



TEXAS
STATE
UNIVERSITY
SAN MARCOS



Aligning IT Projects with Institutional Goals

David Pan
SAP Public Services

May 8, 2007 HERUG

THE BEST-RUN BUSINESSES RUN SAP™





TEXAS
STATE
UNIVERSITY
SAN MARCOS



Background and Approach

Analysis (Business Perspective)

Analysis (IT Perspective)

Recommended IT Projects & Timeline

Consolidated Scores

Q&A

THE BEST-RUN BUSINESSES RUN SAP™



Texas State University Background

Texas State University-San Marcos is a doctoral granting university located in the burgeoning Austin-San Antonio corridor, the largest campus in the Texas State University System, and one of the 75 largest universities in the country.

Texas State's 27,503 students choose from 115 undergraduate and 84 masters and 6 Ph.D. graduate degree programs offered by seven colleges.

In the fall of 2004, there were 903 full-time faculty and 1,450 full-time staff.

Implemented SAP since Nov 2002. Current version: R/3 4.7 x200.



Approach – 1. Grasp the Vision



We begin with 4 simple questions.

1. What strategic goal does the business expect to accomplish in the next 24 months?
2. What business objectives are defined to achieve the strategic goal?
3. Of the defined business initiatives planned for the next two years, which five have the highest priority?
4. What IT initiatives are planned in the next 24 months?

Approach – 2, Identify Topics for Workshop



Based on information received, we identified 4 major topics and invited business specialists to a workshop.

- 1. Student and campus information system**
- 2. Enterprise intelligence and reporting strategy**
- 3. Self-services**
- 4. Portal strategy and enhanced user productivity**

Approach – 3, Document Our Findings



We summarized our findings in the following slides.

Findings – General Session

- 1) Need to promote the perception of SAP implementation by
 - 1) improving efficiency of ERP system.**
 - 2) enabling paperless work environment**
 - 3) expanding workflow capability.****
- 2) Make information available to end-users. Provide user-friendly tools to end-users and educate them to use and navigate the systems.**
- 3) Need to establish a university-wide imaging solution along with to-be implemented new campus management solution.**
- 4) Need to re-evaluate current infrastructure to reduce TCO including server farm, SAN, server virtualization, ID management.**
- 5) Consolidate legacy student data into SAP BW. Design business intelligence strategy. Make information and report easily accessible to end-users (google-ization).**
- 6) In summary. Need to unleash the power in meaningful ways that our customer understands and can use effectively.**

Findings – Student and Campus Information System

- 1) Current business processes are supported by more than a dozen legacy systems written in COBOL, S1032(VAX) and patched with home grown web front-end.**
- 2) Limited resources to respond quickly to continued increasing demand for development requests. Technology Resources Dept. does not currently have adequately trained staff to accommodate J2EE web development. Many interfaces are batch-file based.**
- 3) There is a concern that Texas State's web capability are not in line with other universities'. Thus the desire to meet or exceed peer universities' capability.**

- 1) Goal: provide an operational data store and tools in a centralized repository using existing SAP BW functionality**
- 2) Data to be considered: personnel administration, payroll, employee recruiting, student, and other legacy data**
- 3) Important functionalities: dash board, broadcasting, access via portal**
- 4) Need to enhance internal staff knowledge of SAP BW capability.**
- 5) Shared some BW features with some senior management and received strong interests.**
- 6) In the process of establishing user group to collect reporting requirement and prioritize them**
- 7) Need to improve reporting quality for FI and CE enabled HR, PBC and Budget**

Findings – Self-Services

- 1) Currently implemented XSS: Time Entry, Time Approval, Address Change, Remuneration statement, Review of benefits, Review time, Personnel Change Request, My Bank (home grown)**
- 2) Plan to implement: performance appraisal, skill, training, leave request, W-2, W-4**
- 3) University's goal is to develop underlying workflow for personnel change requests which are currently restricted to completion and form-printing**
- 4) Additional goal is to workflow enable any business transaction that requires review and/or approval**
- 5) Current travel and expense processes are paper based with an extended turnaround time.**
- 6) University would like to implement travel planning which can augment planning and provide data which increases negotiation power with vendor.**
- 7) Strong interest in self procurement with EBP solution.**

Findings – Portal Strategy

- 1) University is in the process of defining its portal strategy.**
- 2) Centralized User Administration (CUA) strategy needs further development.**
- 3) Enterprise –wide SSO strategy needs refinement, currently using SAP Logon ticket to access R/3 and EP.**
- 4) University is evaluating its use of several portal options as university portal, strongly leaning towards uPortal. Will need to integrate portal content between SAP EP and other portal.**
- 5) Need to consider technology to support university’s Enterprise SOA adoption: Business Process Management, UI, authentication**
- 6) Currently deploying two web content development technologies: SAP and Magnolia.**
- 7) University uses Oracle ID MGMT and MS Active Directory to manage user identity.**
- 8) University does not have strong web development knowledge in both J2EE and .NET.**
- 9) Need to determine the impact of its ERP upgrade strategy on their ability to deploy various business packages via SAP EP.**



TEXAS
STATE
UNIVERSITY
SAN MARCOS



Background and Approach

Analysis (Business Perspective)

Analysis (IT Perspective)

Recommended IT Projects & Timeline

Consolidated Scores

Q&A

THE BEST-RUN BUSINESSES RUN SAP™



Business Vision and Initiatives

Be a public, student-centered, doctoral granting institution dedicated to excellence in serving the educational needs of the diverse population of Texas and the world beyond.

Relevant Key Initiatives

- 1. Modernize Student Information System**
- 2. Enhance ERP value**
- 3. Minimize business disruption via enhanced IT security**
- 4. Adopt new technology to enhance campus support**
- 5. Maximize value of IT investment**

Business Requirements

1. Reduce TCO
2. Easy & efficient IT management
3. Easy access to IT supporting resources
4. Enhance campus business activity experience
5. Automate business process via workflow
6. Minimize business disruption
7. Secure information
8. Increase productivity
9. User friendly
10. Paperless
11. Seamless inter-departmental access
12. Easy search
13. Easy A2A integration
14. Enable self procurement
15. Facilitate enterprise reporting
16. Dashboard
17. Measurable KPI
18. Expanded distance learning opportunities
19. One version of the truth
20. Embedded analytics
21. Student-centered education experience
22. Technology-enabled teaching/learning process
23. Expanded employee/manager self-service
24. Enhance information broadcasting capabilities

