

Modernization Program



United States Department of Education Student Financial Assistance

Modernization Technical Architecture Design/Build

Business Case Support

Technical Architecture Linkage to Business Capability



Business Case Contents

The Business Case supports the design and delivery of three enterprise technical architecture functions:

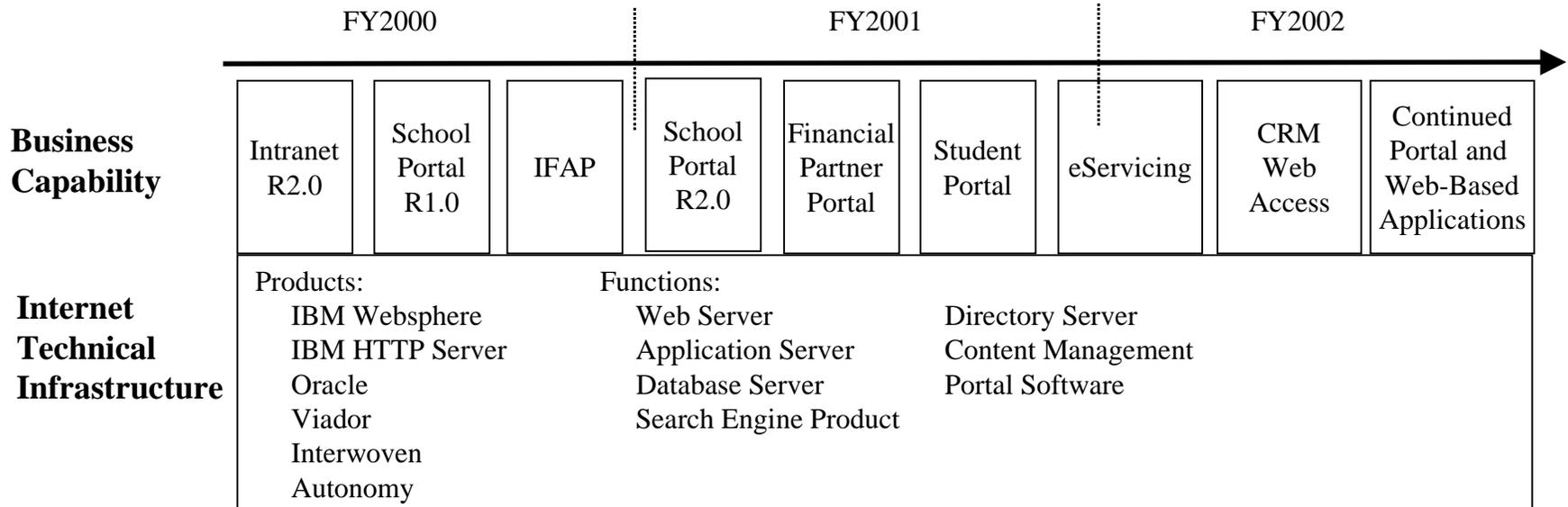
- **Internet/Portals**
 - Provide a reusable, scalable and open internet architecture
 - Increase the functionality and stability of web-based applications
 - Enable reuse and support scale-up to high user volumes
- **Data Warehouse**
 - Offer access to large volumes of data for analysis and reporting
 - Offload transaction systems
 - Provide data extract and data transformation (formatting) services
- **Enterprise Application Integration (EAI)**
 - Middleware that can share processes and data across systems
 - Interconnect SFA systems without direct connections between systems (I.e. untangle the hairball)
 - Enable reduction of redundant and stale enterprise data
 - Ease connectivity of new systems and disconnection of retired systems



Business Capability Supported by Technical Architecture Component

Internet/Portals

- Supports the development of Portals, the SFA Intranet, IFAP interface, eServicing and CRM web access capabilities
- Supports COTS functionality for searching, managing content and Portal functions
- This task will create the development and production environments for these applications

