate cycle times and reduce costs through eventdriven workflow
- Lower bidding process costs through electronic collaboration
- Reduce administrative costs and improve accuracy through vendor self-registration
- Optimize supply base through qualification and scorecarding
- Increase supply availability
- Support end-to-end procurement lifecycle
- Link procurement and funds management
- Integrate records management to fulfill auditing





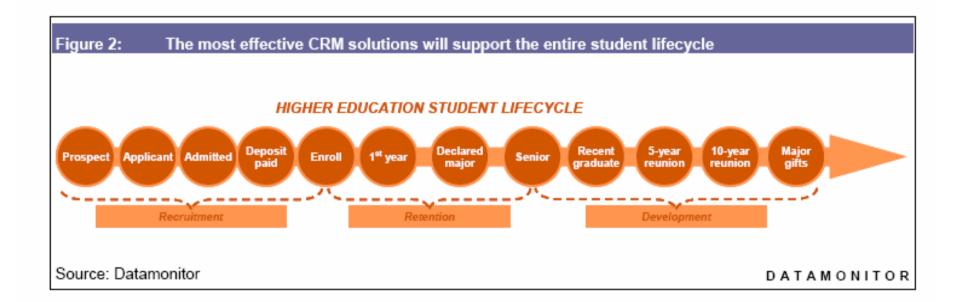
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DATAMONITOR - 2007 Trends



Streamlining Duke's Communications

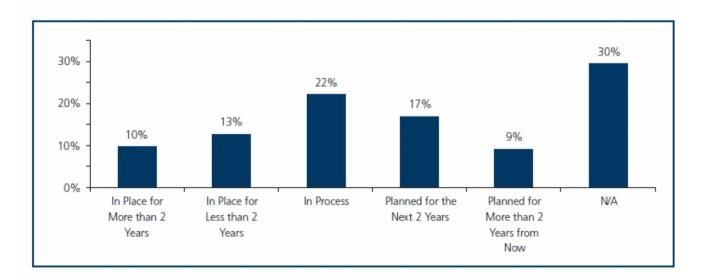


Constituent Relationship Management Makes Inroads in Higher Education

By Catherine Burdt, Senior Analyst

February 2006

Figure 1. CRM Plans, All Institutions from Higher Education Survey on Leadership, Innovation, and Technology 2005 (n=308)



Dr. Richard Staelin of Duke University's Fuqua School of Business points out that CRM offers value both to institutions and their constituents, with a focus on streamlining and improving institution-constituent communications and reducing costs to the institution.



CRM In Higher Education



Constituent Relationship Management Makes Inroads in Higher Education

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February 2006

Often dependent on alumni contributions to help balance budget shortfalls, institutions use CRM applications to build alumni relationships. Contributions to colleges and universities in the United States increased by 3.4% in 2004, with nearly half of the \$24.4 billion raised that year originating from individuals, including alumni and non-alumni donors.³ As a result, alumni relations departments are increasingly looking to CRM for process-optimization support.



Eduventures, Higher Education Survey on Leadership, Innovation, and Technology 2005

³ Council for Aid to Education, 2005



Institutional Development & Alumni Management Duke

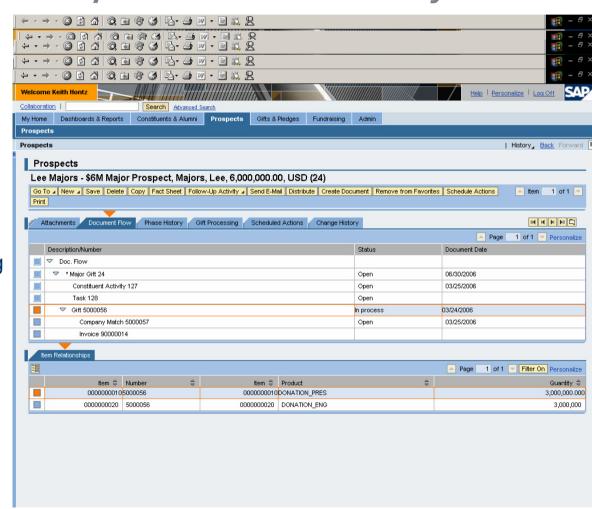


Institutional Development

Managing Gifts & The Final Component Of The Student Life Cycle

Solution Overview

- Portal Roles
- Constituent Management
- Prospect Management
- Campaign Management
- Event Management
- Memberships & Dues Processing
- Alumni Portal
- University Calling Center
- Analytics & Reporting
- Integration To SAP CM





