The Digital Economy
Digital Economy & Procurement

- The “Digital Economy” - Sector of the economy traditionally considered as IT, including all goods, services, ancillary products, & IT-affected products

- Includes all embedded IT in non-IT products to enhance their functionality, e.g., watches, cars, planes, bldgs., etc.

- Addresses any level of the economy, from local to global
Today’s Digital Economy

• The state of DE today equals the state of aviation in 1921

• U.S. digital economy worth hundreds of billions of dollars

• Federal gov leading the way in some areas

• Some states and locales advanced - CA, VA, MD, PA, etc.

• Most organizations are progressing through stages: information, interaction, transaction, transformation

• Third World furthest behind

• Democratic, industrialized nations typically most advanced
### Price Indexes for Computer Equipment

1992 = 100

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<th>Year</th>
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<th>Domestic PCs</th>
<th>World-Wide Semiconductors</th>
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Digital Economy & Community

- Communication global & instantaneous

- Wholly interdependent national & international economies

- More developed the economy - more interdependent - politically, defensively, commercially, etc.

- Underdeveloped nations have greatest opportunity to “leapfrog”…all else being equal

- Traditional manufacturing boosted by the DE

- Cheap labor producing quality goods for DE marketing
Technological/Scientific Synergy

• Speed of scientific discovery sharing & teaching

• Global audience for learning

• Effects: speed, scale, simultaneous change, reordering of expected order, disintermediation (middleman out!)

• DE alters who gets what & when

• Knowledge intensive roles: medicine, law, science, engineering - may be increasingly affected
Cont. Technological/Scientific Synergy

• Progression of Collaboration:
  - Individual
  - Team - Corporate
  - Extended Teams - Joint ventures, Consortiums, Conglomerates, National
  - Networks of Teams - Global, Cross-cultural, Interdisciplinary, Trans-corporate, Trans-national

• Simultaneous sharing & discovery

• Scientific advances outpacing inventions accelerating DE
Digital Economy = Outreach

• Worldwide commercial presence
  - Multi-lingual
  - Multi-cultural
  - Religious sensitivity
  - National history

• Market share - global

• Cost-effective delivery channels
  - Web preferred
  - CD-ROM
  - Simultaneous Web, CD, radio, TV, newspapers, journals

• Streamlined customer enrollment
  - Web preferred
  - Customer updates own customized account
Cont. Digital Economy = Outreach

- Better knowledge of customer = Better Marketing
  - Customized products/services
  - Focused, personalized marketing
  - Long-term relationships
  - Spend to keep customer…cheaper than acquiring new ones
  - Evolve per customer feedback

- Large network connectivity vital to survival
The “Digital Divide”

• Term characterizes the gap between the “information haves & have-nots.”

• Gap is difference of access to telecommunications technology - phones, computers, the Internet

• Demographics: economic, geographical, racial, language

• Broadband (Bb) a subset of communications infrastructure - speed & volume up to 100 times greater - cable, DSL, wireless, satellite
  - Bb growth faster in urban & high-income areas
  - Driven by demand & economics
Cont. The “Digital Divide”

- Some argue for gov intervention

- 7/01 study - 7% - 8% American households have Bb access

- 4/00 Ag Dept Report
  - <5% of towns of 10K or less have Bb access
  - cable Bb access available in >65% of cities >250K
  - telephone network Bb deployed in 56% of cities >100K

- Hope = schools, libraries, USPS, businesses…homes
Social Impact

- Community-building…neighborhoods to global family of mankind
- Broader & better education & knowledge
- Enhanced inter-cultural understanding
- Increased personal & community security
- Higher productivity & lower costs…potentially
- Greater inter-religious tolerance
- Reduced ignorance, bias, prejudice
- Reduced conflict
- Reduced “processing” & more “results”
Psychological Impact

• “I am not alone!”
  • “I am never alone!”

• “I am interconnected.”
  • “I am interdependent.”

• “What I do affects others.”
  • “I can have great influence...for good or bad.”
  • “What others do impacts me.”

• “We all need to work together.”