NetWeaver Benefit to Business Requirements 1 of 2

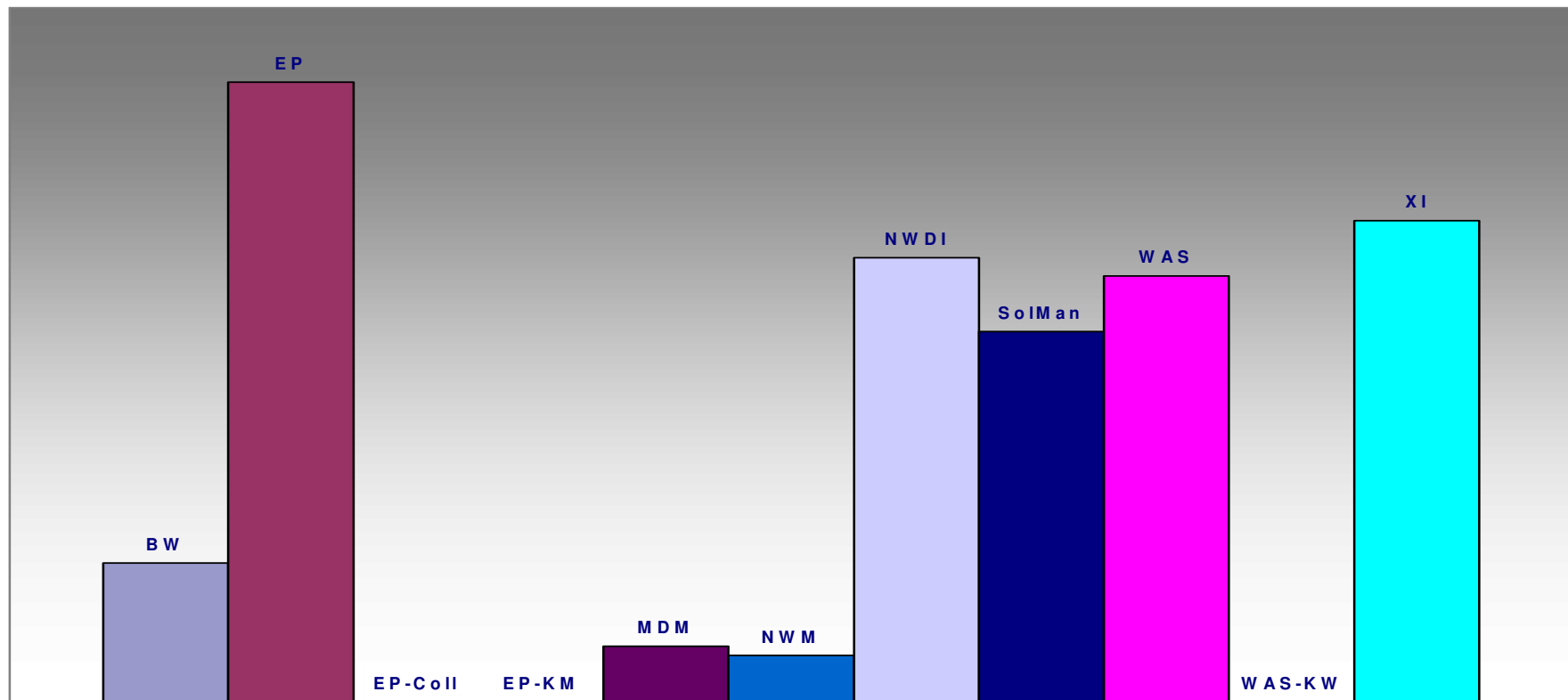
Customer Business Requirements	BW	EP	EP-Coll	EP-KM	MDM	NWM	NW DI	SoIM an	WAS	WAS-KW	XI
1. reduce TCO	👉	💣	👉	👉	👉	👉	+	✈️	💣	👉	✈️
2. easy & efficient IT management	👉	👉	👉	👉	👉	👉	👉	+	😊	👉	😊
3. easy access to IT supporting resources	👉	👉	👉	👉	👉	👉	😊	👉	👉	👉	👉
4. enhance campus business activity experience	👉	😊	✈️	✈️	👉	👉	👉	👉	👉	💣	😊
5. automate business process via workflow	👉	👉	😊	👉	👉	👉	👉	👉	😊	👉	👉
6. minimize business disruption	👉	👉	👉	👉	👉	👉	👉	👉	👉	👉	👉
7. secure information	👉	👉	👉	👉	👉	👉	👉	👉	👉	👉	👉
8. increase productivity	👉	👉	✈️	😊	👉	👉	👉	👉	👉	✈️	💣
9. user friendly	👉	👉	👉	👉	👉	👉	💣	👉	👉	👉	👉
10. paperless	👉	👉	👉	👉	👉	👉	👉	👉	👉	👉	👉
11. seamless inter-departmental access	👉	😊	👉	👉	👉	👉	👉	👉	👉	👉	✈️
12. easy search	👉	👉	👉	👉	👉	👉	👉	👉	👉	👉	👉

NetWeaver Benefit to Business Requirements 2 of 2

Customer Business Requirements	BW	EP	EP-Coil	EP-KM	MDM	NWM	NW DI	SoIM an	WAS	WAS -KW	XI
13. easy A2A integration	👉	👉	👉	👉	👉	👉	😊	👉	👉	👉	✈️
14. enable self procurement	👉	👉	👉	👉	👉	👉	👉	👉	👉	👉	👉
15. facilitate enterprise reporting	💡	👉	👉	👉	👉	👉	👉	👉	👉	👉	👉
16. dashboard	👉	👉	👉	👉	👉	👉	👉	👉	👉	👉	👉
17. measurable KPI	👉	👉	👉	👉	👉	👉	👉	😊	👉	👉	👉
18. expanded distance learning opportunities	👉	👉	👉	👉	👉	👉	👉	👉	👉	👉	👉
19. one version of the truth	😊	👉	👉	😊	💡	👉	👉	👉	👉	👉	👉
20. embedded analytics	😊	👉	👉	😊	👉	👉	👉	👉	👉	👉	👉
21. student-centered education experience	👉	👉	👉	👉	👉	👉	👉	👉	👉	👉	👉
22. technology-enabled teaching/learning process	👉	👉	💡	👉	👉	👉	👉	👉	👉	👉	👉
23. expanded employee/manager self-service	👉	👉	👉	👉	👉	👉	👉	👉	👉	👉	👉
24. enhance information broadcasting capabilities	😊	👉	👉	😊	👉	👉	👉	👉	👉	👉	👉

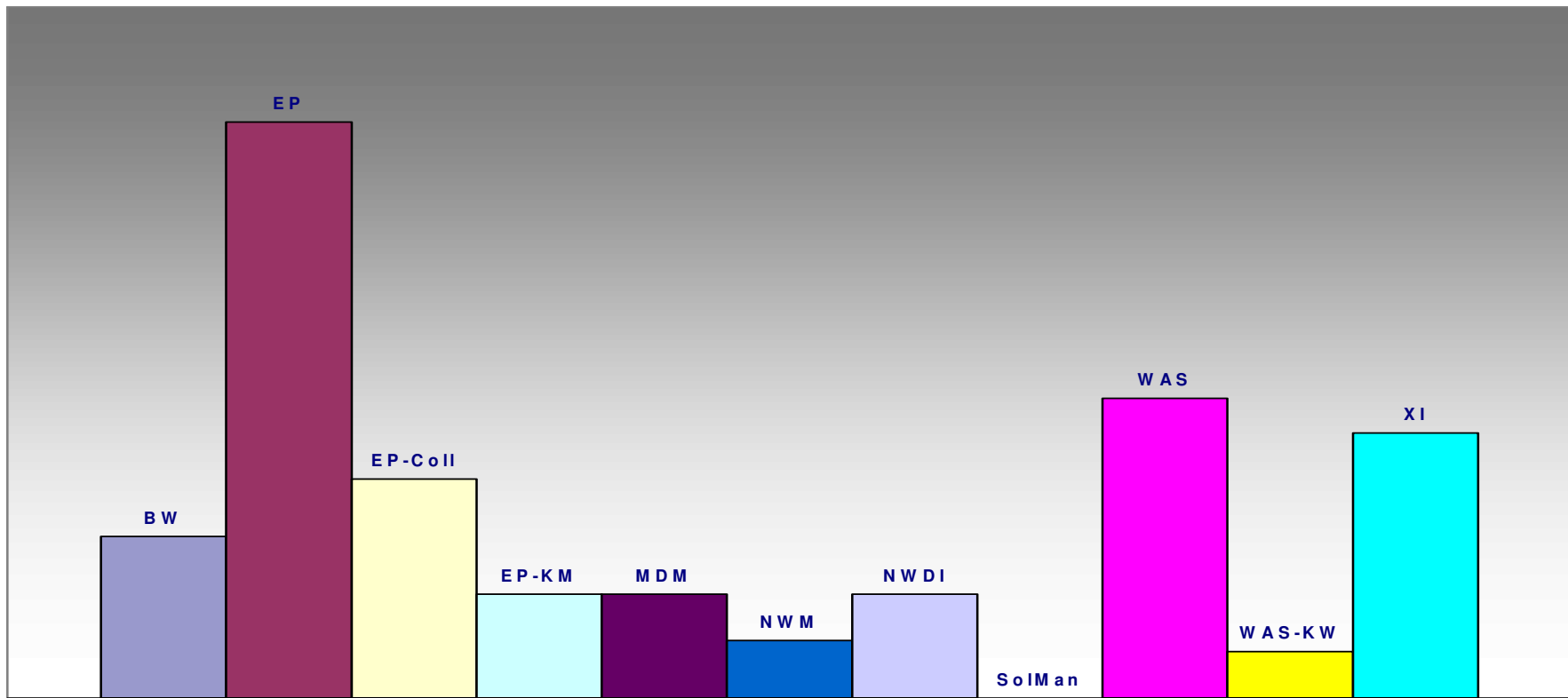
Modernize Student Information System

Subject	Content
Focused strategy	Select and implement new student information/campus management system. Consolidate legacy student data into SAP BW. Provide enhanced Web service.
Measures (assume cumulative)	TBD
Timeframe	18 months
Affected IT Systems	Student Information System, R/3
NetWeaver Enablers	EP, XI, NWDI, WAS, SoIMan, BW



