

# **Integrated Acquisition Environment**

## **Best Practices White Paper**

## Table of Contents

I.	BACKGROUND	1
A.	Issues, Challenges and Critical Success Factors	1
B.	Best Practices Found	3
II.	BEST PRACTICE FINDINGS	5
A.	Best Practice Findings to Meet the Challenges	5
B.	Critical Success Factors and Emerging Technology Opportunities	12
III.	Conclusions	14
A.	Recommendations	14
B.	Areas for Additional Study	14
APPENDIX A.	Team Members and Methodology	15
APPENDIX B.	Best Practice Information Sources	16

## I. BACKGROUND

---

The President's e-Government Taskforce (Quicksilver) initiative includes the Integrated Acquisition Environment (IAE). The Office of Management and Budget (OMB) requested the Federal CIO Council Best Practices Committee to conduct a best practices study for this initiative. Working in partnership with the Best Practices Committee, the Industry Advisory Council (IAC) led a team to explore best practices experienced by industry in implementing, in the private sector, initiatives similar in magnitude and complexity to those identified by OMB as e-Government (Quicksilver) Initiatives. The objectives of the IAE are to build a fully integrated secured acquisition environment for Government, businesses, and citizens that facilitates and supports cost effective exchange of information, goods, and services. Many of the building blocks for the IAE exist today but need to be further developed and unified (based on common standards) in order to provide the open access, standards based functionality, and scalable capability needed. Major IAE capabilities will include:

- **Consolidated Catalogs** to provide common on-line access to current GWACS and eCatalogs for goods and services to all federal customers.
- **Integrated Vendor Profile Network (IVPN)** to provide a single point of registration, validation and access for all supplier data.
- **Federal Acquisition Management Information System (FAMIS)**, to replace the existing Federal Procurement Data System (FPDS) for better integration with agency procurement systems.
- **Intra-governmental Transactions Exchange** to provide a redesigned process for government-to-government transactions to streamline ordering, billing and collection and to improve the financial settlement process.
- **Standard eTransactions** to establish standard data elements, business definitions, ownership, behaviors, and roles and responsibilities for Government acquisition data.

The Federal CIO Council Best Practices Committee (BPC) IAE Team, consisting of industry and government representatives, was formed to identify best practices that may be helpful to the IAE Project Manager. The purpose of this white paper is to document relevant best practices identified by the team and make related recommendations.

### A. Issues, Challenges and Critical Success Factors

#### Issues and Challenges

Interviews with the IAE Program Management Office officials identified the key issues facing the IAE program where best practices would be most helpful to the PMO. The PMO cited the following issues as key focus areas for identifying best practices:

- Managing a global Federal project of such large scale
- Obtaining resources required to achieve both near and long term milestones
- Identifying holes and redundancies in standard business processes that do not yet exist
- Organizing an approach to the directory of government-wide agency contracts (GWACs)

- Implementing the well-defined enhancements to the Integrated Vendor Profile Network (IVPN) database
- Consolidating e-catalogs with a common set of business practices
- Using common terminology, languages, data standards, data definitions, stewardship, and business processes
- Applying commercial best practices to the government considering the regulatory environment in which the government must operate
- Collecting organizations' application portfolios, particularly the back office supporting modules
- Harvesting intellectual ware including collection, cataloging, library, analysis, and dissemination.

The Best Practices Committee IAE team analyzed the IAE Program Management Office's requested key focus areas in the context of the planned initiatives for the IAE program, and identified four fundamental challenges. These four challenges are:

- *Challenge 1: Data Standards*—Achieve a common, maintainable language for conducting Federal acquisition transactions.
- *Challenge 2: Supplier Enablement*—Enable both large and small suppliers for conducting electronic commerce.
- *Challenge 3: Business Rules*—Establish rules of engagement that jump start IAE adoption.
- *Challenge 4: Program Management*—Manage the massive changes required to implement government-wide initiatives across multiple and diverse departments, agencies and organizations.

