The Criticality of Enterprise

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VISION

When you're "mature"……

…..you have the benefit of seeing the "cycles" involved in processes and industry itself. To others, it looks like "vision".

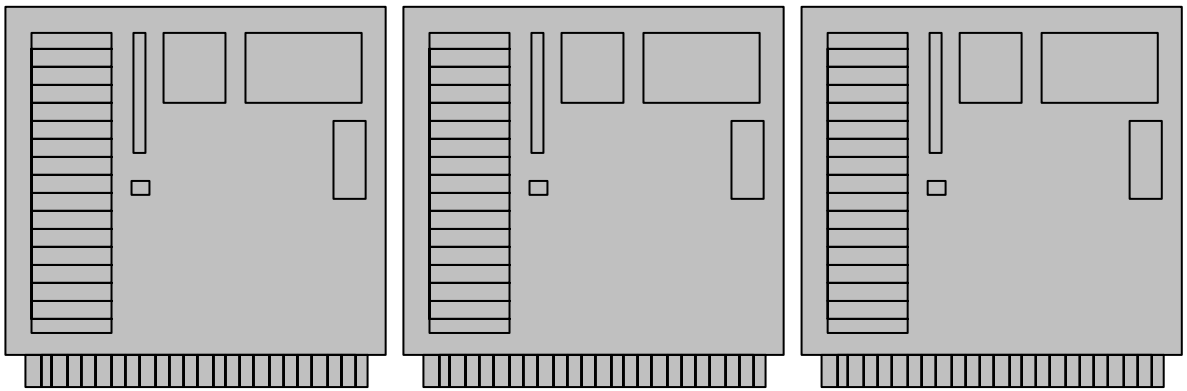
70s

P. S.

I could have started in the 60s!

70s - COMPUTERS START OUT AS “ENTERPRISE”

- **Physical Size and Footprint**



70s - COMPUTERS START OUT AS “ENTERPRISE”

- **Computer Programs involved everyday business processes**
  - Payroll
  - Inventory
  - Student Grades
  - Finances

70s - COMPUTERS START OUT AS “ENTERPRISE”

- There was no “computer science” program. Computers were introduced in Business classes concerning processes.
- Mainframe computers ran software for business functions via punched cards/teletype.
- Workforce used “dumb terminals” to access applications to conduct business processes.

70s - COMPUTERS START OUT AS “ENTERPRISE”

- IT “shops” have system designers to deal with business processes, system analysts to transform business needs to computer requirements, computer programmers to write and test.

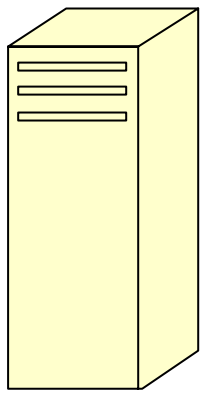
- Same staff taught the software and served as the help desk.

80s

- **The decade starts out with:**
  - Change configuration processes,
  - Computer operation manuals,
  - Government Central Design Agencies to deal with Federal/State agency IT shops

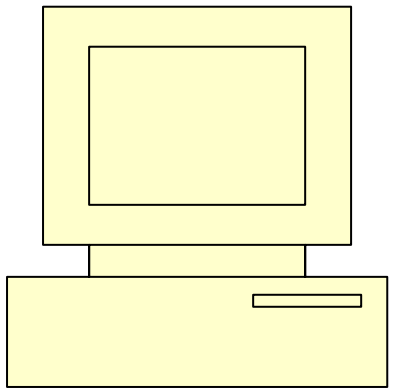
80s

- **Eventual migration from mainframe to client servers – business processes moved to the local desktop.**



80s

- PC desktop software makes everyone a “business analyst”.



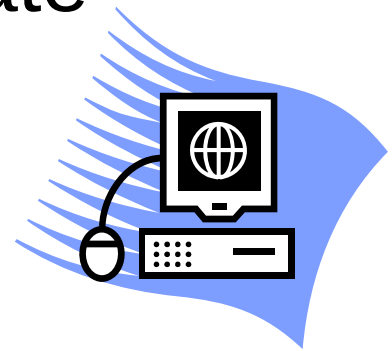
- IT shops become decentralized and fragmented as Desktop Intelligence reigns.
- Enterprise becomes disparate – critical information decentralized.