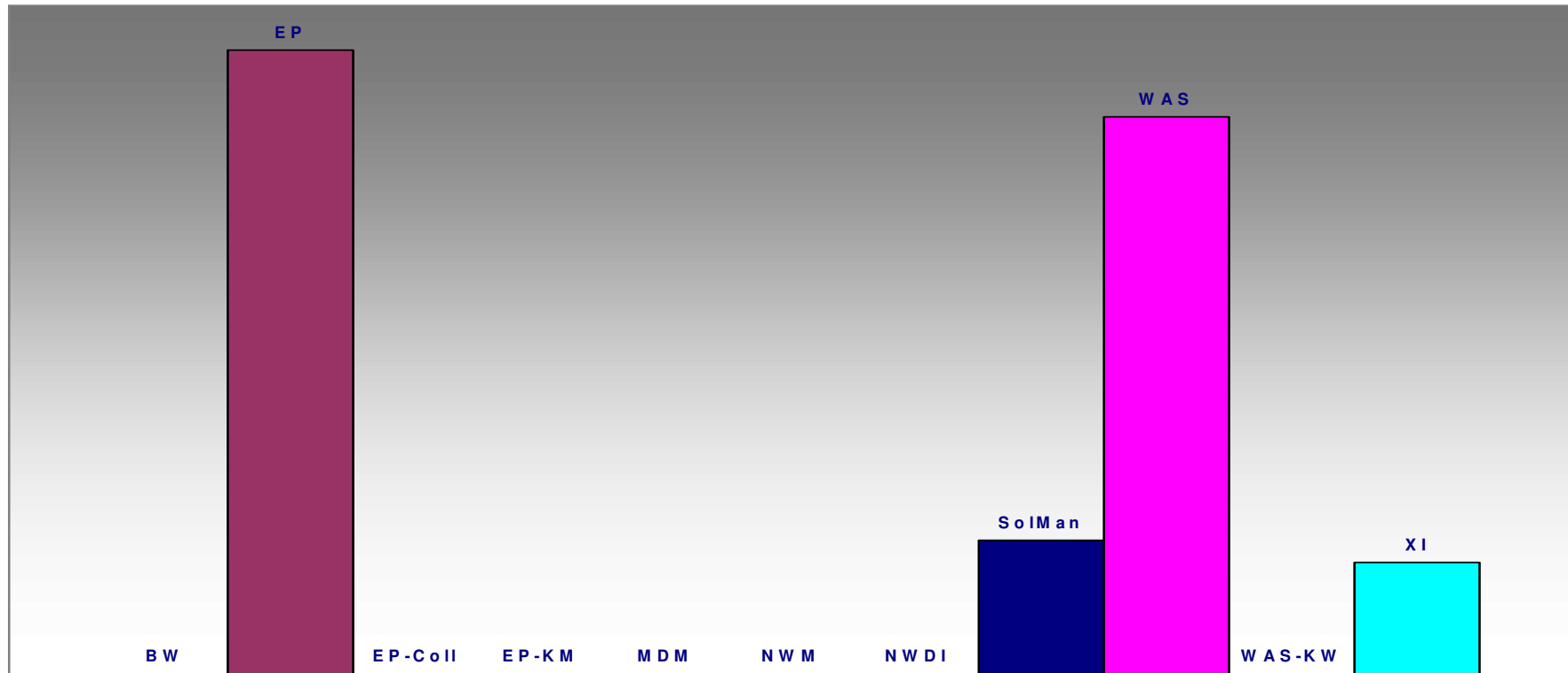
Enhance ERP Value

Subject	Content
Focused strategy	Upgrade to ERP05 to take advantage of e-SOA framework, enable some IT projects and satisfy urgent HR needs. Evaluate ERP05 PS edition.
Measures (assume cumulative)	TBD
Timeframe	18 months
Affected IT Systems	R/3, ID MGMT
NetWeaver Enablers	EP, XI, NWDI, WAS, BW



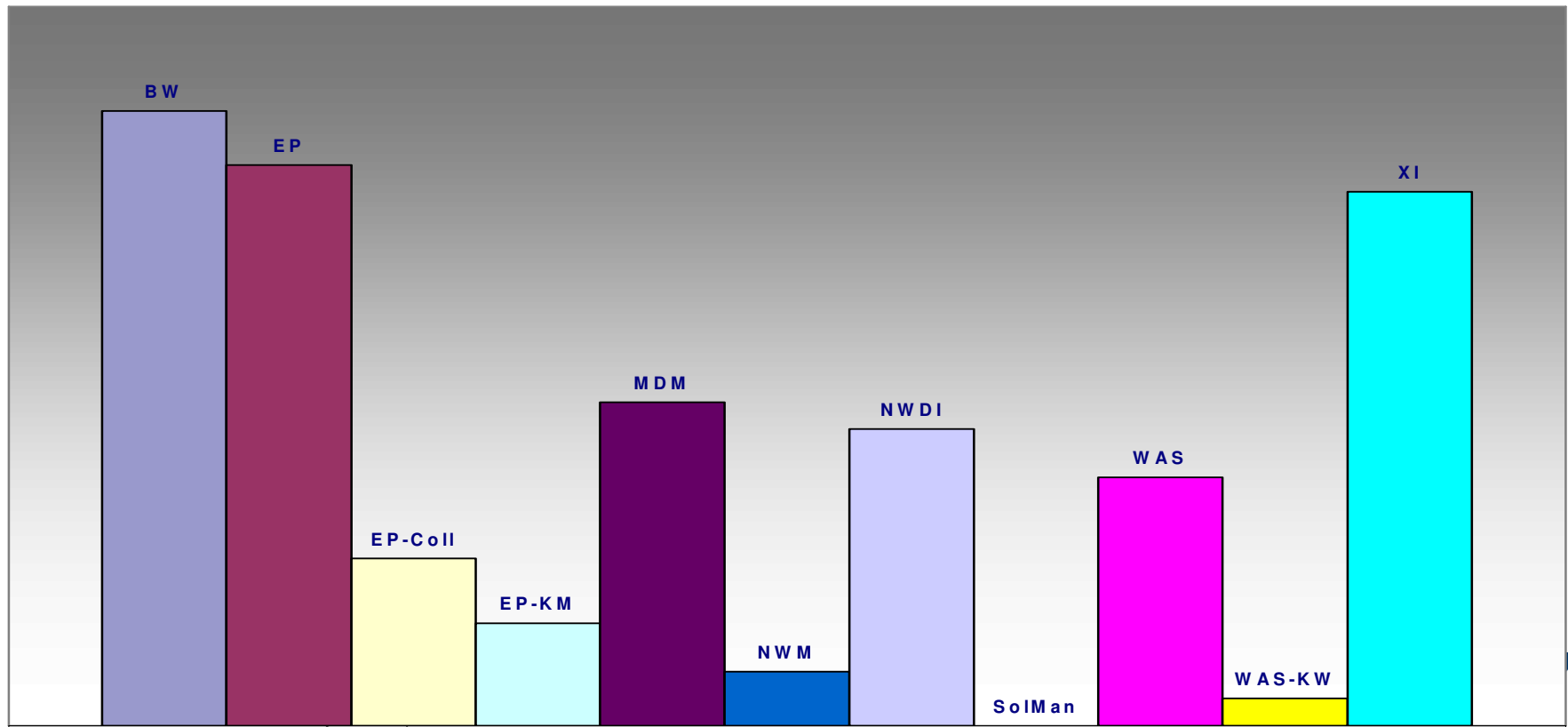
Minimize business disruption via enhanced IT security