• Openness vs. paranoia

• Person - interconnected, interdependent, accessible
  • Place - unlimited - global
  • Time - unlimited - 24/7
DE Challenges

• Privacy
• Security
• Equal access
• Taxation
• Governance
• Censorship
• Veracity
• “Tough industries” - e.g., home construction
• Few technological issues
Digital Economy Forecast

1 Billion Connected Users

1/3 US Homes have High Speed Connections

PC less than 50% of Connected Devices

Global Trade Portals Emerge

IP Based Business Interactions Reach 40%

New Home Device Introduced

e-Commerce Investments Increase

e-Commerce Reaches $2 Trillion Globally

Businesses Negotiate with Developing Countries for IP Infrastructure Rights

Entertainment Industry allows User Configured Viewing Schedule
Sec. 508 & the Digital Economy

• Sec. 508 ensures that federal employees & the public have equal data use & access through the government buying only accessible IT

• Federal procurement is the control point…effective 6/25/01

• Tens of thousands of Americans: more readily obtain & be productive in federal employment

• Millions of Americans: better informed & more productive citizens

• Tens of millions of world citizens: information & employment benefits

[see more @ www.treas.gov/procurement/508]
Cont. Sec. 508 & the Digital Economy

• Societal enrichment
• Individual productivity
• More diversified & enriched labor force
• Greater labor pool
• More productive labor force
• Minimally higher costs for IT products
• More advanced technology for individuals without disabilities
• Greater American business competitiveness overseas
Treasury Procurement Implications - Essentials

• Skills development in IT applications

• Work locally --- Think globally

• Practice teamwork

• Participate in your “communities of interest”

• Embrace the DE outside work - services, schools, shopping, social communication

• Embrace IT enhancements (changes!) - they’re opportunities!

• Practice continuous learning!!!
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Knowledge Management
What is knowledge?

• “Knowledge is the small part of ignorance that we arrange and classify.”  --Ambrose Bierce (1842 - 1914)

• What we know --- purified by reality

• Knowledge continuum:
  • Data ⟷ Information ⟷ Knowledge (Tacit & Explicit)
    (Fuller understanding (Information refined by reliable practice)
      of data in context)

• Two kinds of knowledge:
  • Explicit: formal; systematized; recorded for posterity; “book knowledge;” “white papers;” policy manuals; general documents
  • Tacit: personal “know-how;” “tricks of the trade;” seasoned intuition; resident in individuals; typically developed from experience
What is knowledge management (KM)?

• “A discipline that promotes an integrated approach to identifying, capturing, evaluating, retrieving and sharing enterprise information assets.” (Gartner Group)

• “KM is the process through which an enterprise uses its collective intelligence to accomplish its strategic objectives.” (Ramon Barquin, Barquin International, Inc.)

• A “people enabler” not a technological solution

• Steps of KM process:
  - K creation
  - K capture
  - K application
  - K measurement
Why is acquisition KM important?

- Research = groups beyond 200 - 300 people lose grasp of collective K, & over time, a large quantity of K resides with only a few people in the organization

- Federal acquisition profession needs KM:
  - Budget cuts, downsizing (1993 - 1998, 1102 series Contract Specialists diminished at rate of 8% - 9%/yr.; 42% retirement eligibility by 2008; 22% by 2003)
  - Limited incoming talent (1:6 outside hires)
  - Contracting-out emphasis
  - Increased procurement actions, e.g., competitive sourcing
  - Private sector demand for experienced federal Contract Specialists

- Transfer abundance of acquisition knowledge being lost by attrition
- Increase efficiency & productivity
- Capture & spread internal know-how, best practices & experience
- Eliminate “reinventing the wheel”
- Avoid repeating same mistakes
What is acquisition KM content?

- Acquisition regulations such as FAR & agency FAR supplements
- Pertinent statutes & Executive Orders
- Relevant work samples
- Training opportunities & case studies
- Sound practices, promising practices, lessons learned
- Workbook competencies
- Relevant articles
- Acquisition experiences
Cont. **What is acquisition KM content?**

- Live group collaboration
- Live group problem-solving
- “Ask an Expert”
How is acquisition KM deployed?

• Web-based portal typically

• Web-based KM portal is a common Web access point for delivery of highly integrated & highly sophisticated knowledge, using specialized features, to a target audience.