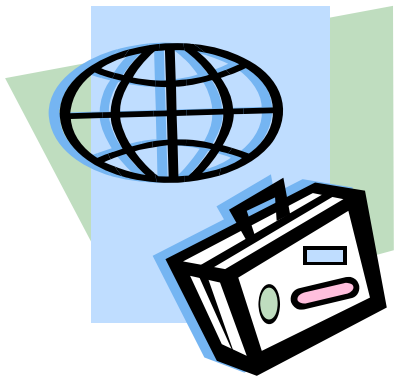
90s

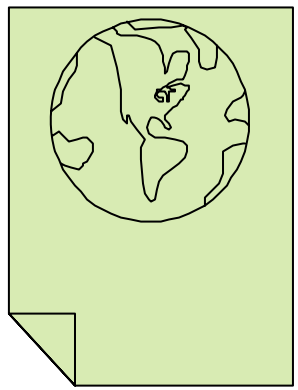
- Agency employees decide to control their own business process destiny and technology support with “home-grown” applications.
- Quality Management is in the mind of the beholder.

90s

- Internet use explodes and disparate applications shared
- Specialized Technology
  - Geospatial
  - Science







TURN OF THE CENTURY

- **Back to Centralization**
  - 911
  - Sarbanes Oxley
  - Hurricane Katrina
- **What is the right answer?**

“HOW CAN GOVERNMENT NOT KNOW?”

The CIO

is responsible for the security, accuracy and the reliability

of the systems

that manage and report data.

CRITICALITY OF ENTERPRISE

ISO Definition:

A relative measure of the consequences of a failure made and its frequency of occurrence

CRITICALITY OF ENTERPRISE

- Enterprise Architecture
  - Platforms
  - Services
  - Policies
  - Data Quality
  - Science Results

CRITICALITY OF ENTERPRISE

- Communities of Practice
- Leveraging of funding and business processes
- Realignment of “enterprise” solutions
- The name of the game is “integration”
- Business Process Analysis again becomes an enterprise function.

Software Applications and Networking Infrastructure exist because there is data that needs to be collected, analyzed, reported, and stored. The work associated with that data is called “business processes”.

IT'S HARD TO DRAW A LINE AND GET STARTED….

- What a mess – distributed processes everywhere.
- Business Owners come with "culture" and "passion".
- Skill sets not onboard to deal with Business Processes.
- Business Processes with huge, gapping holes.
- Applying technology to weak business processes makes us "Stupider Faster"

(stup(ére) to be numb or stunned)

IT'S ABOUT STEWARDSHIP AND INTEGRATION

- **Federal, State, and Local Governments**
- **Citizen Monitoring and Environmental Groups**

The recognition that each local government unit is a data steward – the state does not need to "build" the mother of all systems.

DATA MANAGEMENT CHALLENGES

Track *Chesapeake 2000* commitments and support a robust, data-driven product line with:

- clear messages
- timely information
- quality data
- data provided by CBP partners

Hamilton Leads Els by One in British Open | SPORTS, E1

Weather
Today: Rain, cooler. High 76. Low 67.
Monday: Thunderstorms. High 82. Low 70.
Details, Page C10

The Washington Post

Sunday, July 18, 2004

Bay Pollution Progress Overstated

Government Program's Computer Model Proved Too Optimistic

By Peter Whoriskey
Washington Post Staff Writer

At news conferences, on its Web site and in its regular publications, the government agency leading the cleanup of the Chesapeake Bay has documented more than a decade of steady progress.

The Chesapeake Bay Program has reported that the flow of major pollutants from rivers into North America's largest estuary has declined nearly 40 percent since 1985, bolstering the claims of politicians in Virginia, Maryland, Pennsylvania and the District that they were "saving the bay" and helping the states fend off criticism and lawsuits from environmentalists.

Those reports, however, significantly overstated the environmental achievements.

The estimates of pollution reduction were based on a computer model—not water samples—that program officials now say was distorted by overly generous assumptions.

Bay Program officials said there was no deception involved. The magnitude of the gap between the computer estimates and actual water quality is a matter of scientific debate.

But U.S. Geological Survey water monitoring data from the mid-1980s through 2003, requested by The Washington Post, indicate that observed concentrations of the two targeted pollutants, nitrogen and phosphorus, showed no decline in most of the major rivers spilling into the bay.