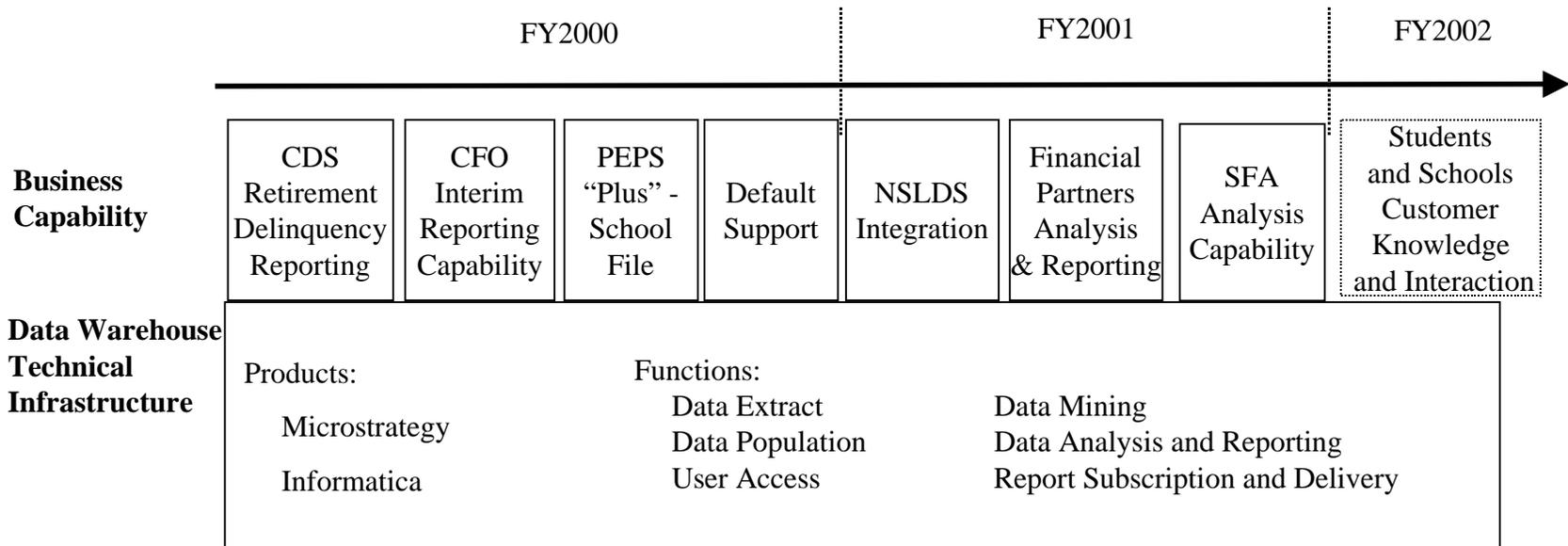




Business Capability Supported by Technical Architecture Component

Data Warehouse

- Supports the data extract, load, analysis and reporting capability at the SFA enterprise level
- Reduces the effort of creating reports and files for internal and external customers
- Increases service through subscription and delivery or scheduled and reports, including web-enabled subscription and delivery
- Supports extensive analysis of SFA customer information
- This task will create the development and production environments for these applications

