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DEFENSE INFORMATION SYSTEMS AGENCY
CENTER FOR INFORMATION MANAGEMENT

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SUBJECT: DoD Data Administration Program

COMMENTS: Sir,

The attached is the briefing that Ms. Kendall decided at 7 pm on October 6, 1993 to be given to Senator Glenn's staffers on October 7, 1993. The complete briefing package is also enclosed. The version given to the staffers contains no script per decision by Ms. Kendall.

Very Respectfully,
Bel Leong-Hong

cc:
BG Bohn

DONE

I CERTIFY THE ABOVE INFORMATION IS
UNCLASSIFIED

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DoD DATA ADMINISTRATION PROGRAM

Ms. Belkis Leong-Hong
Acting Director, The Center for Information Management
Defense Information Systems Agency
October 1993

SLIDE 1 - TITLE

Good morning, I am pleased to be here to talk to you about our DoD Data Administration (DA) program.

Data Administration is one of the foundational pillars of Corporate Information Management (CIM)



DoD DATA ADMINISTRATION PROGRAM

What . . .

**"The responsibility for definition,
organization, supervision, and protection
of data within an enterprise or organization."**

**- DoDD 8320.1, DoD Data Administration
September 26, 1991**

SLIDE 3 -- WHAT IS DA? (8320.1 Definition)

This slide provides the formal definition of Data Administration that we use in the Department, and it is found in the DoD Directive on Data Administration issued in September of 1991.

Another way of explaining Data Administration is that data is a **CORPORATE ASSET** that needs corporate-wide policy and procedures, standards and protection just like any other valuable commodity. The emphasis is a management orientation; not a technical view. The tools used by DA, such as data dictionaries, are just tools. Those tools must be administered properly if we expect to gain benefit.



DoD DATA ADMINISTRATION PROGRAM

PITFALLS OF POOR DATA

CAN'T MAKE GOOD DECISIONS BECAUSE OF:

- **Bad Data**
 - **Conflicting Data**
 - **Obsolete Data**
 - **Missing Data**
 - **Inability To Aggregate /Integrate Data**

MAKE BAD DECISIONS BECAUSE YOU:

- ✓ **Don't know when or if you have a data problem**
- ✓ **Don't know how bad the problem is**
- ✓ **Can't get the info needed to solve the problem**
- ✓ **Information is incomplete or incorrect**

SLIDE 5 -- PITFALLS OF POOR DATA

Let me explore with you what would happen if we did not have accurate, timely, and shareable data,--indeed, *if we had poor data*, then:

- we could not make decisions based on the bad data, conflicting data, obsolete data, or missing data and
- clearly, we would not be able to get coherent data if we aggregated data that is of poor quality.

Ultimately, we would be making bad decisions, because

- we would have no confidence in the data that we are using;
- in some cases, we would not even be able to tell how bad the problem is
- We would not get the correct information to solve the problems,
- and the resulting information would be incomplete or incorrect



DoD DATA ADMINISTRATION PROGRAM

BENEFICIARIES OF DATA ADMINISTRATION

Two classes of beneficiaries:

- **DECISION MAKERS**

(end users: e.g., warfighter, CINCs, SecDef)

- **SYSTEMS BUILDERS**

SLIDE 6 -- Beneficiaries of Data Administration

There are two groups of beneficiaries of data administration:

1) the Decision Makers (i.e., the end-users, the warfighters, the CINC's, the functionals),

For the decision maker, the Data Administration Program gets the right data to the right person at the right time; This includes support to our troops in terms of increased interoperability.

DA provides a service to users in performing their day-to-day mission. Through DA we all gain better support through data that is more consistent and correct. We also have the ability to respond more rapidly to change. Availability of data is enhanced so that data can be accessed when needed for better decision-making.

This results in **enhanced performance and reduced cost**

2) the System builders.