Subject	Content
Focused strategy	Establish corporate ID mgmt. Integrate with CUA & SSO. Develop federated portal w/easy & secure access.
Measures (assume cumulative)	TBD
Timeframe	8 months
Affected IT Systems	R/3, ID mgmt
NetWeaver Enablers	EP, XI, NWDI, WAS, SoIMan, BW



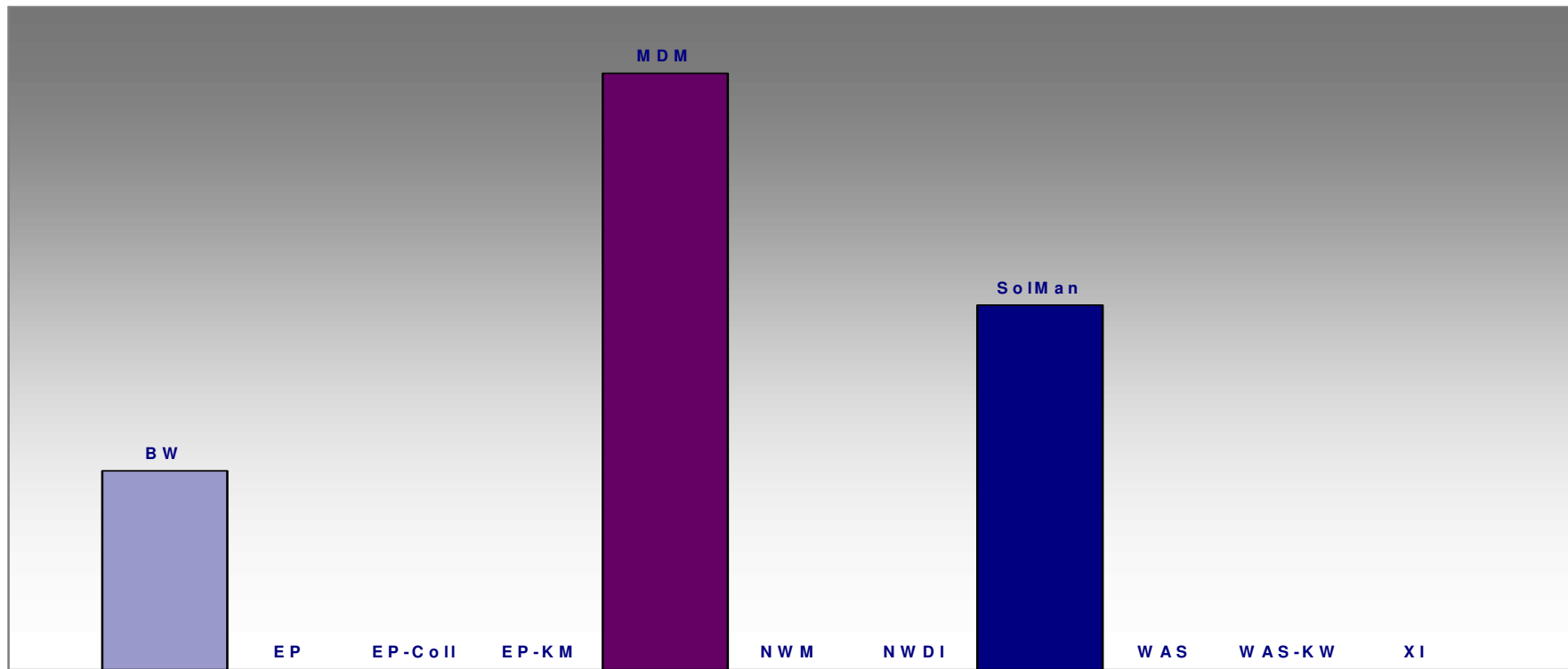
Adopt new technology to enhance campus support

Subject	Content
Focused strategy	Set up e-SOA framework, model key business processes, facilitate A2A via SOA.
Measures (assume cumulative)	TBD
Timeframe	8 months
Affected IT Systems	R/3
NetWeaver Enablers	EP, XI, NWDI, WAS, BW, MDM



Maximize value of IT investment

Subject	Content
Focused strategy	Identify reporting needs, deploy BI (info broadcast, data warehouse modelling, visual composer). Evaluate MDM opportunity. Establish/monitor KPI in SoIMan
Measures (assume cumulative)	TBD
Timeframe	8 months
Affected IT Systems	R/3
NetWeaver Enablers	EP, XI, NWDI, WAS, SoIMan, BW





TEXAS
STATE
UNIVERSITY
SAN MARCOS



Background and Approach

Analysis (Business Perspective)

Analysis (IT Perspective)

Recommended IT Projects & Timeline

Consolidated Scores

Q&A

THE BEST-RUN BUSINESSES RUN SAP™



IT Vision and Initiatives

Develop, enhance, and maintain the technological infrastructure, access, support, training, and professional development that are needed to successfully empower the university community to achieve its varied instructional, research, and business services activities.