### Critical Success Factors

The critical success factors that must be addressed to ensure an effective IAE program have been identified by the Best Practices Committee IAE team:

- *Active Senior Executive Sponsorship and Creative Program Management.* The IAE initiative needs strong and active sponsorship by senior executives in each Federal organization, as well as creative program management by the IAE Program Management Office, in order to effectively implement the envisioned cross-government changes in acquisition business processes and systems.
- *Firm and Flexible Techno-Policy.* Federal acquisition policy officials need to establish a mix of strict mandates and attractive incentives to drive IAE adoption among Federal agencies and suppliers.
- *Maximized Leverage of Existing Infrastructures and Proven Reusable Methodologies.* The IAE program needs to make use of existing infrastructures and methodologies to speed system adoption among both agencies and vendors and maximize economies of scale.

## B. Best Practices Found

The following best practices relating to integrated acquisition were identified:

### *Development and Ongoing Maintenance of Data Standards.*

Data standards exist today that already enable electronic commerce transactions on a large scale. The Universal Standard Products and Services Classification (UNSPSC) Code (<http://www.eccma.org>) and the Universal Description Discovery and Integration (UDDI) standard (<http://www.uddi.org>) offer two such standards. In both cases, UNSPSC and UDDI offer good examples of establishing and implementing a data standard. But perhaps more importantly, UNSPSC and UDDI also demonstrate how widely diverse (and often competing) organizations can effectively collaborate to jointly maintain a data standard that evolves to meet changing stakeholder needs.

### *Methodologies for Enabling Suppliers.*

Successful commercial and federal models exist for efficiently managing buyer-supplier relationships. These models provide existing supplier-related acquisition processes and technology connections to up to thousands of suppliers that can be leveraged to enable electronic integration between government agencies and suppliers. Examples of existing commercial and federal models include the Ariba Supplier Network (<http://www.ariba.com> and <http://supplier.ariba.com>), the DoD E-Mall (<http://www.emall.dla.mil>), and GSA Advantage! (<http://www.gsaadvantage.gov>). Additionally, Microsoft has demonstrated best practices in enabling trading partners via the use of XML technologies. These examples can help the government address supplier needs in order to more quickly enable live purchasing via an integrated acquisition environment.

### *Business Rules that Drive System Adoption.*

Lessons learned by industry and the government demonstrate that just establishing data and transaction standards is not enough to ensure a successful e-marketplace. The U.S. automobile industry, for example, found that it needed to tackle common business practices and data management in order to reap the supply-chain efficiencies promised by a product exchange (<http://www.aiag.org>). The Central Contractor Registration (CCR) (<http://www.ccr.gov>) established by the Department of Defense achieved critical mass only after a strict policy mandate was established requiring contractors to use the system in order to get paid. And Naval Sea Systems Command (NAVSEA) achieved broad production usage of existing multiple award contracts by setting a policy of driving customers to a centralized web site (<http://www.seaport.navy.mil>) where all information for ordering is captured once and reused many times. The federal government can enable a new integrated acquisition business process by learning from these lessons and implementing a blended policy of policy mandates and incentives to remove barriers to government-wide e-commerce initiatives.

### *Creative Program Management.*

The Federal government is not the first complex, multi-jurisdictional organization to attempt to implement major changes in how it conducts business. The Federal government can draw on

program and change management best practices from global corporations (e.g., IBM at <http://www.ibm.com>), current Federal programs (e.g., the Integrated Vendor Profile Network at <http://www.ccr.gov/>) and state government initiatives (e.g., the eVA electronic purchasing initiative established by the Commonwealth of Virginia, at <http://www.eva.state.va.us/>). These best practices offer reminders of sound program management fundamentals, as well as creative program management ideas that the Federal government can leverage to manage a successful rollout of the IAE.

## II. BEST PRACTICE FINDINGS

---

### A. Best Practice Findings to Meet the Challenges

The Integrated Acquisition Environment is both an ambitious business transformation project and an enabling information technology (IT) project. This program affects all Federal agencies, as well as thousands of suppliers. It involves building acquisition systems that have sufficient scale and flexibility to be shared across all Federal agencies. It also involves a complex change management challenge to enable system adoption across a widely diverse Federal acquisition community.

#### *Challenge 1: Data Standards*

Develop both a standard taxonomy for acquisition transactions, and a governance structure jointly owned by all stakeholders, that enables the standard e-commerce language to evolve over time.