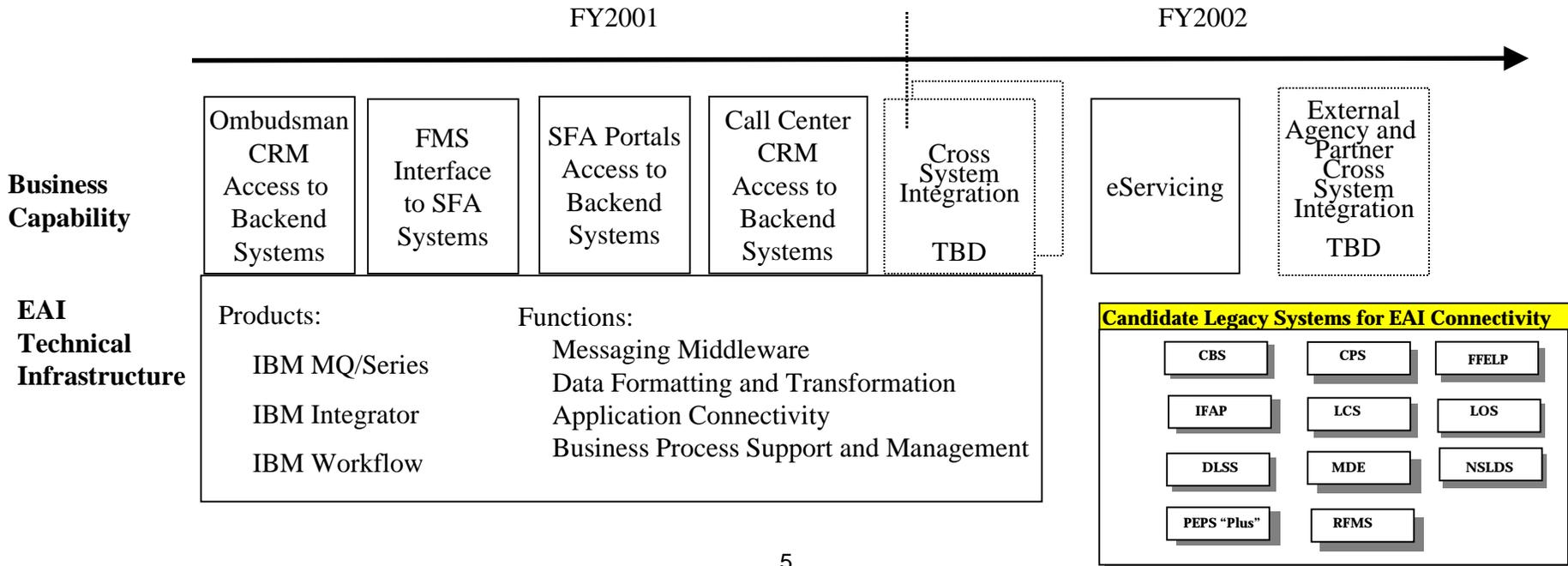




Business Capability Supported by Technical Architecture Component

EAI/Middleware

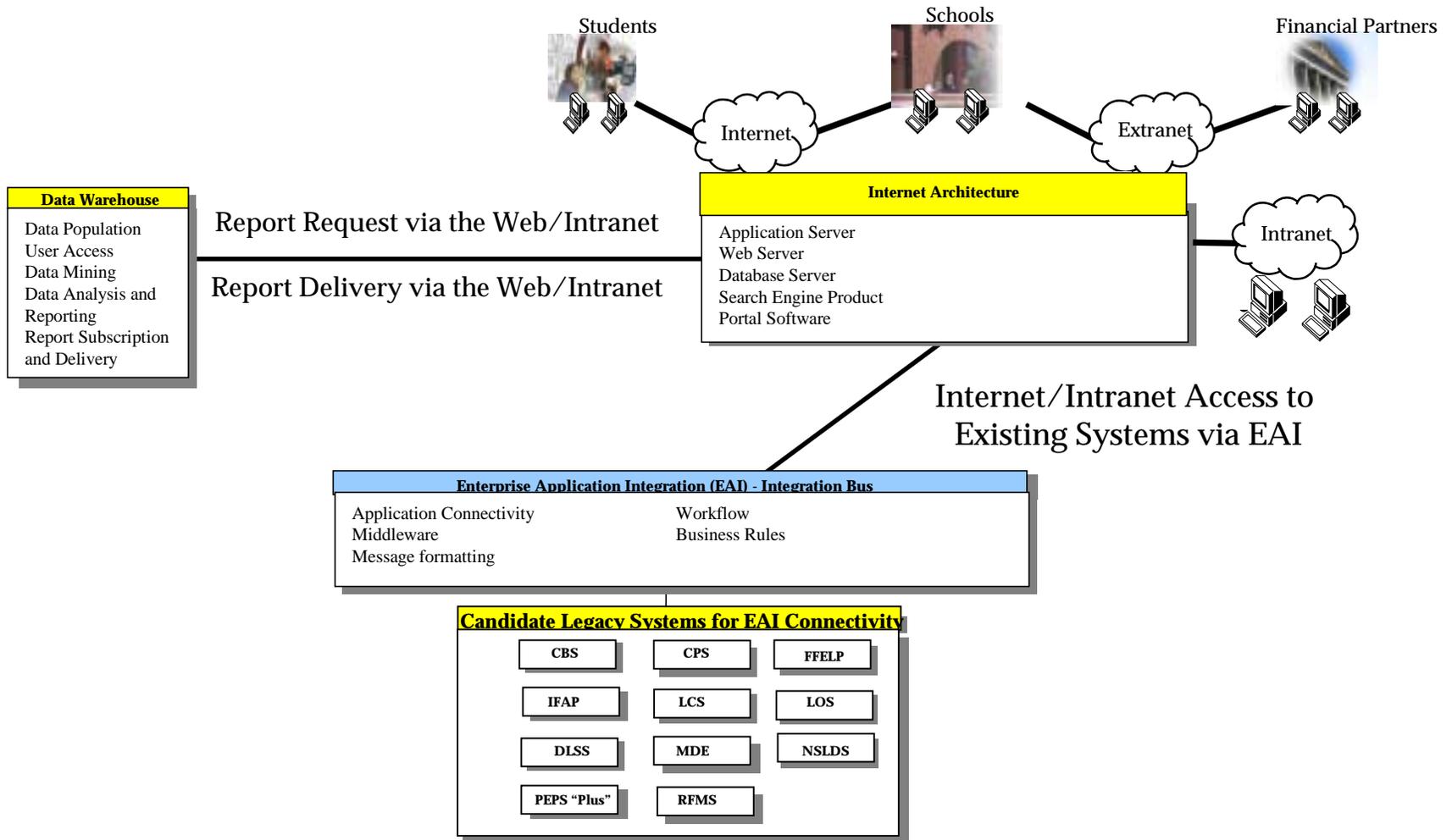
- Provides a common data transport mechanism for cross system communication
- Enables integration of web-based interfaces to existing back end systems
- Enables integration with outside agencies and partners
- Supports the use of business rules to resolve data discrepancies across systems
- Provides workflow capability to automate standard business processes
- This task will provide the infrastructure and the first set of system connections