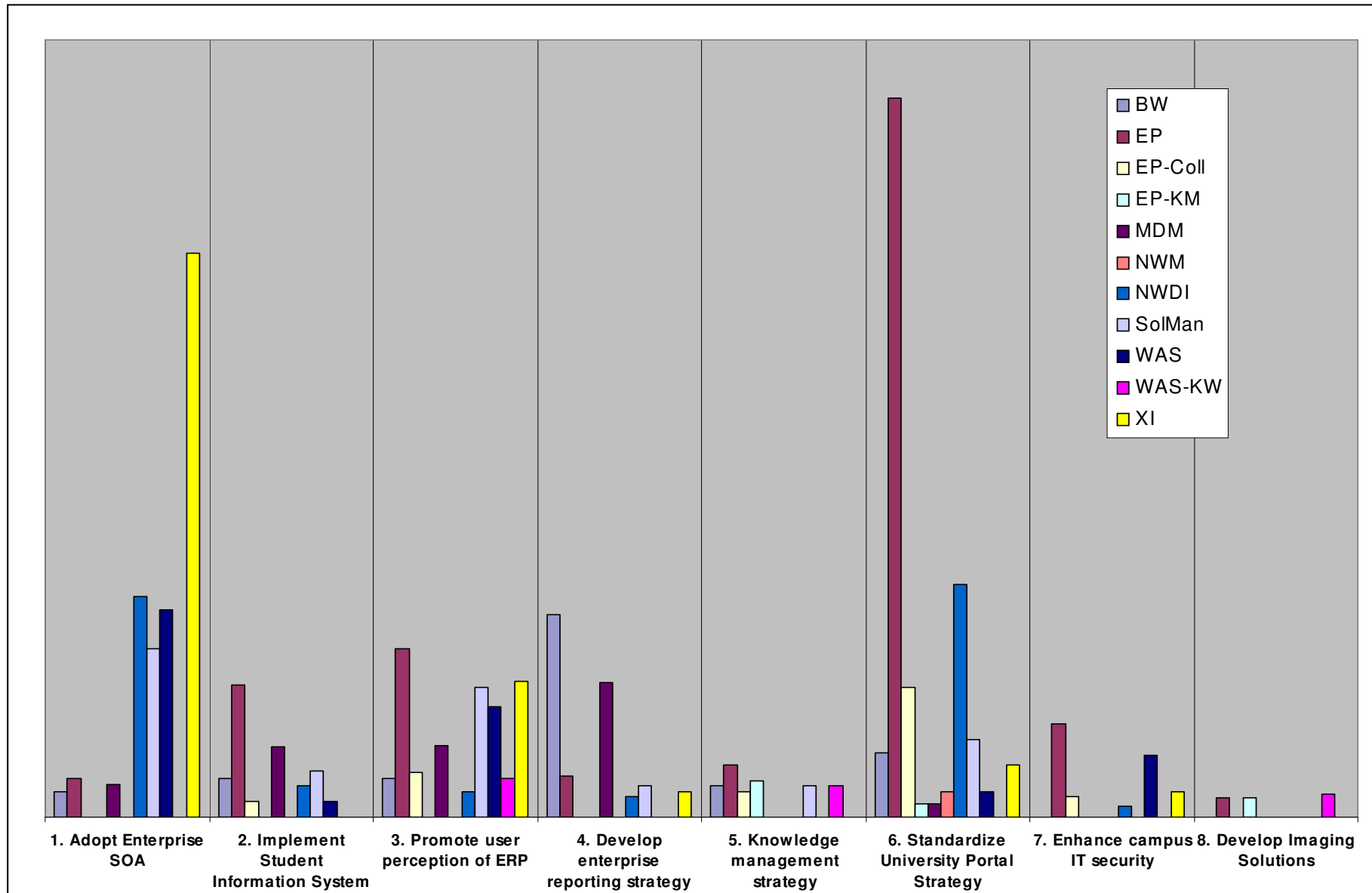
Relevant Key Initiatives

- 1. Adopt Enterprise SOA**
- 2. Implement a new Student Information System**
- 3. Promote user perception of ERP**
- 4. Develop enterprise reporting strategy**
- 5. Develop enterprise knowledge management solution**
- 6. Adopt comprehensive portal strategy**
- 7. Enhance campus IT security**
- 8. Establish University wide Imaging Solution**

NetWeaver Benefit to IT Initiatives

	BW	EP	EP-Coll	EP-KM	MDM	NWM	NWDI	SolMan	WAS	WAS-KW	XI
Customer IT Initiatives											
1. Adopt Enterprise SOA	20	30	0	0	25	0	170	130	160	0	435
2. Implement new Student Information System	30	102	12	0	54	0	24	36	12	0	0
3. Promote user perception of ERP	30	130	35	0	55	0	20	100	85	30	105
4. Develop enterprise reporting strategy	156	32	0	0	104	0	16	24	0	0	20
5. Develop enterprise knowledge management strategy	24	40	20	28	0	0	0	24	0	24	0
6. Standardize University Portal Strategy to support corporate web site, business services, instructional blackboard, and individuals	50	555	100	10	10	20	180	60	20	0	40
7. Enhance campus IT security	0	72	16	0	0	0	8	0	48	0	20
8. Develop Imaging Solutions	0	15	0	15	0	0	0	0	0	18	0
NetWeaver Summarized Score	310	961	183	38	248	20	418	374	325	54	620

IT Initiatives and NetWeaver Enablers/Benefit





TEXAS
STATE
UNIVERSITY
SAN MARCOS



Background and Approach

Analysis (Business Perspective)

Analysis (IT Perspective)

Recommended IT Projects & Timeline

Consolidated Scores

Q&A

THE BEST-RUN BUSINESSES RUN SAP™

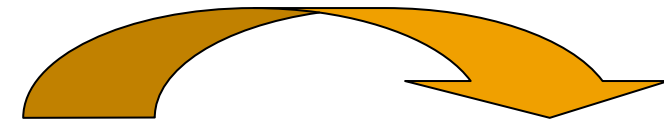


Recommended IT Projects

Based on our analysis, SAP recommends the following IT projects

- 1. Implement new Student Information System**
- 2. Upgrade to SAP ERP 2005**
- 3. Implement a travel planning and reimbursement solution**
- 4. Upgrade SAP Enterprise Portal**
- 5. Implement SAP NetWeaver Business Intelligence**
- 6. Implement an SRM PPS solution**
- 7. Establish infrastructure for SOA adoption**
- 8. Model key business process for SOA enabled**
- 9. Establish SLA and monitor KPI**
- 10. Implement SAP KM**
- 11. Integrate Oracle ID mgmt, MS Active Directory and SAP CUA**
- 12. Implement SAP XI and ES repository**
- 13. Implement SAP ADS**
- 14. Design and implement Federated Portal Network**
- 15. Select and implement enterprise document management system**
- 16. Develop/deliver enhanced SAP system training for users**

IT Projects Aligned Business Initiatives



IT Projects

- Implement new Student Information System
- Upgrade to SAP ERP 2005
- Implement a travel planning and reimbursement solution
- Upgrade SAP Enterprise Portal
- Implement SAP NetWeaver Business Intelligence
- Implement an SRM solution
- Establish infrastructure for SOA adoption
- Model key business process for SOA enabled
- Establish SLA and monitor KPI
- Implement SAP KM
- Integrate Oracle ID mgmt, MS Active Directory and SAP CUA
- Implement SAP XI and ES repository
- Implement SAP ADS
- Design and implement Federated Portal Network
- Select and implement enterprise document management system
- Develop/deliver enhanced SAP system training for users



IT Initiatives

- Adopt Enterprise SOA
- Implement a new Student Information System
- Promote user perception of ERP
- Develop enterprise reporting strategy
- Develop enterprise knowledge management strategy
- Standardize University Portal Strategy
- Enhance campus IT security
- Develop Imaging Solutions

Business Initiative

- Modernize Student Information System
- Enhance ERP Administration
- Minimize business disruption via enhanced IT security
- Adopt new technology to enhance campus support
- Maximize value of IT investment

NetWeaver Benefit to IT Projects

Customer IT Project	BW	EP	EP-Coll	EP-KM	MD M	NWM	NW DI	Sol Ma n	WA S	WA S-KW	XI
1. Implement new Student Information System	👍	👍	👍	👍	👍	👍	👍	👍	👍	👍	👍
2. Upgrade to SAP ERP 2005	👍	👍	👍	👍	👍	👍	👍	👍	👍	👍	👍
3. Implement a travel planning and reimbursement solution	👍	👍	👍	👍	👍	👍	👍	👍	👍	👍	👍
4. Upgrade SAP Enterprise Portal	👍	✈️	+	👍	👍	👍	💣	👍	👍	👍	👍
5. Implement SAP NetWeaver Business Intelligence	✈️	👍	👍	👍	✈️	👍	👍	👍	👍	👍	👍
6. Implement an SRM solution	👍	👍	👍	👍	👍	👍	👍	👍	👍	👍	👍
7. Eestablish infrastructure for SOA adoption	👍	👍	👍	👍	👍	👍	👍	👍	👍	👍	💣
8. Model key business process for SOA enabled	👍	👍	👍	👍	👍	👍	👍	👍	👍	👍	✈️
9. Establish SLA and monitor KPI	👍	👍	👍	👍	👍	👍	👍	💣	👍	👍	👍
10. Implement SAP KM	👍	👍	👍	💣	👍	👍	👍	👍	👍	+	👍
11. Integrate Oracle ID mgmt, MS Active Directory and SAP CUA	👍	👍	👍	👍	👍	👍	👍	👍	👍	👍	👍
12. Implement SAP XI and ES repository	👍	👍	👍	👍	👍	👍	😊	😊	👍	👍	+
13. Implement SAP ADS	👍	👍	👍	👍	👍	👍	👍	👍	👍	👍	👍
14. Design and implement Federated Portal Network	👍	✈️	👍	👍	👍	👍	😊	👍	👍	👍	👍
15. Select and implement enterprise document management system	👍	👍	👍	😊	👍	👍	👍	👍	👍	+	👍
16. Develop/deliver enhanced SAP system training for users	👍	👍	👍	👍	👍	👍	👍	👍	👍	+	👍