#### Best Practice: Establish Data Standards for Classifying Commodities and Services

It is critical for buyer and supplier organizations to have a standard way of classifying commodities and services so that they can conduct transactions efficiently and correctly. Buyer and supplier organizations often have different classification schemes for the commodity or service in question and have found that mapping the two schemes was a manual, intensive process. Duplicating this mapping for each buyer/supplier relationship, especially when many government agencies have thousands of suppliers, is unreasonable. In addition, buyer organizations typically have a difficult time understanding how much of a certain commodity or service type they are buying because of the different classification scheme used across the different procurements or the lack of awareness on the individual buyer to indicate the correct commodity code. This hinders the organization's ability to aggregate the total organization's demand for a certain commodity or service and use that knowledge to negotiate a better price for the organization overall.

The Universal Standard Products and Services Classification (UNSPSC) Code is an open standard that provides an industry-accepted classification of products and services. The UNSPSC is used extensively around the world in the electronic catalogs, search engines, procurement application systems and accounting systems. ECCMA is the not-for-profit, unbiased, membership that oversees the management and development of the UNSPSC Code. Current membership in ECCMA is extensive (<http://www.eccma.org>) and includes all major vendors and systems integrators.

The UNSPSC code currently covers 56 industry segments and over 12,000 codes from electronics to chemical, to medical, to educational services, to automotive to fabrications. The UNSPSC code covers any product or service that can be bought or sold. A copy of the public file can be viewed and printed from <http://eccma.org/unspsc/browse/>. The UNSPSC code is an open, global standard available free to the public with no use restrictions or licensing fees.

There are other industry-specific classification schemes that are currently in use by industry. For example, the NAICS (North American Industry Classification Scheme) is a classification scheme adopted by OMB for use by statistical agencies for classifying business establishments. Where

appropriate, government agencies can develop and publicly provide a mapping between classification schemes. In many instances, these mappings are already publicly available.

Best Practice: Establish a Standard Method to Describe Web Services

The UDDI (Universal Description, Discovery, and Integration) effort started as an 18-month project to define a set of specifications that would make it easier for businesses to accelerate the use of B2B and commerce over the Internet. UDDI does this by defining how companies can expose their business applications -- like ecommerce, order management, inventory, marketing, and billing -- as Web Services that can be directly and securely *defined, discovered and integrated* with business applications at trading partners and customers. This direct application-to-application integration over the Internet is a core building block of the Digital Economy and holds great promise for how businesses and government will transform themselves over the next decade.

UDDI is based on existing Internet standards, is platform and implementation neutral, and has generated considerable momentum since its launch. Over 80 companies -- including business leaders like Merrill Lynch and Cargill; technology leaders like IBM, Microsoft, and Sun Microsystems; and innovative B2B companies like Ariba, CommerceOne, and VerticalNet -- have all signed on to support UDDI. These companies have come together because they agree that no individual technology vendor can control how standards for B2B will evolve. Industry analysts like the Gartner Group, Forrester Research, and Seybold are cautiously optimistic that UDDI will become the core initiative for accelerating B2B adoption. One analyst referred to UDDI as "the right approach at the right time."

*Challenge 2: Supplier Enablement*

Enable efficient management of specific buyer-supplier relationships and efficient execution of individual purchases by following successful commercial supplier enablement models, and re-use existing e-marketplaces that have already established efficient buyer-supplier relationships.

Best Practice: Mass Enable Suppliers to Increase User Adoption and Satisfaction

In implementing an automated acquisition system, a key challenge is enabling the suppliers with which a government agency does business. This challenge is due to many reasons: Many suppliers have their own processes for accepting purchase orders, communicating with their customers, and submitting invoices; small suppliers--a key socio-economic demographic for the government--do not feel they have the infrastructure to implement and support an integrated acquisition system; and, change is hard. There are many examples of failed eCommerce ventures because there was not enough business transacted to realize a return on the investment.

However, in order for an IAE to be successful, the integration of the acquisition process and systems needs to extend outside of the government to the suppliers for exchange of such information as purchase orders and invoices. In addition, there needs to be an existing network of suppliers available for an agency to buy from to make individual buyers more likely to use the IAE.