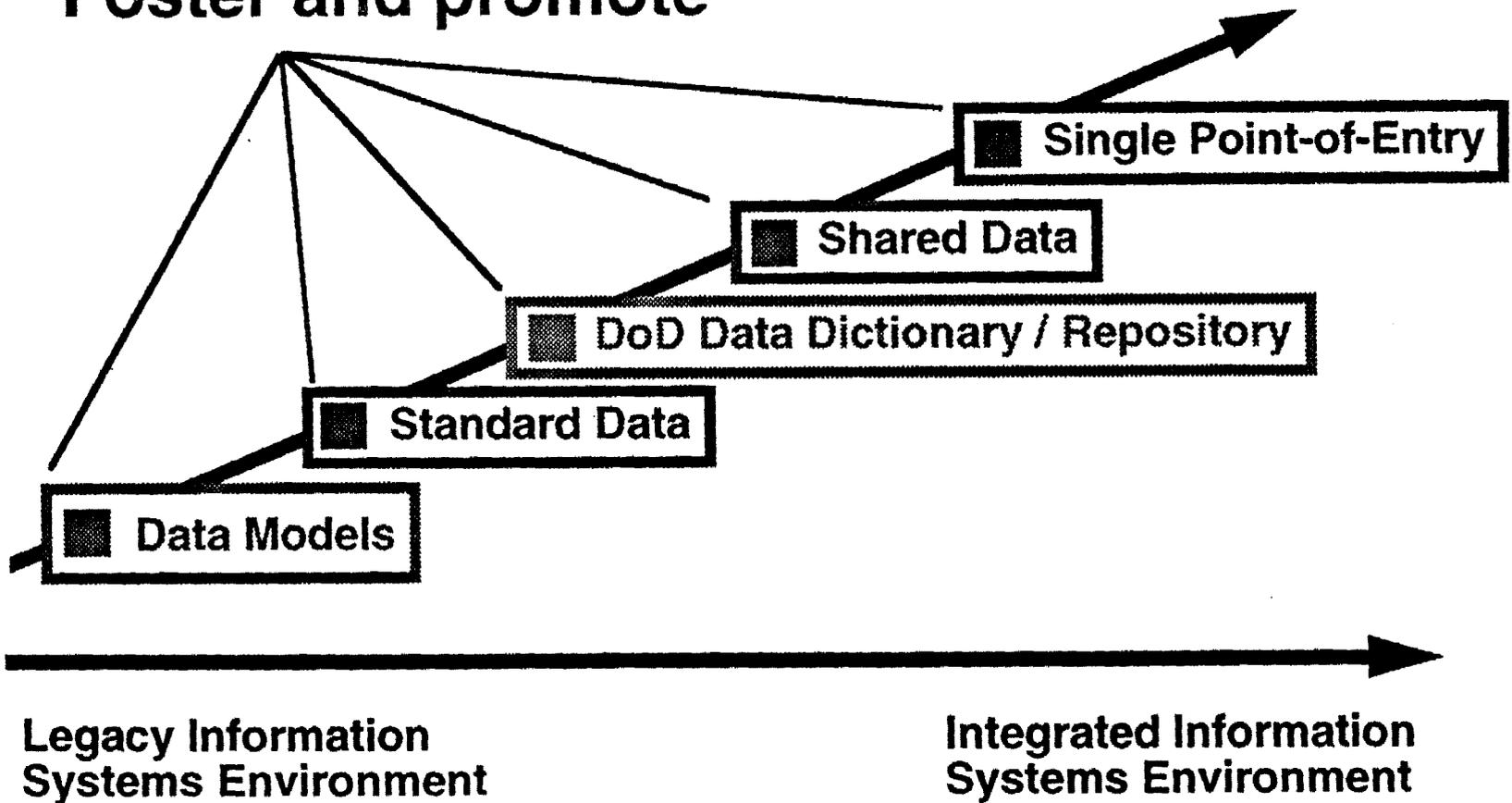
For the system builder, data administration provides the means to control data redundancy; expedite information system development and maintenance; and facilitate data reuse and exchange

This results in **cost savings and increased flexibility**



Center for Information Management DATA ADMINISTRATION

Foster and promote



SLIDE 8 - KEY DA CONCEPTS

In the next few slides, I will describe some of the key concepts of data administration .

Our data Administration program provides support throughout the information management process. As we migrate from yesterday's legacy information systems environment to tomorrow's integrated information systems environment, Data Administration plays a central role in enabling that process.

We want to achieve an environment where data can be shared among various functions and various systems, and in sharing that data, the data remains constant in its definition and in its usage. When that condition has been achieved, we have achieved "shareable data";

We also want to enter data only **ONCE**. That would minimize the possibility of introducing errors and/or creating redundancies along the way. For example, when a contracting officer assigns a contract number to a document, that number should be used consistently throughout the various offices (such as the supply depot, the distribution center, the contract payment office, and the contract audit office).or the associated systems that must process that contract.