Analytics & Reporting

Delivering Insight Through The Entire Prospect & Student Lifecycle

Role-Based Analytics & Interactive Dashboards

- President's Dashboard & KPI Radar
- VP Of Admissions Dashboard & KPI Radar
- Recruiter Dashboard & KPI Radar
- Actionable Interactive Analytics

Enrollment Analytics

- Enrollment Goal Versus Actual Monitoring
- Enrollment Likelihood Analysis
- Analysis By Status (Prospect, Inquiry, Applicant, Admit, Enroll)

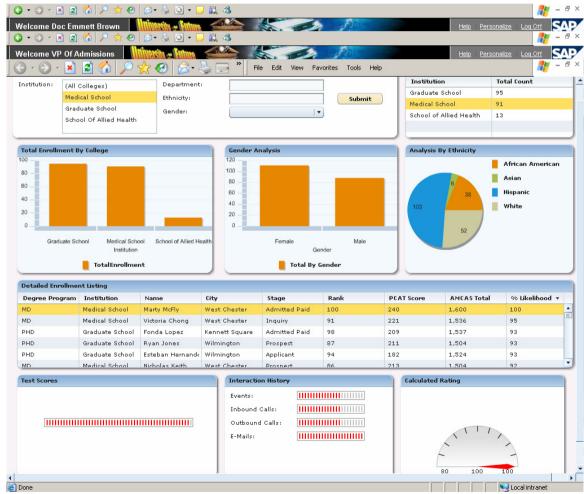
Recruitment Analytics

- Recruitment Funnel
- Recruitment Campaign Response Analysis
- Recruiter Efficiency & Effectiveness

Prospect Analytics

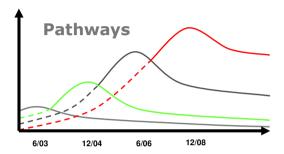
- Prospect Inquires By Channel
- Prospect Pool By Ethnicity, Gender, Scores
- Prospect To Inquiry Analysis

EASY-TO-USE Browser-Based Portal



Bridge between Strategy and Execution

Strategy







Goal Diagrams



Execution

Measures & Targets

	Initiatives	Owner	Status	Start Date	End Date
	Collision Experiments	Craig	Started	6/1/2003	6/1/2004
	Create information portals for customers	Sam	Not Started	1/1/2004	12/31/2004
	Dealer excellence programs	Nathan	Started	4/1/2003	6/1/2004
	Dealer rewards program	Cindy	Started	6/1/2003	6/1/2004
	Introduce EDI infrastructure	Craig	Started	10/1/2003	6/1/2004
	Market research on urban dwellers	Sam	Started	1/1/2003	6/1/2004
	Provide online support to customers and dealers	Rob	finished	1/1/2003	6/30/2003
	Research cost structure	Nathan	Started	1/1/2003	12/31/2003
	Targeted Marketing Campaigns to promote brand and image	Maria	Started	7/1/2003	7/1/2004
	Understand customer requirements	Sam	Started	1/1/2003	12/31/2008
٠	Understand technical vehicle customizability requirements	Maria	Started	1/1/2003	12/31/2008