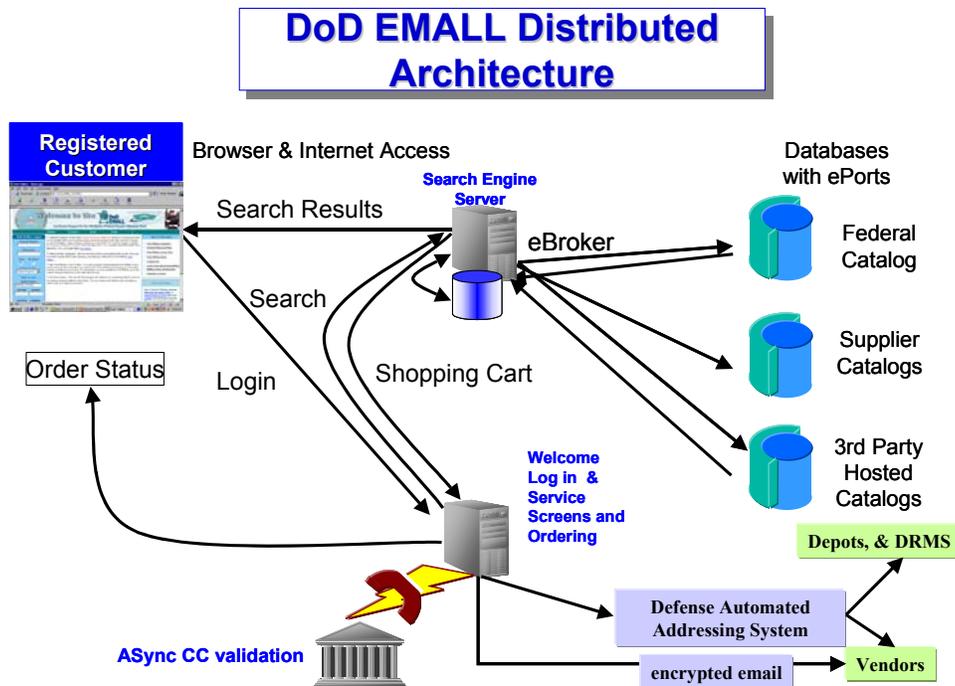
Supplier enablement involves: supplier registration, which can leverage existing systems as CCR; supplier integration, which needs to address multiple communication techniques to address different supplier needs (e.g., XML, EDI, fax, e-mail); contract vehicles through which the agency would buy from a supplier; and the publishing of supplier content, if available, to the agency (e.g., a catalog hosted inside an agency, a punchout to the supplier’s web site). Best practices have shown that there should be no costs to the supplier to participate in an IAE.

Examples of two government agencies with best practices in supplier enablement are Department of Energy’s Kansas City Plant and Department of Energy’s Rocky Flats site. Examples of existing supplier networks that can be leveraged by the government include DoD E-Mall, GSA Advantage!, and the Ariba Supplier Network.

**Best Practice: Overcome Barriers to Entry and Leveraging Existing Architecture**

DoD EMALL has leveraged and has plans to expand the number of e-marketplace electronic catalog content sources. Those have included FedCenter.com, Ariba Supplier Network. This strategy has significantly, and most importantly, very rapidly increased the number and types of suppliers – particularly small and economically disadvantaged suppliers.

The DoD EMALL uses the concept of a distributed architecture. This approach takes existing suppliers’ standards-based e-catalogs that have been previously electronically enabled and brings them together into a single web-based graphical user interface. This is done without the need for complex integration or migration to a single database. Content management is thus dependent on existing, distributed resources that accomplish the design, development, and maintenance of the electronic catalogs. A graphical depiction of this eBroker and ePort approach is provided below.