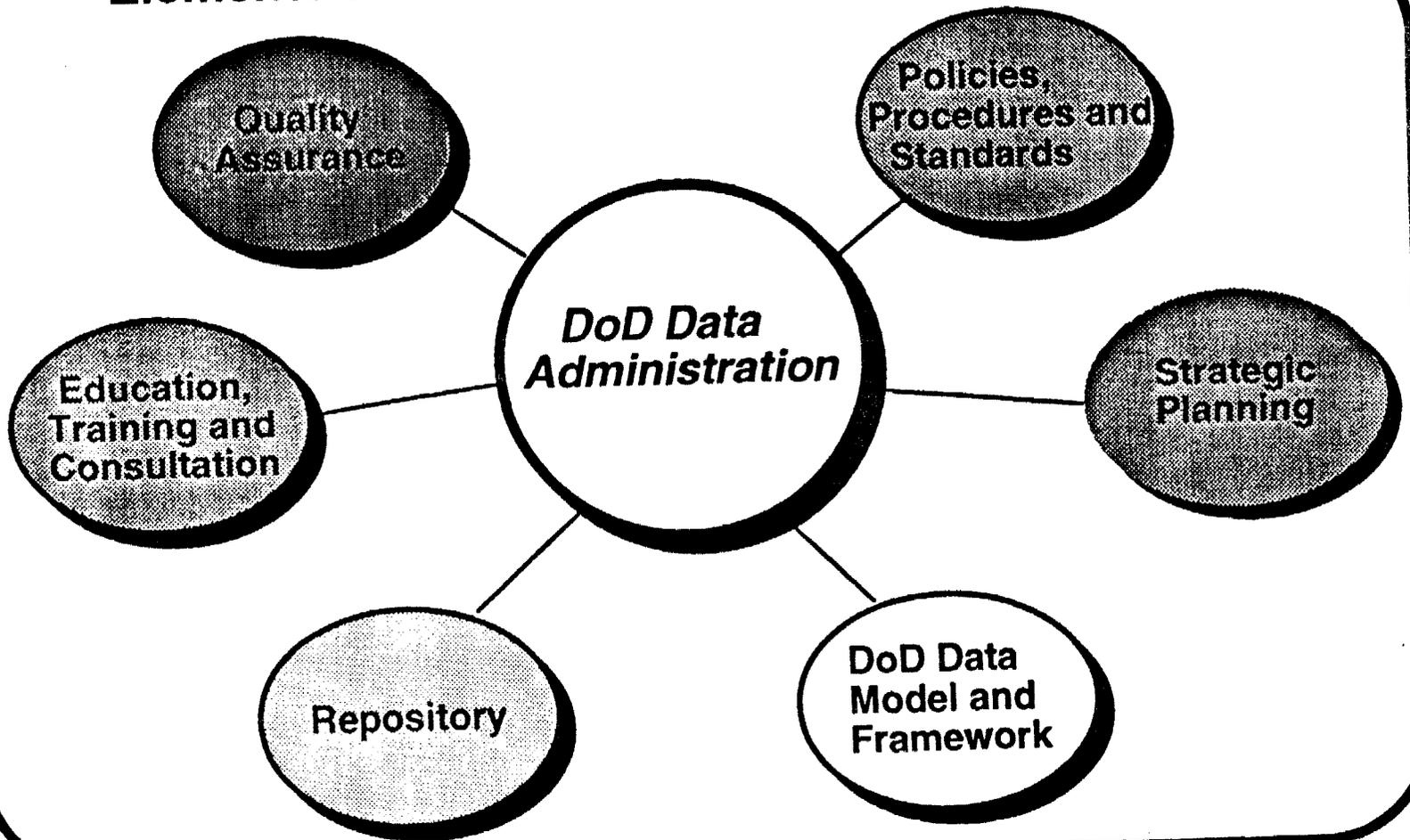
But before we can achieve shareable data, and single entry of data, we must have in place a number of essential building blocks, such as: standard data elements that are derived from data models, and a data dictionary/repository which contains the standard data elements.

With these essential elements in place, we can then progress in an evolutionary fashion to achieve shared data and data that is entered once. I will discuss each of these key concepts in more detail in the following slides.