Integration of Technical Architectures

The EAI, Internet and Data Warehouse architectures are dependent on one another



Architecture Projected Costs by Component



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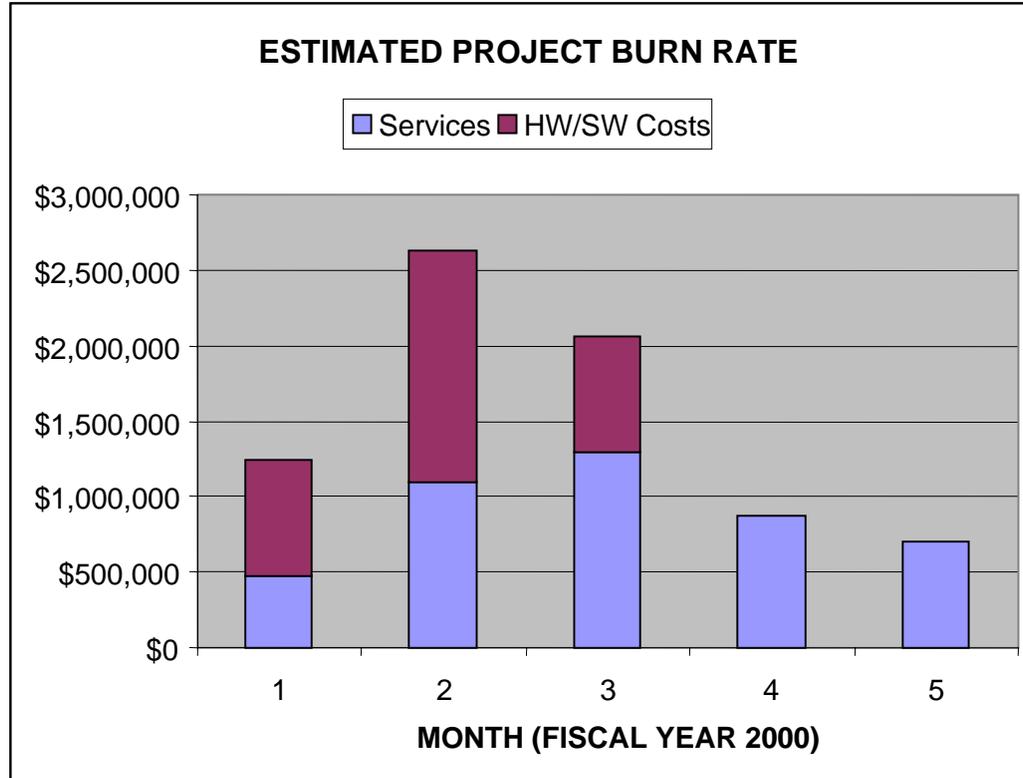
Architecture	Required Resources/Software		Projected Costs		
	Technical Resources	Software	Services	Software	Total
Internet Build	Mod Partner IBM	IBM Internet Platform IBM Internet Development Toolkit	\$1,035,000	\$283,000	\$1,318,000
Portals	Mod Partner IBM Viador Autonomy Interwoven	IBM Internet Platform Viador Portal Framework Software Autonomy Search Engine Product Interwoven Content Management Product	\$1,300,000	\$423,000	\$1,703,000
Data Warehouse	Mod Partner IBM Microstrategy Informatica	Microstrategy Data Warehouse Product Suite Informatica Extract, Data Transformation and Load Product	\$1,035,000	\$954,000	\$1,990,000
EAI	Mod Partner IBM	IBM MQSeries IBM MQSeries Integrator IBM MQSeries Workflow	\$1,100,000	\$582,000	\$1,680,000
Overall Estimated Total			\$4,470,000	\$2,242,000	\$6,689,000 *

* Hardware costs are not included

Cost Components - Architecture Procurement and Deployment



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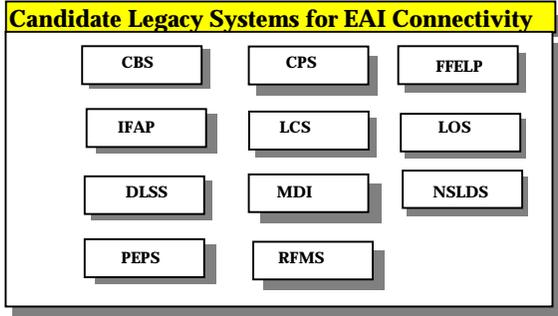
Fiscal Year	Estimated EAI Infrastructure Cost
2000	7,500,000
2001	3,000,000
2002	2,000,000
TOTAL	12,500,000

FY2001 Costs include: SW Maintenance, HW additions, Services, and MQS Workflow implementation
 FY2002 Costs include: SW Maintenance, HW additions, and Services

Cost Components - Application Integration



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Eleven Systems identified as candidates for EAI Integration

Estimated Cost/Placeholder for Applications Implementation of EAI

fy2001: \$4.8m

fy2002: \$2.4m

Total: \$7.2m through fy2002

Planning Assumptions:

- 2 systems connected in current work effort
- 6 systems connected in fy2001
- 3 systems connected in fy2002
- \$800K in services and software to connect each system (rough estimate)