**Figure 1: DOD EMALL Distributed Architecture**

### Best Practice: Leverage Extensible Markup Language to Facilitate Supplier Enablement

Extensible markup language (XML) has played a key role in allowing system developers to easily describe and deliver rich, structured data from any application in a standard, consistent way. bCentral (<http://www.bcentral.com>) and the Microsoft Solution for Supplier Enablement (MSSE) (<http://www.microsoft.com/solutions/msse>) serve as useful examples of both small and large scale supplier enablement efforts.

bCentral is all about helping small businesses manage everyday processes — anytime, anywhere and on any device. Whether an organization wants to host or build a successful online business presence, improve customer marketing, deliver stronger sales and service, or manage business operations, this solution can meet unique supplier needs.

The Microsoft Solution for Supplier Enablement was designed to help companies of all sizes reach customers more efficiently through electronic sales channels. It provides a complete system that makes it easy for companies to demonstrate the real value of their goods and services in e-procurement and marketplace systems. In addition, the Solution for Supplier Enablement offers features and functionality that help them build on the systems and technologies they already have in place, understand buyers better, and improve decision-making processes.

#### *Challenge 3: Business Rules*

Develop simple, yet nimble, rules of engagement that enable the smooth flow of Federal e-commerce traffic, through a combination of incentives and strict mandates.

### Best Practice: Establish Policies that Go Beyond Setting Standards—Standards are not Enough

Product data exchanges alone cost the US auto industry \$1.4B in 2000 because of inefficiencies in how product data is handled: translation, quality and business process inconsistency. Engineering designs lock in 85% of the final cost of a product. Collaborative engineering can reduce the design costs, as well as improve quality, speed and time-to-market. However, collaborative engineering is more than just CAD file exchange: it requires shared program responsibility, compatible business processes, and careful handling of product meta-data. To improve supply chain efficiency for all trading partners, the Automotive Industry Action Group (AIAG) (<http://www.aiag.org>) sponsored an effort to support and extend standards that are applied throughout the supply chain.

The AIAG effort set up pilots to identify product data management (PDM) requirements and develop common business practices and data transactions. Key elements of the pilots were: identifying organizational contexts for PDM exchanges; identifying various designer process needs for PDM exchanges; choosing representative process examples to pilot; and identifying the change management required. The five process examples chosen were: commodity design, black box design, grey box design, collaborative design and customer design. While not all of each process was piloted, the goal was to identify the needs for change management across the process to implement the desired changes.

At major conferences in 2000 and 2001, Phase 1 demonstration scenarios showed how PDM worked across the supply chain for a variety of design processes. The capability of such PDM exchanges was shown, potential benefits were identified and estimated, and challenges were identified.

Key challenges are: 1) PDM systems are often customized for internal processes; 2) PDM is dependent on context—business processes count; 3) some system vendors resist the approach and do not move to support interoperability.

Essential to the success of this effort was the broad support of the sponsoring organization (AIAG has over 1600 corporate members) and the commitment to deploy the successful pilot results.

Best Practice: Ensure Enabling Techno-Policy is in Place Early

The DoD's Central Contractor Registration (CCR, <http://www.ccr.gov/>) capability was a classic example of a "build it and they will come" venture. CCR had the same data sharing objectives as those of the e-Gov Quicksilver initiatives and was based on the principle of "enter one time, use many times." The initial premise was that a central repository of trading partner registration data would be so attractive to the sell-side (vendors) and buy-side (Federal agencies) that vendors would flock to register on CCR.

The key was to get a critical mass of vendors registered. This critical mass was not being achieved at a sufficient enough pace to justify the investment in such a tool. What was needed was the enabling techno-policy that ensured vendors would register and maintain the currency of their registration data. On May 31, 1998 enabling policy was implemented in the DoD Federal Acquisition Regulation Supplement (DFARS) that mandated the use of CCR data for vendor payment. Since the DFARS change was enacted the CCR database has grown to almost 190,000 active vendors. By comparison, in December 1997 active vendor registrations totaled 22,000. Additionally, data validation time has come down from over 30 days in 1997 to less than 24 hours today.

Best Practice: Capture Data Once

Faced with a targeted reduction of \$250M on the amount to be spent on professional support services acquisitions through 2005, the Naval Sea Systems Command (NAVSEA) embarked on a business process re-engineering effort to maximize the efficiency and economy by which professional support services are procured. NAVSEA focused on exploiting commercial electronic commerce initiatives to minimize the time and costs required to award and administer a task order without compromising quality. The execution of NAVSEA's re-engineered strategy for acquisition of services, which became collectively known as SeaPort, evolved into a three pronged approach: 1) the evaluation and award of the multiple award contracts, 2) the launch of a web based commercial e-marketplace solution, and 3) the development of a public web site (<http://www.seaport.navy.mil>).