DoD DATA ADMINISTRATION PROGRAM

Elements of the DoD Data Administration Program



SLIDE 15 - ELEMENTS OF DOD DA PROGRAM (General)

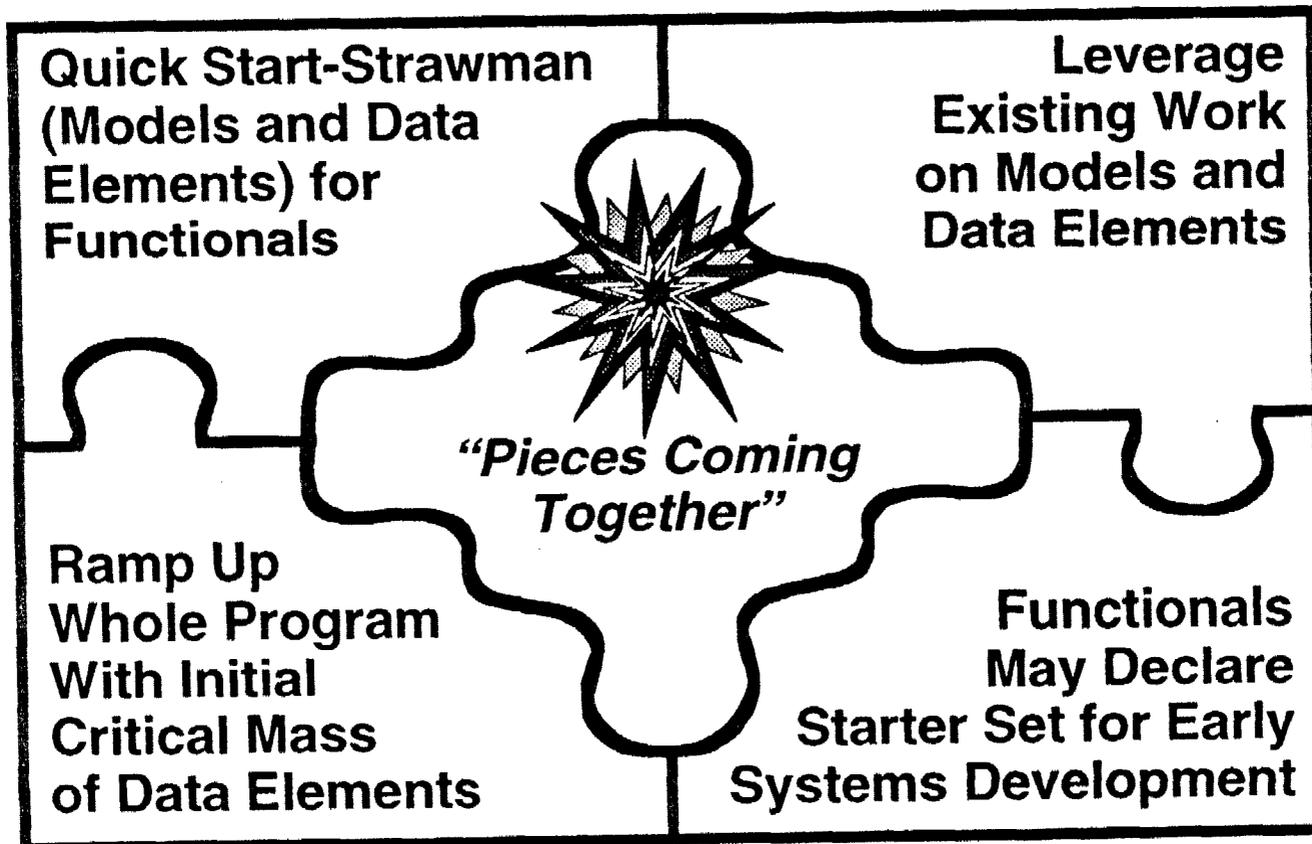
With the help of each one of these elements, we can achieve the overall framework for the program you just saw. Each piece is part of the whole of Data Administration

In the following slides I will explain the pieces and provide you with status of our progress.