Supporting Initiatives



Organization-wide Collaboration





Multi-Channel Recruitment

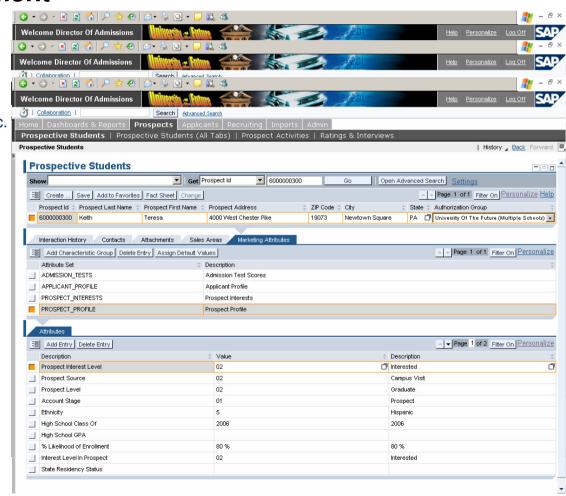
Prospect Data Management

Multi-Channel Prospect Data Management - Anytime, Anywhere

Prospective Student Management

- Prospective Student Profile
- Multiple Address Management
- Interaction History 360 Degree View
- Many-To-Many Relationships
 - Attended High School, Parents, Friend, Etc.
- Notes & Attachments
- Profile Sets & Attributes
 - Prospect & Program Interests
 - Likelihood To Enroll, Etc.
- Multi-Channel Creation & Management
 - Flat-File Import (ACT, SAT)
 - Web Site
 - Portal
 - Phone
 - Mobile/PDA
 - Adobe/PDF
 - **SAPGUI**
- Synchronized With SAP CM

EASY-TO-USE Browser-Based Portal



Multi-Channel Recruitment

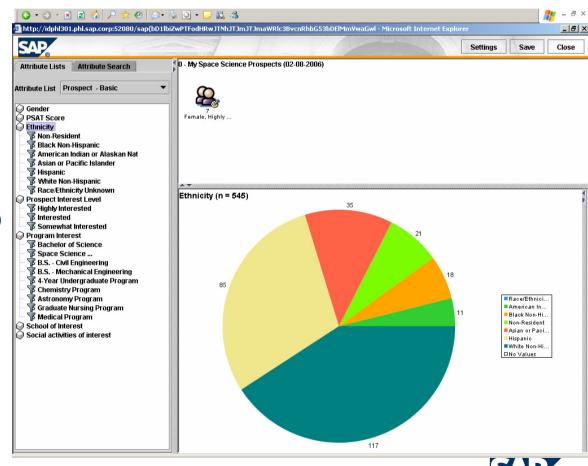
Recruitment Planning

Multi-Channel Recruitment Planning & Execution To Drive Enrollment

Recruitment Planning & Execution

- Multi-Channel Communication
- Recruitment Planning & Execution
- Recruitment Calendar
- Recruitment Budget Planning
- Campaign Automation
- Personalized E-Mail Surveys
- Prospect Profiling & Segmentation
- Direct Mail & E-Mail Form Templates
- Prospective Student Import (ACT/SAT)
- Recruitment Event Management
- Ratings & Interviews

EASY-TO-USE Browser-Based Portal





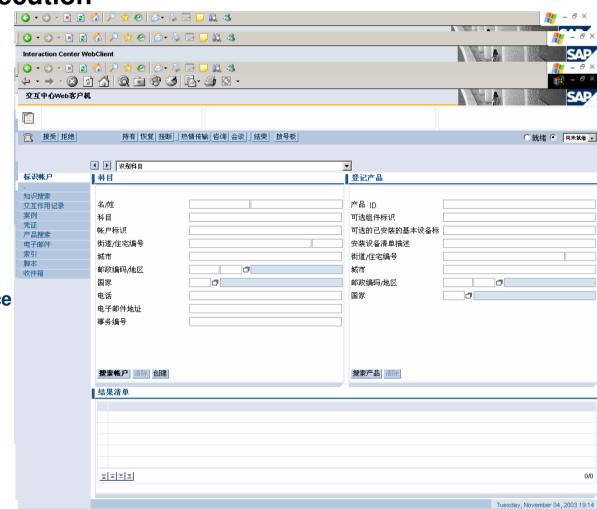
Admissions Interaction Center

Leveraging Phone Interactions To Drive Enrollment

Recruitment Planning & Execution

- Multi-Channel Support
- CTI Screen Pop
- Prospective Student Maintenance
- Interaction Management & Follow-up
- Call List Management
- Interactive Scripting
- Frequently Asked Questions
- Queue Inbox
- Alert Modeler
- Scratch Pad

EASY-TO-USE Browser-Based Interface





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Campus Management Requirements Planning Forum

An accelerated process for gathering product requirements

- Involves customers with CM planning as early as possible
- Ensures that CM represents "real world" requirements
- Determine the desired trade-offs between providing completely new functionality vs. "fleshing out" existing functionality
- Provides a realistically prioritized requirement list for product development