The SeaPort portal is web-based, allowing requirements to be defined and proposals to be solicited, submitted, and evaluated from any location at any time of the day in a private e-marketplace, which provides an intuitive “amazon.com-like” environment. Complimenting the portal is the front door web site, developed by NAVSEA and the eCommerce specialists at the US Naval Inventory Control Point. Information submitted at each step of the task order process is captured electronically in a database, which greatly adds to the utility of the system. Using the data captured in the system, entering it once, SeaPort has standard and ad hoc reporting functionality, complete with appropriate data filters, which makes it possible to provide relevant information quickly and accurately in response to data calls of any nature or magnitude. Requirements are initiated using Wizard questions to guide a task order originator through a series of questions that enable him/her to complete a procurement package with minimal or no training on the system. The task order originator will receive electronic proposals from the contractors in a format that facilitates a streamlined selection process. The entire task order process is conducted in a paperless environment; legally binding electronic signatures are used in place of pen and ink signatures, even for execution of task orders by both the contractor and the government. Simplified mechanisms also exist within the system for identification and resolution of task order performance issues as they arise and a streamlined task order past performance assessment for each task order to ensure continuous quality performance.

SeaPort capitalizes on the data management principle of “capture once use many times” by storing solicitations, task orders and other contract documents in an electronic resource library. This resource library can be searched based on an array of data fields using key words and phrases, task order number or a number of other identifying elements to locate models and examples for statements of work, evaluation criteria, etc. which can be cut and pasted into future procurements. Modifications to task orders are generated in SeaPort by re-using the data captured from the current version, improving both processing time and accuracy. Similarly, this resource library can be used to “clone” any existing procurement document for tailoring for a similar requirement or re-use for follow-on procurement, eliminating the need for any data re-entry. To facilitate continuous improvement, the eBusiness portal captures time-date stamps on steps throughout the process providing current performance metrics.

Key elements of the Seaport effort were 1) Senior and Executive commitment to move to an e-marketplace. 2) A well established and agreed upon workflow between customers, users, and suppliers 3) and true partnership with between government and industry where successes were shared.

#### *Challenge 4: Program Management*

Manage the transformation and integration of the acquisition environment across multiple agencies.

#### Best Practice: Transform the Organization

Transforming IT infrastructures across a worldwide enterprise is analogous to migrating Federal agencies to a single IT architectural baseline. In transforming complex IT infrastructures from many disparate architectures and organizations, strong, committed, top down program management is essential. In transforming IBM’s IT infrastructure, a single CIO was appointed responsible for transformation process management, assurance of consistent architecture across the enterprise and the assurance of consistent standards. A corporate commitment to breakdown

the walls between operating units is essential and maximizing the use of existing products, architectures, databases, etc. to capture investments already made is paramount to successful transformation. Dependencies on middleware technologies (MQ Series, Tivoli, etc), web enabling technologies (i.e. Web Sphere), and open architectures facilitate the achievement of these objectives.

The transformation of IBM was driven by the personal commitment to the challenge of the CEO. In the case of government, OMB, the Secretary of the implementing agency, and the CIOs of all the agencies must drive this commitment. The result of IBM's transformation was the generation of \$23B of revenue and the handling of 99 million self-serve customer inquiries and transactions over the Internet. Additionally, the IBM corporate purchasing organization transacted \$43B of supplier commitments, allowing us to do 96% of supplier invoicing in a paperless management. The savings to IBM in procurement expenditures alone was \$377M in calendar year 2000, with an intended \$2.4B in enterprise cost avoidance savings.