• Portal becomes the targeted users’ preferred access point for most efficiently & productively accomplishing work

• Web-based portal is the most advanced technical tool for KM deployment…& is continuously improving
Quality KM Site Functional Capabilities

• Quick, easy, immediate, ubiquitous access

• Single sign-on access to all linked sites

• Email account

• Links to sources of explicit K (where it’s maintained!)

• “Chat rooms”

• “Threaded discussions”

• Customization - presentation & content delivery based on criteria set by user

• Personalization - tailor the presentation of content to individuals or classes of customers based on profile info
Cont. Quality KM Site Functional Capabilities

- Alerting - matches incoming streams of new information against users’ profiles & “pushes” it to them by user-selected means

- Search & Retrieval with Filtering
  - Can find out who else has been searching on a topic
  - Can direct search agent to push new info to desktop, cell phone, or hand-held computer

- Virtual work space or “e-room” where docs are easily exchanged

- Web conferencing

- Virtual communities of practice (e.g., Contract Specialists, Price & Cost Analysts, Procurement Analysts)

- Shared presentations

- Networks of subject matter experts
How do you create an acquisition KM portal?

• Senior management buys into KM concept & need for KM culture

• Senior management establishes critical prerequisites for the acquisition workforce:
  - Major culture change - other-focused
  - Sharing highly prized & supported
  - Rewards & recognition for contributing to KM
  - Use encouraged, NOT mandated
  - Credit for most use of KM
  - “Best Seller” list of most frequently accessed contributions
  - Performance plans include requirement for KM use and contributions

• Decide whom portal is to serve

• Link KM to measurable business goals & overall business strategies -- and derive KM solution from user needs to address the goals & strategies

• Implement, maintain & evolve
KM Portal Do’s & Don’t’s

• CIO lead? --- NOT!!!

• DO make a key content manager the lead

• DO NOT focus on the technical tool enabling KM

• DO focus on your users & their behavior & culture

• DO NOT concentrate on technology generally

• DO concentrate on integrating business goals & business strategies, & meeting user K needs
Will there be a federal acquisition portal?

• GSA’s new Intellectual Capital Management Office, in collaboration with the PEC, leading the federal acquisition KM portal project

• Interagency user group providing guidance

• YOU can participate NOW in this portal for Reverse Auctioning, PBSC, Share-in-Savings & more by free registration at http://67.104.144.235
Will there be a Treasury acquisition portal?

- Office of Procurement (OP) EC Team has initiated a Treasury acquisition KM portal project to complement the federal acquisition portal under development by GSA

- Current year funding has been obtained

- Bureau user representatives have provided input

- The OP Web site has been re-engineered to a “pre-portal” status

- What do you want at the Treasury Acquisition Portal?
Why should I make proper use of an acquisition KM portal?

• Increases efficiency & productivity

• Indicates a personal change indicative of the new essential sharing/collaborative acquisition culture

• Enhances your marketability in the job market - gov or private sector

• Rewards entitlement (at management discretion)

• Matter of acceptable performance
Examples of KM Portal Sites

• U.S. Army’s Army Knowledge Online (www.us.army.mil) - One-stop super site for employees

• U.S. Navy’s Surface Warfare (www.swonet.com) - Some portal aspects to this site catering to the Navy’s approx. 8,600 surface warfare officers

• CIO Council’s KM Working Group (www.km.gov) - General KM info

• Commercial General KM Site (www.eknowledgecenter.com)
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Central Contractor Registration (CCR) System
What is it?

- As of 10/1/02, the single point of vendor registration for provision of organizational information
- Located at www.ccr.gov
- Developed & maintained by DoD with PWC support
- Operational for DoD in 1998
- Occasioned by industry multiple registration complaints
- Used to collect & use company administrative & EFT data
- Designed for electronic interfacing with automated procurement &/or financial systems
- May be accessed through CCR Tools by Web browser or through CD’s
- Vendor maintains own data
- Secure access to Proprietary & Sensitive data
What data is collected?