Center for Information Management

"Pieces Coming Together"



SLIDE 21 - PIECES ARE COMING TOGETHER

The urgent need for standard data, or corporate data has never been more urgent. Functional managers and Systems developers alike are demanding standard data for use in their efforts. Migrating legacy data to standard data is critical. We have moved in multiple directions, and have modified our processes (without compromising the data integrity), in some instances, to accelerate putting in place a substantial number of data standards, one of the most critical foundational building blocks for data administration:

- leverage current modelling efforts to produce greater number of model-based data standards;
- reverse engineering legacy and migration systems to produce rational data models
- Quick start strawman (models and data elements) for functionals



DoD DATA ADMINISTRATION PROGRAM

Contents of the Defense Data Repository System

(9/21/93)

Submitted for
Development as
Candidate
Prime Words
and Data
Elements

436 Developmental
Prime Words

6 Approved Prime Words
2 Approved Data Elements
17 Approved Generic
Elements

7 Developmental
Generic
Elements

4,429 Developmental
Data Elements

Migration and
Key Legacy
System Data
Elements (Non-
standard
Submitted for
Reference
Purposes)

48,384 Migration Systems Data Elements

IM 217

C2 2,053

Health Affairs 4,428

Logistics 9,630

Army/RCAS 2,688

Finance 29,368

5000.12M DoD Corporate Data Elements
2,077

DoD Data Element Standards
Coordinated and Standardized
(1964-1991)

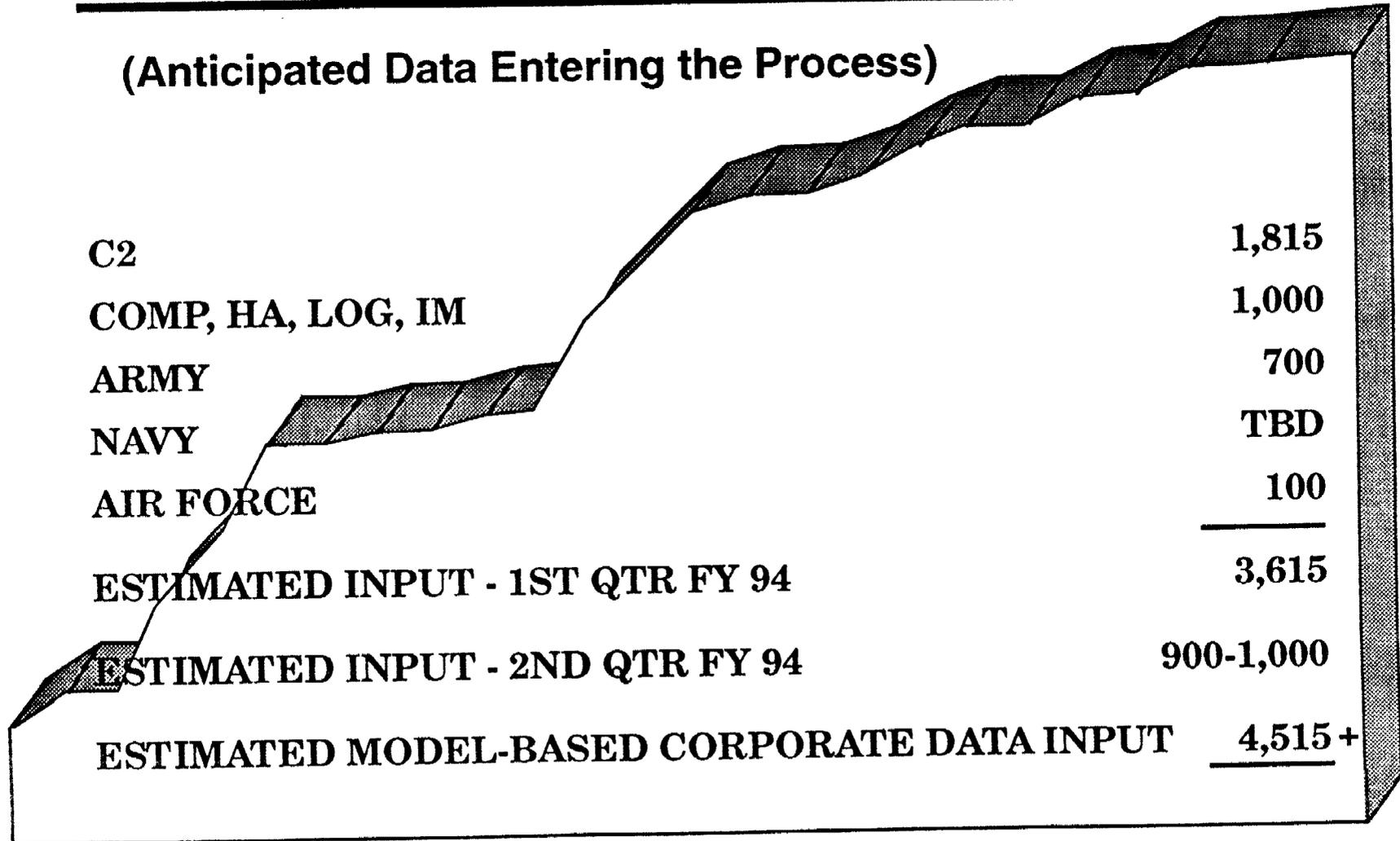
SLIDE - Contents of the Defense Data Repository System)