TEXAS
STATE
UNIVERSITY
SAN MARCOS



Background and Approach

Analysis (Business Perspective)

Analysis (IT Perspective)

Recommended IT Projects & Timeline

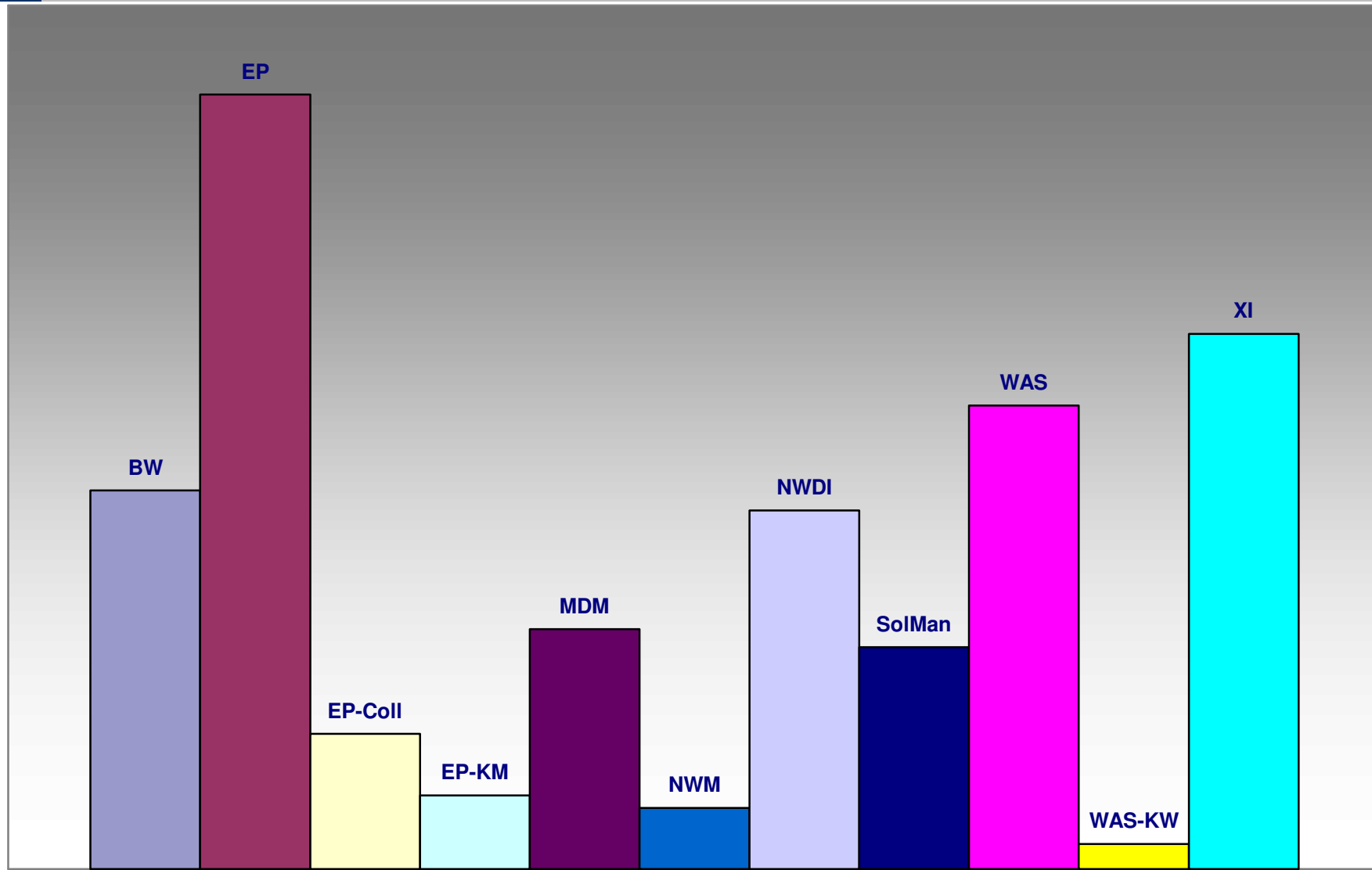
Consolidated Scores

Q&A

THE BEST-RUN BUSINESSES RUN SAP™

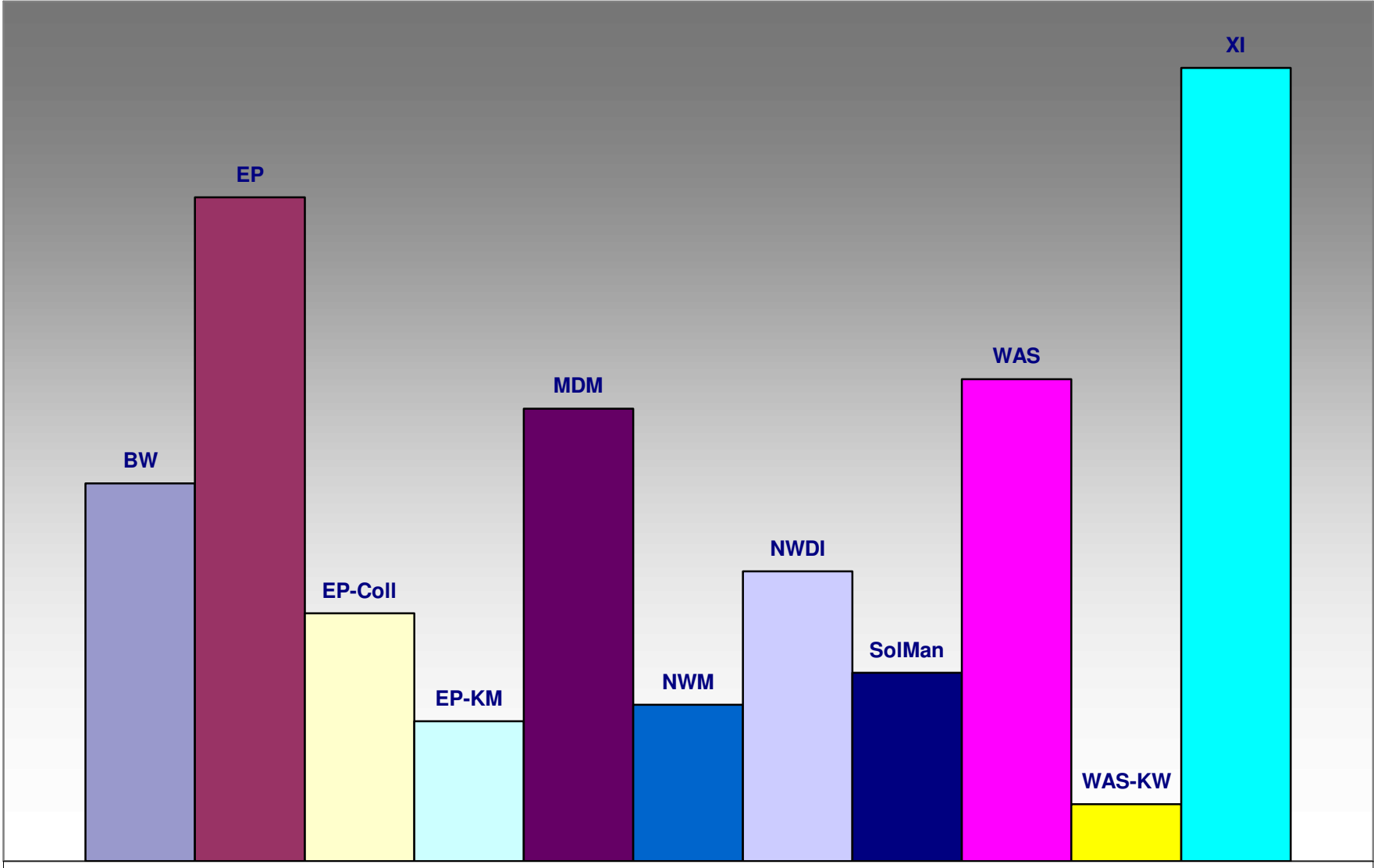


Business Initiatives Fit Analysis



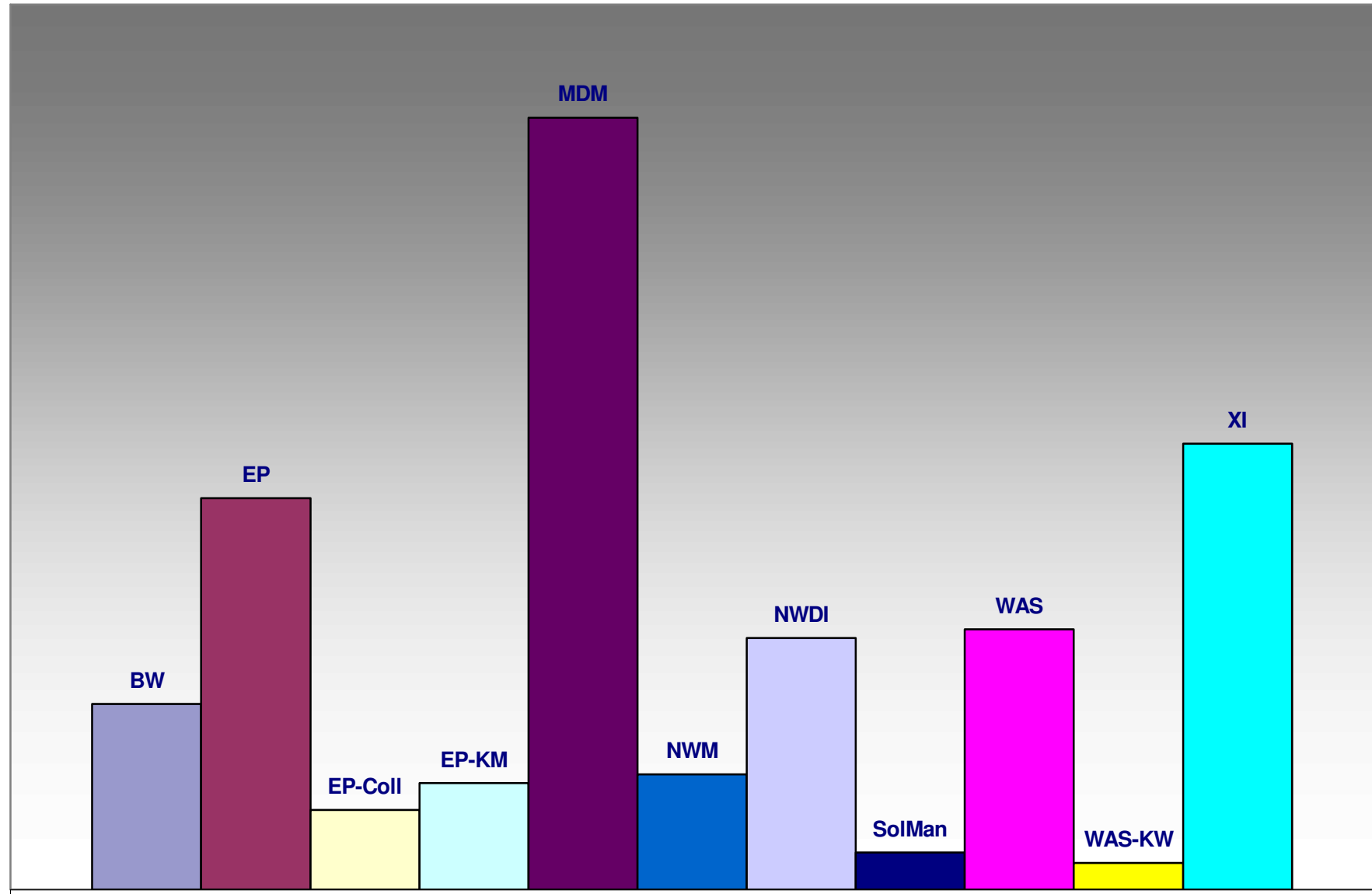
Business Initiatives Fit Analysis Summarized Score

Benefit Score