#### Best Practice: Build the Business Case and Capture Total Cost of Ownership

Component Architect Frameworks reduce the overall effort for integration as well as reducing overall system life cycle costs (LCC). Architectural Frameworks have evolved and matured in the commercial sector over the past three years. (<http://www.ichnet.org/>). Moreover, most adhere to standards that limit specific technology lock in *and* more importantly, provide the ability to abstract Business Process Management (<http://www.bpmi.org>) from the technology. This is very significant and will usually allow the business user to establish and change processes (because business will change), without a ripple effect into the technology. The result is that IT infrastructure will enable process change and not hinder it.

Moreover, security has and can be incorporated to meet the guiding principles and government unique requirements. The Office of Management and Budget (OMB) recommends both Microsoft's .Net and Java2 Enterprise Edition (J2EE) as possible architectures for its 24 Quicksilver E-Gov projects. Both standards have been and are being widely used for E-Gov and e-commerce projects.

#### Best Practice: Enable Adoption of a Common E-Commerce System Across Decentralized Government Organizations

In 2001 and continuing into 2002, Virginia rolled out a common e-commerce purchasing solution called "eVA" (<http://www.eva.state.va.us/>) to its 169 state agencies, as well as to 16 colleges, 33 community colleges, and 80 local governments. Over a six-month span, the system adoption ramped up exponentially, from 500 orders totaling \$3 million in September 2001 to 22,837 orders totaling \$114 million through May 31, 2002.

Virginia implemented a streamlined methodology for system configuration to address the fact that each state agency, college, community college, and local government has widely varying approval and workflow requirements. This method applied an automated data collector that prompted each organization to enter data about its workflow. Each organization entered its specific configuration information. Virginia then electronically loaded the organization-specific

data into the common eVA e-commerce system to enable organization-specific workflows in a manner of days.

Virginia also expedited system adoption across hundreds of decentralized organizations by 1) driving the change with strong senior commitment from the Governor on down, 2) implementing a hosted environment and true thin client application, 3) leveraging existing credit card infrastructures to simplify financial system integration, and 4) monitoring system usage to identify organizations that are not using the system and deploy targeted education and support teams to help those in need.

## **B. Critical Success Factors and Emerging Technology Opportunities**

The following three critical success factors were identified for the Integrated Acquisition Environment initiative:

1. Active Senior Executive Sponsorship and Creative Program Management
2. Firm and Flexible Techno-Policy
3. Maximized Leverage of Existing Infrastructures and Proven Reusable Methodologies

### Active Senior Executive Sponsorship and Creative Program Management

The best practices described in this white paper demonstrate components of a successful senior executive sponsorship and program management effort, and emerging technologies that can help enable creative program management. These include:

- Drive the program from the top, with the head of every Federal organization fully supporting and publicizing the transformation and conducting regular reviews of project status.
- Build incrementally, demonstrating success on incremental modules, rather than trying to develop/integrate/migrate the entire solution at one time.
- Build business cases that assess the total cost of ownership of the status quo vs. the total cost of ownership of the planned outcome.
- Take up-front steps to simplify the implementation of individual organizations by applying automated tools for capturing and configuring unique agency data and workflow needs.
- Follow up with participating organizations where system usage data indicates low actual usage.

### Firm and Flexible Techno-policy

The best practices described in this white paper demonstrate methods and emerging technologies to establish policies that enable and drive IAE adoption. These include:

- Establish policies early in the process.
- Establish strict mandates (the “stick”) to enforce policies that make sense for the government as a whole but that may face cultural resistance.
- Identify, create and publicize incentives (the “carrot”) for IAE stakeholders to encourage voluntary system adoption (e.g., works better, costs less).

- Implement technologies that can codify policy decisions in configurable business rules, so that use of the technology ensures the actual business process complies with mandates and other business rules.

### Maximized Leverage of Existing Infrastructures and Proven Reusable Methodologies

The best practices described in this white paper demonstrate reusable implementation methods and emerging technologies. These include:

- Maximize reuse of existing infrastructures.
- Maximize reuse of existing data standards.
- Maximize reuse of existing implementation methodologies.
- Leverage true thin client applications that require zero local installation services.
- Capture data once and reuse it many times.