Goal is to achieve a good balance between flexibility and usability

- Continued flexibility to allow universities to configure the system in their own unique ways
- Looking for good opportunities to provide 'best academic practices' in a fully-delivered fashion (i.e. customers should not have to all reinvent the same wheel)





What to expect from the CM Development Phase

- **■**Emphasis on usability (including Web Self-Service)
- **■**Emphasis on delivering complete processes
- **■**Emphasis on ease-of-implementation



Focus



■ Make use of existing applications, functionality and technology easier

Leverage composition of innovative end-toend processes

■ Enhance User Experience

■ Provide solid foundation for managing "constituents" on the campus



Focus Scenarios

Student Life Cycle Management & Academic Service and Learning

- Campus Management
- CRM Constituent Master Data Management
- Learning Management Partnership with Blackboard

Research

Grants Management enhancements with focus on Research Portfolio Management (especially Pre-Award process integration)

Business Process Platform

- Identity and Master Data Management
- Composite Application Framework
- Exchange Infrastructure
- Public Services Platform



Campus Management Plan – High Level

Implementation Accelerator Packages

Web-Uls & Portal Roles

- Student Portal Role and Web Dynpro based Uls
- Registration Officer Role
- Expert-Uls for Module Booking and Academic Work maintenance

Student Relationship Management CM – CRM

- Prospect, Student, Employee one person, multiple roles
- Duplicate Checking & Merging
- Data and Process sharing concept CM CRM (- other systems)

Continuous Enhancements

- Cross-field validation, Obsolete IMG values
- Enhanced prerequisite functionality
- Progression and Degree Audit enhancements
- Attendance Tracking

Enterprise-SOA

- LMS Integration 2nd phase
- Re-use of Services in ERP (LSO, Business Partner, Talent Management)
- Support "Composition" of Processes for End-users
- Support Integration scenarios
- Driven by Input from Enterprise Service Defintion Groups

Priorities
mainly
influenced by
the
Requirement
Planning
Forum



Implementation Accelerator Packages

"IAP" is an initiative for the Campus Management development for

- Fast delivery of new functional developments
- More out-of-the-box web Uls
- Delivery on the promises of Netweaver technologies, e. g.
 - Guided procedures
 - Bl Analytics
 - Adobe Forms
 - Workflows
 - WebDynPro
- BC Sets with pre-defined commonly-used IMG settings
- Extended library of technical configurations
 - Business Add-in implementations for common scenarios
 - VSR rules
 - Selection Methods
- Templates for interface programs (e.g. test score loads)
- Detailed implementation instructions via 'cookbooks'



Examples for first IAPs

BC Set for CM base configuration

Admission Application Form, extended Workflow

Web-UI to display students admissions deficiencies

Composite Test Score Calculation

Web interface for an Equivalency Determination Self-Service

Transfer Articulation Rules Data Load

XML file extracts for online public Course Catalog and Schedule

Selection Method: Students Based upon Admissions Data

SSN Setup and Synchronization between BP SSN and Student Personal ID Number

Mass Assignment of Booking Windows

Sample Student Bill

Mass Transfer of Course Registrations

Web-based Search for Rooms

Graduation Application Form and Workflow

Transcript Request

Missing Grade Process







■Integrated in ERP, streamlined implementation, flexible and stable

■ Customers integrate Pre-Award and Portfolio Management applications

■Researchers don't get access to the information in GM

Extend Grants Management to the end-users desktop – from Grants Management as product to a solution for research scenarios