NetWeaver Summarized Benefit Score

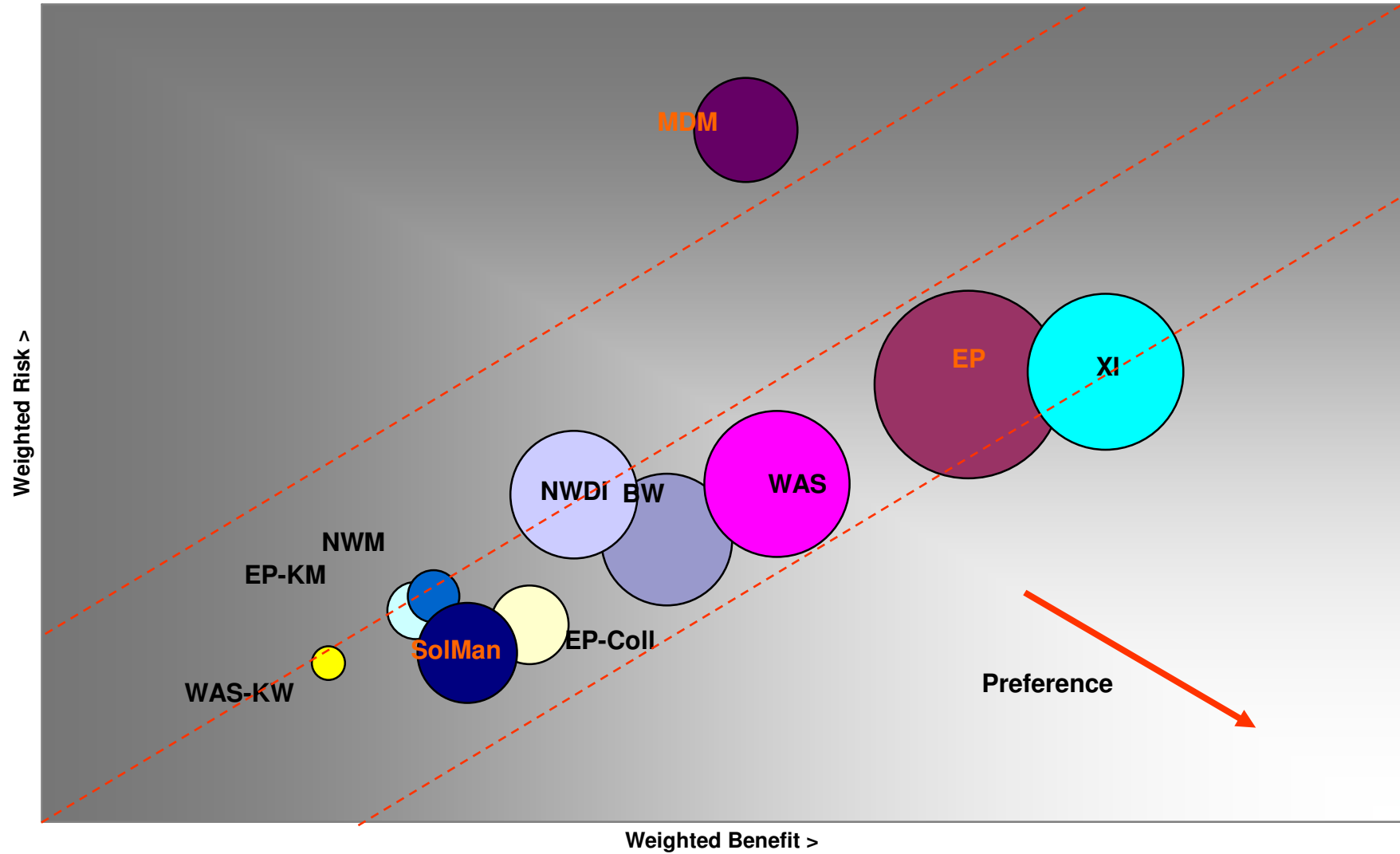
Risk Score



NetWeaver Summarized Risk Score

NetWeaver Benefit vs.. Risk Rating

Business Initiative Fit Score (Ball Size) v.s. Benefit and Risk





TEXAS
STATE
UNIVERSITY
SAN MARCOS



Background and Approach

Analysis (Business Perspective)

Analysis (IT Perspective)

Recommended IT Projects & Timeline

Consolidated Scores

Q&A

THE BEST-RUN BUSINESSES RUN SAP™



Thank You for Your Time.