This chart shows an inventory of what is currently in the dictionary system.



Center for Information Management Model-based Enterprise Data in the Pipeline for 1st Half FY94

(Anticipated Data Entering the Process)



SLIDE - Pipeline

This chart shows those data elements models and data elements that are in the pipeline that are going through the data standardization process. We anticipate having more than 4,600 model-based data elements within the next 6 months.



DoD DATA ADMINISTRATION PROGRAM

NEAR TERM CHALLENGES:

- **Paradigm Shift In DoD IM Business**
 - **Data Administration Is Only One Component Of Change**
- **All Elements Of The DA Program Needed At Once**
 - **Intensive Ramp Up Required**
- **Data Administration Is A “Hard Sell”**
 - **DA Concept Is Not Intuitive**
 - **Payback Is Not Immediate**
 - **Significant Initial Investment Is Required**

SLIDE - NEAR TERM CHALLENGES

Clearly, we have been witnessing a paradigm shift in the information management panorama. We are at a time when recognition of the capability of the CIM program to provide improvements, efficiencies, and productivities is becoming evident. And clearly, Data Administration is only one of the component of change.

Within Data Administration, we now have in place the policy and organizational infrastructure, we also have developed a high level DoD Data MModel that can serve as the framework for future modelling efforts and subsequent data standardization activities, and all these foundational elements are poised to add value-- but...

All element of the DA program are needed at once, and therefore, an intensive ramp-up of the whole program is needed.

We are also faced with the fact that Data Administration is really a "hard sell" because the concepts are not intuitive; payback is not immediate; and significant initial investment is required.

CIM: Data Administration Issues - GAO

- **A central goal of Corporate Information Management is to improve Defense operations and reduce costs through improved management of information.**
 - **DoD concurs with observation but does not concur that the CIM "Process" Model needs to be applied in a strictly top-down fashion.**
- **Defense has not determined its corporate data requirements.**
 - **DoD has not fully determined all of its data requirements. Functional managers are in the process of determining their data needs. Data standardization is not something that happens all at once, and it does not happen quickly when it is done correctly.**
- **Data element standardization procedures are premature and ineffective.**
 - **DoD does not concur that these procedures are either premature or ineffective. We needed procedures to do it right and data modeling procedures are being circulated now. Regardless of how they were built, data models can be used to develop well-formed, single concept corporate data elements. We have funded and backed the IDEF Federal standard development.**
- **Defense Data Repository System does not support Data Administration goals.**
 - **DoD concurs that functional process improvement is needed for data administration now that we have it going. We are doing a functional process improvement study. We have done a requirements analysis for the DDRS and are proceeding with a requirements validation and acquisition planning. The DDRS is needed until it can be replaced.**

GAO DRAFT REPORT, AUGUST 19, 1993
"CORPORATE INFORMATION MANAGEMENT: MANAGEMENT COMMITMENT NEEDED TO ACHIEVE DATA
ADMINISTRATION GOALS"

FINDINGS

**CENTRAL GOAL OF CIM IS TO IMPROVE DEFENSE OPERATIONS AND REDUCE COSTS THROUGH IMPROVED
MANAGEMENT OF INFORMATION. CONTRIBUTING FACTORS:**

- DOD FUNCTIONAL MANAGERS LACKED UNDERSTANDING OF IMPORTANCE OF USING INFORMATION TO
MANAGE BUSINESS RESOURCES
- DOD LACKED FRAMEWORK FOR DEFINING AND INTEGRATING DATA MANAGEMENT ACTIVITIES
DEPARTMENT-WIDE
- DOD LACKED COMMON APPROACH AND METHODOLOGY FOR IDENTIFYING AND DESCRIBING DATA
REQUIREMENTS

GAO RECOGNIZES DOD HAS TAKEN STEPS TO IMPROVE MANAGEMENT OF INFORMATION WITH ISSUANCE OF DATA
ADMIN. POLICY IN 1991.