Several scientists affiliated with the Chesapeake Bay Program said the water monitoring reports offer a more reliable measure of pollution reduction than the computer estimates that the program has used.

"Basically, what we're seeing is that the government has had its thumb on the scale for years," said J. Charles Fox, former secretary of the Maryland Department of Natural

See BAY, A12, Col. 1

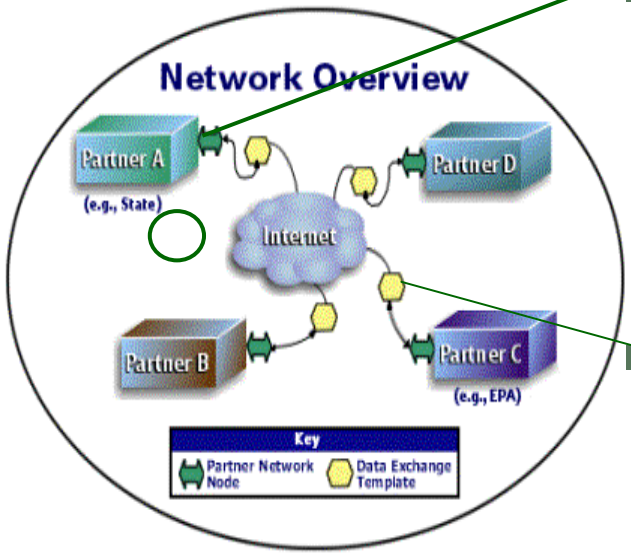
The sun rises over a fish trap of nets at Cedar Point Hollow. Blooms of fed by pollution have blocked sunlight from reaching underwater gra

Chesapeake Bay Program
A Watershed Partnership

STATE/EPA ENVIRONMENTAL INFORMATION EXCHANGE NETWORK

- **Operational**
  - 49 States
  - 1 Tribe
- **In Development**
  - 5 Tribes
  - 2 Territories
- **Planning**
  - 1 State
  - 18 Tribes

EN CORE COMPONENTS



- **Nodes**
  - Hardware and software used to exchange information on the Network
  - Transfer point on the Network
- **Data Exchange Templates**
  - Describe format of data being exchanged
  - Consist of XML schema
  - **Incorporate Data Standards**
  - XML Schema for flows found in the Registry

EXCHANGES

- **Air**
  - National Emissions Inventory
  - Air Emissions Inventory
  - Air Quality System
- **Waste**
  - RCRAInfo
  - California EPA Unified Program Agency Project
- **Health**
  - California Pesticide-Related Illness Data Exchange
  - Oregon Air Quality Data Exchange
  - Washington Fish Tissue Data Exchange
- **Natural Resources**
  - Biodiversity Data Exchange

EXCHANGES

- **Water**
  - Beach Monitoring
  - Beach Notification
  - California Environmental Exchange System
  - Chesapeake Bay Program Regional Exchange for BMPs
  - Pacific Northwest Water Quality Data Exchange
  - Concentrated Animal Feeding Operation
  - Discharge Monitoring Reports
  - Safe Drinking Water Information System
  - Electronic Drinking Water Report
  - Underground Injection Controls
- **Cross-Program**
  - Facility Identification
  - Substance Registry System
  - Toxic Release Inventory
  - Heartland Emergency Response Exchange
  - Homeland Security Data Exchange
  - Pollution Prevention