NetWeaver Component – BW enables these tasks

- **Ad hoc Query**
- **Business Planning**
- **Enterprise Reporting, Query and Analysis**
- **Excel Integration**
- **Information Broadcasting**
- **Modeling BI Data with SAP NetWeaver Visual Composer**
- **Modeling the Data Warehouse**

NetWeaver Component – EP enables these tasks

- **Authentication Using a Directory with SSO Integration Using SAP Logon Tickets**
- **Combining Embedded and Unbound Processes**
- **Creating Applications Using SAP NetWeaver and Visual Composer**
- **Creating Portal Applications using the .Net PDK**
- **Developing Applications that are Compatible with SAP NetWeaver**
- **Developing JAVA Applications using Web Dynpro**
- **Enabling Co-existence of Several Portals**
- **Implementing a Global Portal (Federated Portal)**
- **Implementing a Multi-tenant Portal**
- **Integrating User Management and Access Management**
- **Leveraging Java 2 Platform, Enterprise Edition (J2EE) Standard**
- **Providing Uniform Content Access**

NetWeaver Component – EP-Coll enables these tasks

- **Ad-hoc Collaboration**
- **Central Access to Tasks**
- **Collaboration in Virtual Rooms**

NetWeaver Component – EP-KM enables these tasks

- **Content Creation, Publication and Access**
- **Content Integration and Management**

NetWeaver Component – MDM enables these tasks

- **Central Master-data Management**
- **Consolidation of Business Intelligence Master Data**
- **Consolidation of Master Data from Client Systems**
- **Master Data Harmonization**

NetWeaver Component – NW Mobile enables these tasks

- **Enabling Mobile Applications for Occasional Connection**
- **Running Mobile Applications with an Online Connection**

NetWeaver Component – NWDI enables these tasks

- **Creating Applications Using SAP NetWeaver and Visual Composer**
- **Developing ABAP Applications using Web Dynpro**
- **Developing Applications that are Compatible with SAP NetWeaver**
- **Developing JAVA Applications using Web Dynpro**
- **Developing Mobile Applications for Occasional Connection**
- **Leveraging Java 2 Platform, Enterprise Edition (J2EE) Standard**
- **Providing Web Services Interoperability**
- **Service-Oriented Development**
- **Service-Oriented Integration (Mediated with Integration Broker)**

NetWeaver Component – SolMan enables these tasks

- **Administering SAP NetWeaver**
- **Developing ABAP Applications using Web Dynpro**

NetWeaver Component – WAS enables these tasks

- **Adaptive Computing**
- **Authentication Using a Directory with SSO Integration Using SAP Logon Tickets**
- **Combining Embedded and Unbound Processes**
- **Data Archiving**
- **Implementation Support**
- **Integrating User Management and Access Management**
- **Managing Heterogeneous System Landscapes**
- **Monitoring SAP NetWeaver**
- **Providing Web Services Interoperability**
- **Service-Oriented Development**
- **Service-Oriented Integration (Mediated with Integration Broker & BPM-Service Orchestration)**
- **Service-Oriented Integration (Mediated with Integration Broker)**
- **Service-Oriented Integration (Point-to-Point) Synchronous**
- **Software Maintenance**
- **Support for Off-line Processes**
- **Training Materials, Documentation and Management**

NetWeaver Component – WAS-KM enables these tasks

- **Creating Training Materials, Documentation and Manuals**
- **Maintaining Training Materials, Documentation and Manuals**
- **Publishing Training Materials, Documentation and Manuals**
- **Viewing Training Materials, Documentation and Manuals**

NetWeaver Component – XI enables these tasks

- **Application-to-Application Integration**
- **Business Partner Integration Using Industry Standards**
- **Combining Embedded and Unbound Processes**
- **Ensuring A2A and B2B Integration**
- **Process Automation**
- **Service-Oriented Integration (Mediated with Integration Broker & BPM-Service Orchestration)**
- **Service-Oriented Integration (Point-to-Point) Synchronous**
- **Small-business Partner and Subsidiary integration**
- **Usage and Adoption of Predefined Content**

Copyright 2007 SAP AG. All Rights Reserved

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP AG. The information contained herein may be changed without prior notice.

Some software products marketed by SAP AG and its distributors contain proprietary software components of other software vendors.

Microsoft, Windows, Excel, Outlook, and PowerPoint are registered trademarks of Microsoft Corporation.

IBM, DB2, DB2 Universal Database, OS/2, Parallel Sysplex, MVS/ESA, AIX, S/390, AS/400, OS/390, OS/400, iSeries, pSeries, xSeries, zSeries, System i, System i5, System p, System p5, System x, System z, System z9, z/OS, AFP, Intelligent Miner, WebSphere, Netfinity, Tivoli, Informix, i5/OS, POWER, POWER5, POWER5+, OpenPower and PowerPC are trademarks or registered trademarks of IBM Corporation.

Adobe, the Adobe logo, Acrobat, PostScript, and Reader are either trademarks or registered trademarks of Adobe Systems Incorporated in the United States and/or other countries.

Oracle is a registered trademark of Oracle Corporation.

UNIX, X/Open, OSF/1, and Motif are registered trademarks of the Open Group.

Citrix, ICA, Program Neighborhood, MetaFrame, WinFrame, VideoFrame, and MultiWin are trademarks or registered trademarks of Citrix Systems, Inc.

HTML, XML, XHTML and W3C are trademarks or registered trademarks of W3C®, World Wide Web Consortium, Massachusetts Institute of Technology.

Java is a registered trademark of Sun Microsystems, Inc.

JavaScript is a registered trademark of Sun Microsystems, Inc., used under license for technology invented and implemented by Netscape.

MaxDB is a trademark of MySQL AB, Sweden.

SAP, R/3, mySAP, mySAP.com, xApps, xApp, SAP NetWeaver, and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP AG in Germany and in several other countries all over the world. All other product and service names mentioned are the trademarks of their respective companies. Data contained in this document serves informational purposes only. National product specifications may vary.

The information in this document is proprietary to SAP. No part of this document may be reproduced, copied, or transmitted in any form or for any purpose without the express prior written permission of SAP AG.

This document is a preliminary version and not subject to your license agreement or any other agreement with SAP. This document contains only intended strategies, developments, and functionalities of the SAP® product and is not intended to be binding upon SAP to any particular course of business, product strategy, and/or development. Please note that this document is subject to change and may be changed by SAP at any time without notice.

SAP assumes no responsibility for errors or omissions in this document. SAP does not warrant the accuracy or completeness of the information, text, graphics, links, or other items contained within this material. This document is provided without a warranty of any kind, either express or implied, including but not limited to the implied warranties of merchantability, fitness for a particular purpose, or non-infringement.

SAP shall have no liability for damages of any kind including without limitation direct, special, indirect, or consequential damages that may result from the use of these materials. This limitation shall not apply in cases of intent or gross negligence.

The statutory liability for personal injury and defective products is not affected. SAP has no control over the information that you may access through the use of hot links contained in these materials and does not endorse your use of third-party Web pages nor provide any warranty whatsoever relating to third-party Web pages.