### **III. CONCLUSIONS**

---

#### **A. Recommendations**

1. Emphasize the process change needed, and work collaboratively to get change implemented.
2. Analyze and identify areas of acquisition commonality across federal enterprises. Where commonalities are identified, set business rules requiring use of a common system or standards (e.g., for electronic signatures).
3. Build on industry accepted data standards.
4. Use existing supplier networks and/or marketplaces to increase the value for the buyer and the supplier to participate.

#### **B. Areas for Additional Study**

IAE Program Management Office identified a number of issues. They could not all be addressed in this white paper due to time and resource constraints. Following are those issues that could benefit from further study.

1. The overall global Federal challenge of a project of such large scale and the challenge to obtain resources for both near and long term milestones.
2. The difficulty in finding the holes and redundancies across government without standard business processes.
3. The approach to the directory of GWAC's; implementation of enhancements to the IVPN database (i.e., annual completion of certifications and representations).
4. Consolidation of e-catalogs with a common set of business practices; implementation of common terminology, languages, data standards, data definitions, stewardship, and business processes.
5. How to apply commercial best practices to the government considering the regulatory environment in which the government must operate.
6. How to collect organizations' application portfolios, particularly the back office supporting modules.
7. Harvesting intellectual ware including collection, cataloging, library, analysis, and dissemination

## APPENDIX A. TEAM MEMBERS AND METHODOLOGY

---

The Best Practices Committee Integrated Acquisition Environment (IAE) team prepared this report. The joint Industry Advisory Council (IAC) and Federal government team was formed at the request of the Federal CIO Council Best Practices Committee on behalf of OMB. The IAC team was composed of corporate members of the Federal Government Information Processing Council (FGIPC). The purpose of the Best Practices Committee E-Gov teams are to review the plans for 24 Presidential Priority E-Gov initiatives and offer recommendations to improve them based on best practices.

The Industry Advisory Council (IAC) team members for the Best Practices Committee IAE team were derived from systems integration, software and data storage firms. Members had both acquisition and program management expertise. The task force held a series of meetings in February and March, 2002, to review the Integrated Acquisition Environment initiative and develop best practice recommendations. Meetings were also held with the members of the General Services Administration IAE Program Management Office to identify key focus areas where best practices would be of the most help to GSA's efforts to implement the IAE. GSA IAE PMO officials included Teresa Sorrenti, Earl Warrington and Lew Sanford.

The following organizations and individuals were members of this task force:

- Tish Tucker, Chief, Procurement Systems Division, Office of Procurement and Property Management, United States Department of Agriculture – *Government Lead*
- Bruce E. Leinster, Director, Contracts and Negotiations, Global Government Industry, IBM – *Industry Lead*
- Joseph R. Taylor, Program Analyst, Procurement Systems Division, Office of Procurement and Property Management, United States Department of Agriculture
- Andrew McLauchlin, Principal, Public Sector Group, AMS
- Dan Twomey, Director of Marketing, Enterprise Solutions Division, Altarum
- Lawrence B Floyd, CPCM, Principal Consultant, Management Consulting Services, PricewaterhouseCoopers LLP
- Jacqueline S. Everett, Director, Business Development, Computer Sciences Corporation
- Rodney A. Beverly, E-Commerce Program Manager, Federal Advanced Solutions Team, Microsoft Corporation
- Mary Eward, Civilian District Sales Manager, Ariba Public Sector

## **APPENDIX B. BEST PRACTICE INFORMATION SOURCES**

---

The corporations that participated in this study all maintain proprietary systems development and best practices methodologies (e.g., CSC Catalyst, AMS Best Practices, etc.). The individuals who conducted this report are trained in these corporate methodologies and relied on their training, experience and lessons learned in formulating recommendations for this study. Due to the proprietary nature of these methodologies, publicly available references cannot be cited.

Corporate websites providing high-level discussion of methodologies:

AMS: [www.ams.com](http://www.ams.com)

CSC: [www.csc.com](http://www.csc.com)

IBM: [www.ibm.com](http://www.ibm.com)

Microsoft: [www.microsoft.com](http://www.microsoft.com)

Ariba: [www.ariba.com](http://www.ariba.com)

Altarum: [www.altarum.org](http://www.altarum.org)

PWC: [www.pricewaterhousecoopers.com](http://www.pricewaterhousecoopers.com)