- DUNS/DUNS+4 Number
  Agreement with D&B to do a quick assignment if for CCR
- CAGE Code (DoD, NASA, DoE Use)
  If vendor doesn’t have one, it is assigned (except foreign)
- TIN/SSN
- Legal Name, Doing Business As Name, Address
- Type of Organization & Socio-economic Status
- Types of Goods & Services (NAICS, SIC, FSC, PSC)
- EFT and Remittance Information
- Points of Contact
  Gov’t Business, Electronic Business, Past Performance
- EDI Transaction Information
Database Metrics (As of May 2002)
- Approximately 197,000 active vendors
- 2500+ new vendors per month
- 9 hours processing time April 2002
  (Requirement is <48 hours per DFARS)

Weekly processing indicates that:
- 60% actions are updates
- 20% actions are new
- 20% actions are deletes/expired
Market Research Use

- Buyers locate firms expressing specific expertise
- Vendors identify potential business partners
- Buyers obtain EFT data
- Buyers obtain reliable, accurate general company info
Future Enhancements

• SBA PRONet validation of socio-economic factors (Fall 02)

• HP/Oracle architecture (12/02)

• XML dissemination options (12/02)

• Expansion to cover grants

• Annual vendor certifications & representations

• Expansion to cover Inter-Agency agreements

• TIN validations with the IRS

• Mark outstanding debtors

• Capability to email vendors & CO’s automatically from CCR
Integrated Acquisition

- FedBizOpps (GSA)
- Subnet (SBA)
- FAMIS (GSA)
- Government-wide Point of Entry (DoD)
- Integrated Vendor Profile-Data Network
- Other Applications for the "Acquisition Network"
Cont. Integrated Acquisition Environment - Benefits for the CO

• Vendors
  - Complete admin profile (name, address, POC’s, etc.) (DoD, CCR)
  - EFT data (DoD, CCR)
  - Past Performance history (DoD, Past Performance Information Review System, PPIRS)
  - Debtor List (FMS, CCR)
  - Debarred/suspended vendors (Excluded Parties list, GSA)
  - EEO compliance (DOL)
  - Socio-economic certifications & status (SBA, PRONet)
  - Representations & Certifications
  - Associated labor rates
  - Current Government contracts
  - Current Government grants
  - Current subcontracting opportunities
  - Dun & Bradstreet report
  - Past Government contracts
  - Past Government grants
Integrated Acquisition Environment - Benefits for the CO

- Pre-populate all government procurement forms
- Pre-populate contract writing system documents
E-Procurement Progress
revised 12/5/01

25 departments and agencies
100+ separate reporting organizations

Internal procurement process
- requirement/customer
- approval chain
- contract writing
- contract administration
- Receive voucher
- payment
- close out

Internal budget and payment process
- establish obligation authority
- establish commitment
- verify receipt of supply/service
- make expenditure
- dispose of property

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Federal Business Opportunities
FedBizOpps
FBO
What is it?

- The GPE - Government Point of Entry for doing procurement business with the government
- Located at www.fedbizopps.gov
- Maintained by GSA; controlled by a GSA Project Team answering to an Interdepartmental User Group
- Gives vendors a single location to obtain all federal procurement actions required to be synopsized by the FAR
- Offers vendors automatic email notifications of business opportunities
- Helps “level the playing field” for small businesses
Background

- Derived from a NASA system of the mid-1990’s
- Sponsored by the Interagency Acquisition Internet Council
- Became statutory 10/1/01
- CDB or CBDNet extinct as of 1/02
- All federal government must use for synopsis AND solicitation posting (or indexing)
- May be used for simplified acquisitions
- Funded by GSA/FSS and participating agencies
Some Features & Stats

- 24/7/365
- Web-based, JAVA code
- Full Text Search
- Prime Posting of Subcontracting Opportunities
- Statistics Drill Down
- Search enhancements
- Stats - March 2002
  - 16 million hits
  - 156,000 registered vendors
  - 19,000 federal buyers
Market Research Use

• ONLY need to enter your email address or use full text search

• Locate synopses/solicitations so you can
  – develop similar ones
  – collaborate with another agency on a joint requirement

• Receive automatic email notices for selected organizations or Product Service Classifications
  – to develop similar ones
  – to collaborate with named points-of-contact or experts

• Draft solicitation postings

• RFI postings
Future Enhancements

• Interested vendor lists (7/02)
• Online buyer stats (7/02)
• Combined synopsis/solicitation notice (7/02)
• NAICS code data fields
• Links to FAMIS, CCR, PRONet, Past performance data bases, etc.
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