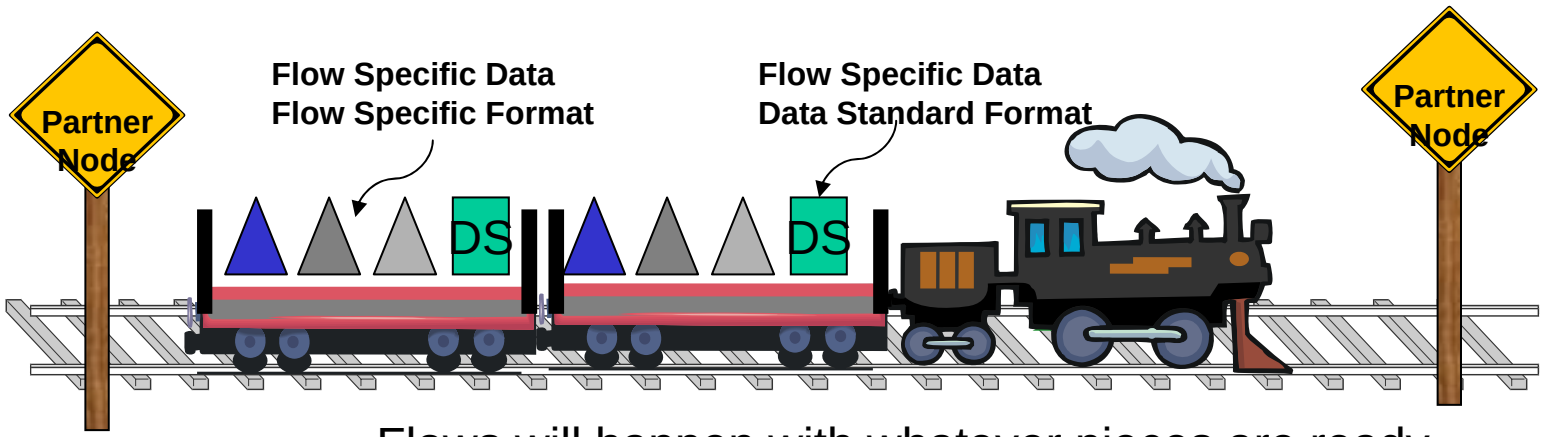
WHAT DOES IT TAKE TO DO A NETWORK FLOW?

- Development of XML Schema and Data Exchange Template
- Flow Configuration Plan to establish the web services that can be invoked for the exchange
- User Guide to describe the data flow issues
- Translators that put the XML file in a format that the EPA/Agency can upload into their databases.

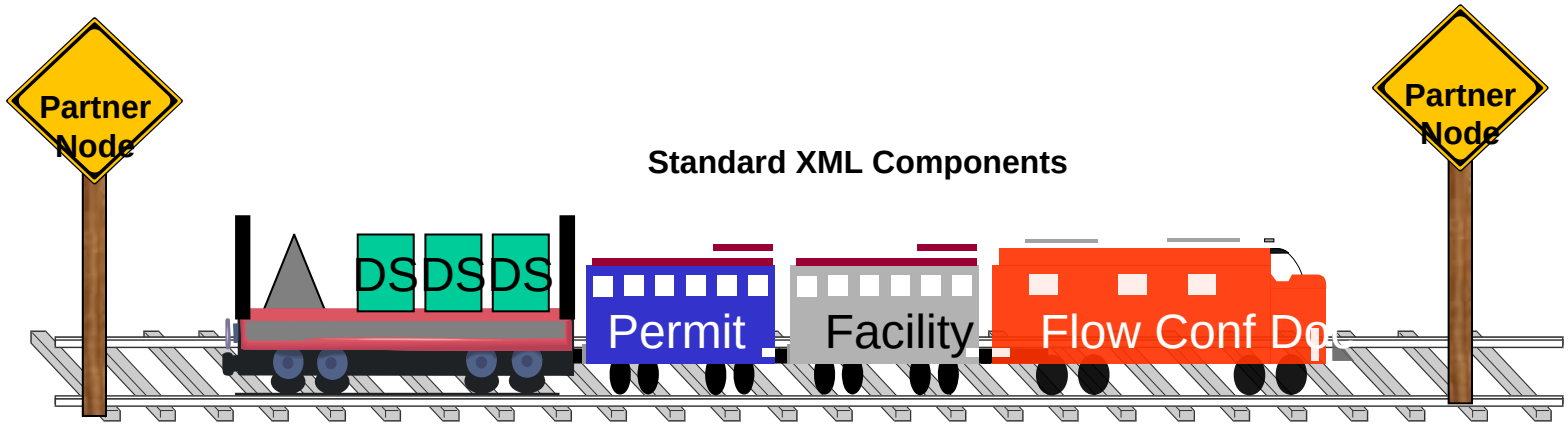
CHALLENGES

Future modernization efforts at EPA should factor in that "exchanging" data is a key or primary function and databases need to be structured to account for not only data entry but for data exchange.

Today's Network and the Next Generation Network



Flows will happen with whatever pieces are ready



Flows that meet business needs with standard Network parts

RESOURCES

- **Tools available on www.exchangenetwork.net website**
  - Registry of XML Schema available
  - Contacts
  - Can create members-only space for team projects if you need it
  - Building Communities of Interest – help share products and resources created for EN data flows

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