DOD RESPONSE: Partially concur. Nonconcur with report reference to a "Corporate Information Management
Process Model"

DEFENSE HAS NOT DETERMINED ITS CORPORATE DATA REQUIREMENTS. CONTRIBUTING FACTORS:

- DOD TOP MANAGEMENT HAS NO CLEARLY DEFINED ROLES AND RESPONSIBILITIES FOR IMPLEMENTING CIM
- LACK OF UNIFORM COMMITMENT ON PART OF SENIOR DOD MANAGERS

DOD RESPONSE: Partially concur.

Nonconcur with GAO assertion of no clearly defined roles/responsibilities. (Ref. DoDD 8000.1 and DoDD 8320.1, and draft DoD 8020.1-M)

Success of CIM initiative may be dependent on DoD data administration, the reverse is not true.

DATA ELEMENT STANDARDIZATION PROCEDURES ARE INEFFECTIVE

- DATA ELEMENT STANDARDIZATION PROCEDURES ISSUED JAN 93 ARE PREMATURE BECAUSE DOD HAS NOT YET DETERMINED ITS CORPORATE NEEDS. DATA MODELING GUIDANCE SHOULD HAVE BEEN ISSUED FIRST.
- IT WILL BE DIFFICULT AND EXPENSIVE TO CONSOLIDATE AND INTEGRATE OVER 100 SEPARATE MODELS CURRENTLY UNDER DEVELOPMENT.

DOD RESPONSE: Nonconcur.

DDRS DOES NOT SUPPORT DATA ADMINISTRATION GOALS

- **DDRS WAS POORLY PLANNED AND IMPLEMENTED--FUNDAMENTALLY FLAWED; DOES NOT SUPPORT:**
 - USER NEEDS
 - KNOWN DATA DICTIONARY REQUIREMENTS
 - DEFENSE DATA ADMINISTRATION GOALS
- **DEVELOPED PRIOR TO DETERMINING METHODS, PROCESSES, AND DATA NEEDED TO SUPPORT DEFENSE DATA ADMINISTRATION**
- **METADATA ABOUT EXISTING NONSTANDARD (MIGRATION) DATA ELEMENTS IS INACCURATE. BY REGISTERING NONSTANDARD DATA ELEMENTS FROM EXISTING SYSTEMS, DOD PERSONNEL ARE PURSUING ACTIVITIES THAT ARE:**
 - WASTEFUL
 - INEFFECTIVE
 - DO NOT SUPPORT DOD CORPORATE DATA ELEMENTS

DOD RESPONSE: Partially concur. DDRS was put into operation to meet immediate needs; FPI was initiated and completed on repository requirements; FPI is underway on data administration.

GAO infers that nonstandard data elements in the repository are to be used as standards -- incorrect conclusion.

GAO RECOMMENDATIONS

PSAs BE REQUIRED TO DOCUMENT THEIR BUSINESS METHODS AND PERFORMANCE MEASURES PRIOR TO PROCESS AND DATA MODELING I/A/W CIM MODEL.

DOD RESPONSE: Partially concur. Disagree with the requirement to document business methods and performance measures “prior to” modeling. Development of models helps determine performance measures.

SECDEF REQUIRE ASD(C3I) TO APPLY CIM MODEL TO DETERMINE DEFENSE DATA ADMINISTRATION METHODS, PERFORMANCE MEASURES, PROCESSES, AND DATA NEEDED TO MANAGE DOD CORPORATE DATA RESOURCES.

DOD RESPONSE: Concur. (Already being implemented through FPI projects in repository and data administration areas)

SECDEF REQUIRE ASD(C3I) TO CANCEL THE DDRS OPERATION AND SUPPORT ACTIVITIES AND TAKE STEPS TO ACQUIRE AN IRDS BASED ON DATA ADMINISTRATION PROCESS AND DATA REQUIREMENTS.

DOD RESPONSE: Partially concur. Disagree with recommendation to cancel DDRS.

SLIDE - SUMMARY

But the bottom line is that we cannot afford to not do it, because without quality data that can be shared, we cannot achieve the efficiencies, savings, and interoperability that we need in this time of reduced resources.