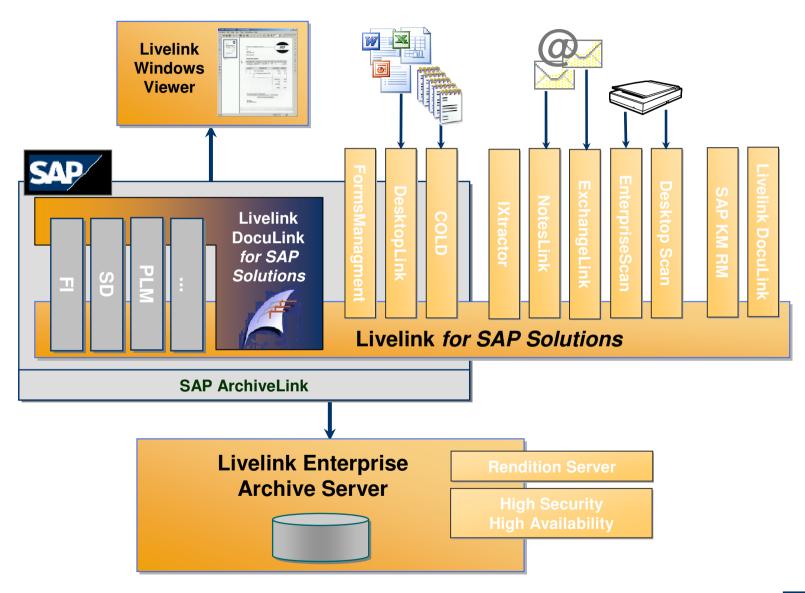
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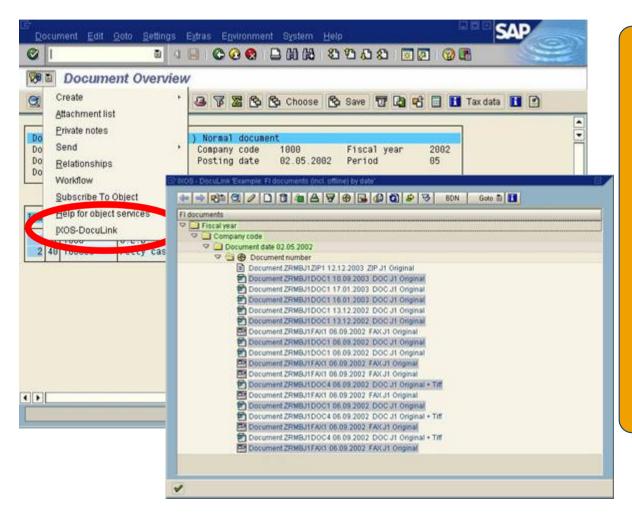


OpenText Livelink for SAP® Solutions Ver. 9.5





Livelink DocuLink for SAP Solutions Integration into SAP Standard Applications



- SAP Standard Applications
- Call of Livelink
 Doculink for SAP
 Solutions via SAP
 menu
- Livelink Doculink starts with related process view



SAP & Blackboard Partnership

Value Proposition





What's different?

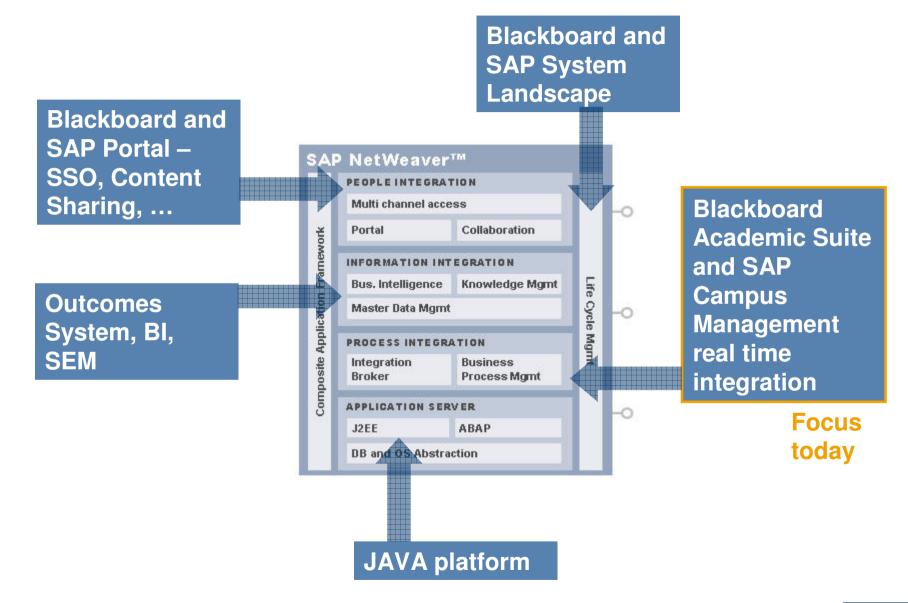
- Comprehensive view on the whole core business of Universities across administrative and academic areas
- Modernization of administration, learning and IT in one integrated approach

Value

- Enables integrated strategy
- Allows emerging universities to leap-frog modernization
- Accelerates transformation
- Avoids expensive pre-studies and evaluations

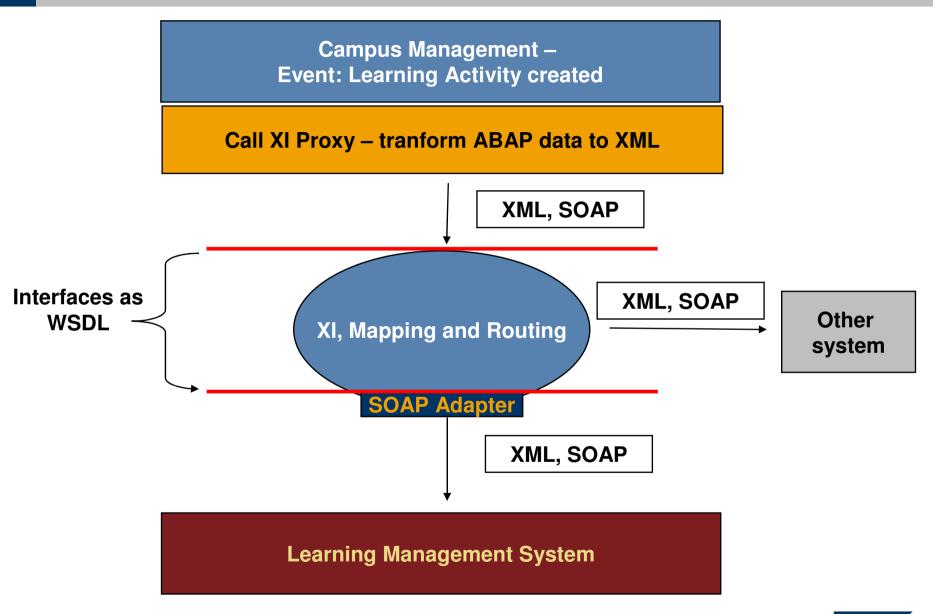


Integration Ideas





Brokered Web Service Calls Using XI





Brokered Web Service Calls - Advantages

 Value added Web Service

 Monitoring of all Web Service calls

 Decoupling of Web Service and application

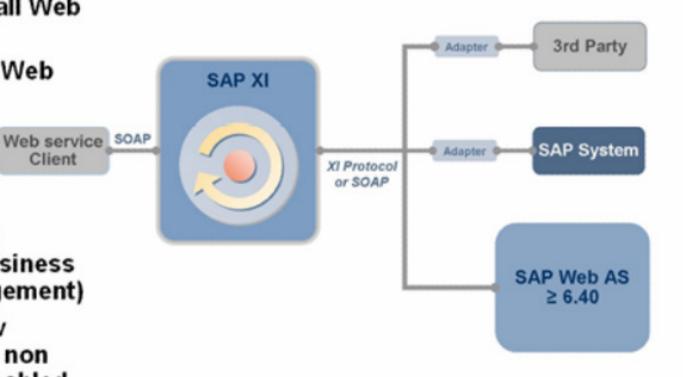
Mapping

Routing

·ccBPM (Cross **Component Business Process Management)**

Client

 Adapters allow connections to non Web Service enabled applications





Composite Process Between SAP & Blackboard

Instructor Calls Grading Self Service

Instructor Selects
Class

Instructor reviews and update grades grades

- In the instructor portal the user calls the grading self service
- The system shows the classes taught by the instructor
- The instructor selects the one which he wants to grade
- The system displays the attendee list of the class and reads existing grading information
- The instructor reviews the grades and updates the information

- The instructor submits the grades
- The grades are saved in SAP Campus Management

SAP: Read Employee by Basic Data (User) SAP: Find Learning Activities by Employee SAP: Find Learning Registrations by Learning Activity

Bb: Read Grades by Learning Registration SAP: Update Learning Appraisals

SAP ERP

incl. Campus Management

Enterprise
Service
Repository

Blackboard Academic Suite

XI

SAP

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