California Department of Mental Health

INFORMATION TECHNOLOGY INFRASTRUCTURE FOR CALIFORNIA MENTAL HEALTH SYSTEM ACCOUNTABILITY

VISION

PRELIMINARY CONCEPTS

EARLY STRATEGIES

Integrating Data Project Silos and Increasing Performance Measurement Capacity Through A Comprehensive Electronic Mental Health Technology Enterprise

Stakeholder Workgroup Meeting
June 23, 2005

Mental Health Information Systems

Major Purposes:

Electronic information capture and distribution to improve services & mental health

Using electronic systems for improving service delivery, and access/security of mental health information (EHRs, PHRs, Info access networks)

Resource management

Allocation, appropriation, funding stream & workforce tracking, cost reporting, Medicaid claiming, billing etc.

Performance measurement / Accountability

Oversight: assuring appropriate, state-of-the-art service delivery (e.g., EBPs, value-based / promising practices, etc). ***Doing what we should do, and what we said we would do.***

Evaluating effectiveness: examining consumer and community outcomes in the context of services and supports provided / available. ***Achieving what we set out to achieve.***

Main Sources of Accountability Information Currently Used

Local Service Encounter Reporting Systems: *Client and services information, including client identifiers, diagnosis, demographics, modes of service, service functions, providers, etc.*

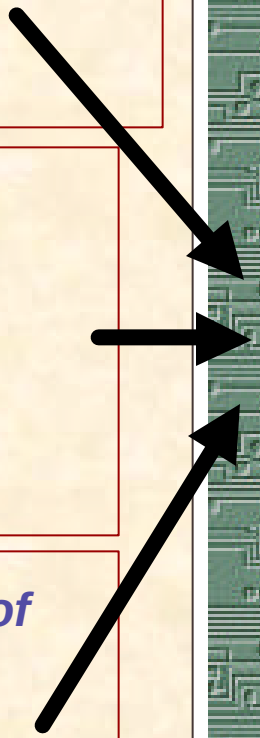
****Monthly Reporting to State CSI / Federal DIG/URS***
****Medi-Cal Claiming, Billing, Cost Reporting***

DMH Centralized Consumer Survey Reporting System: *Consumer perception of service quality and outcomes.*

****On-line key entry***
****Integrated, local scanning of paper forms/central verification***
****Semi-annual reporting from Local Survey Systems***

Key-Event Outcomes Tracking System: *Ongoing collection of changes in objective quality of life information (e.g., AB2034)*

****Key-entry system- separate from local service encounter system***



The goal is to streamline, integrate and coordinate business processes, technology and information.

Three Areas of Coordination & Integration:

1. **Coordinating and Integrating Data-Informed Projects**
   - ***Conceptually and operationally tying goals, data needs and business processes together - reducing conceptual stovepipes and data redundancy***

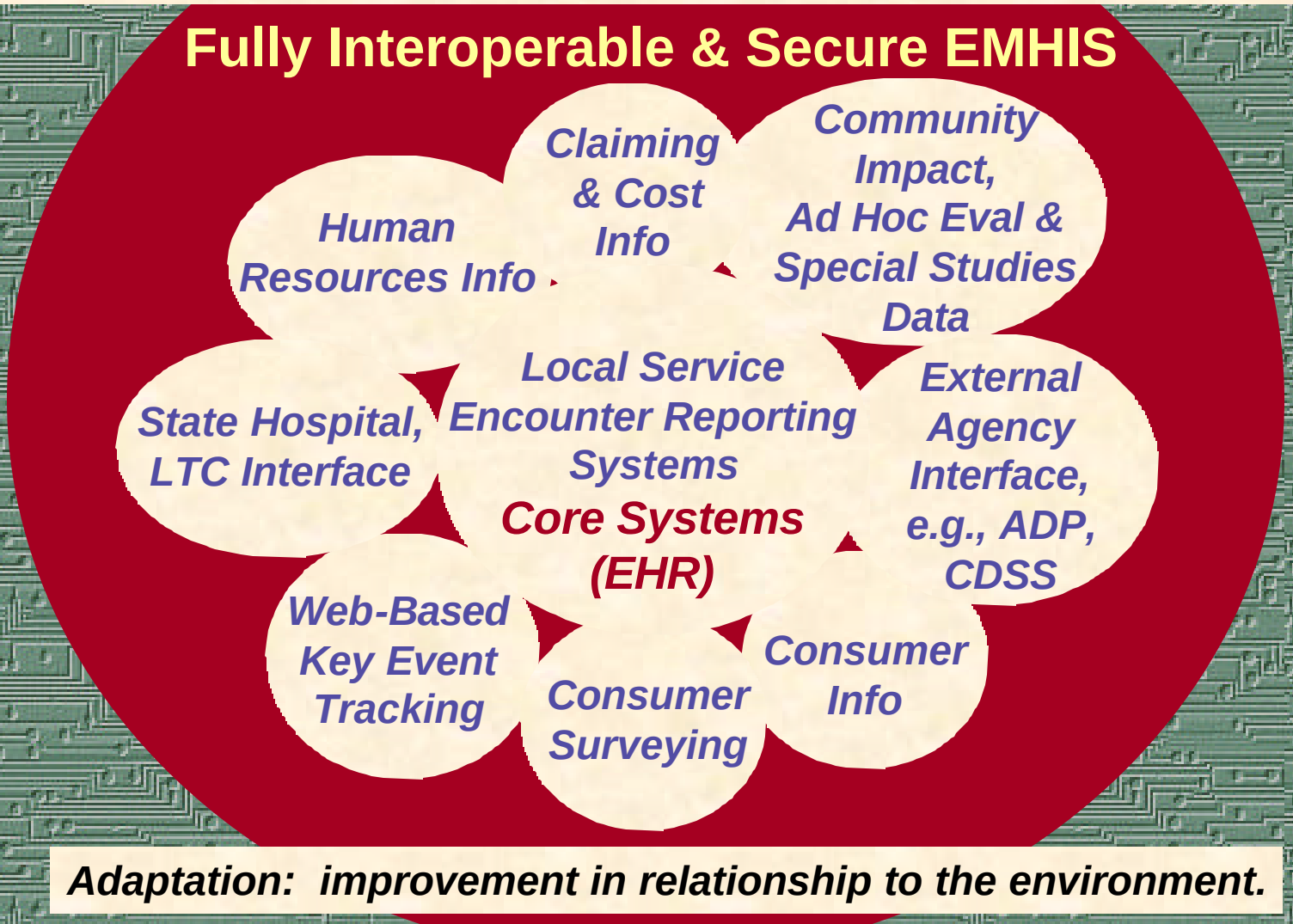
2. **Creating integrated & coordinated computer / communications technology solutions**
   - ***Achieving interoperability between disparate systems, components, databases, etc.***
   - ***Streamlining the user experience: Developing intuitive, seamless, and transparent processes for system users; reducing data entry redundancy***

3. **Integrating resulting data for performance-based accountability**
   - ***Combining typically isolated data silos in order to measure meaningful indicators, e.g., cost-effectiveness, differential service outcomes, etc.***

Integrating Computer / Communications Technology Solutions

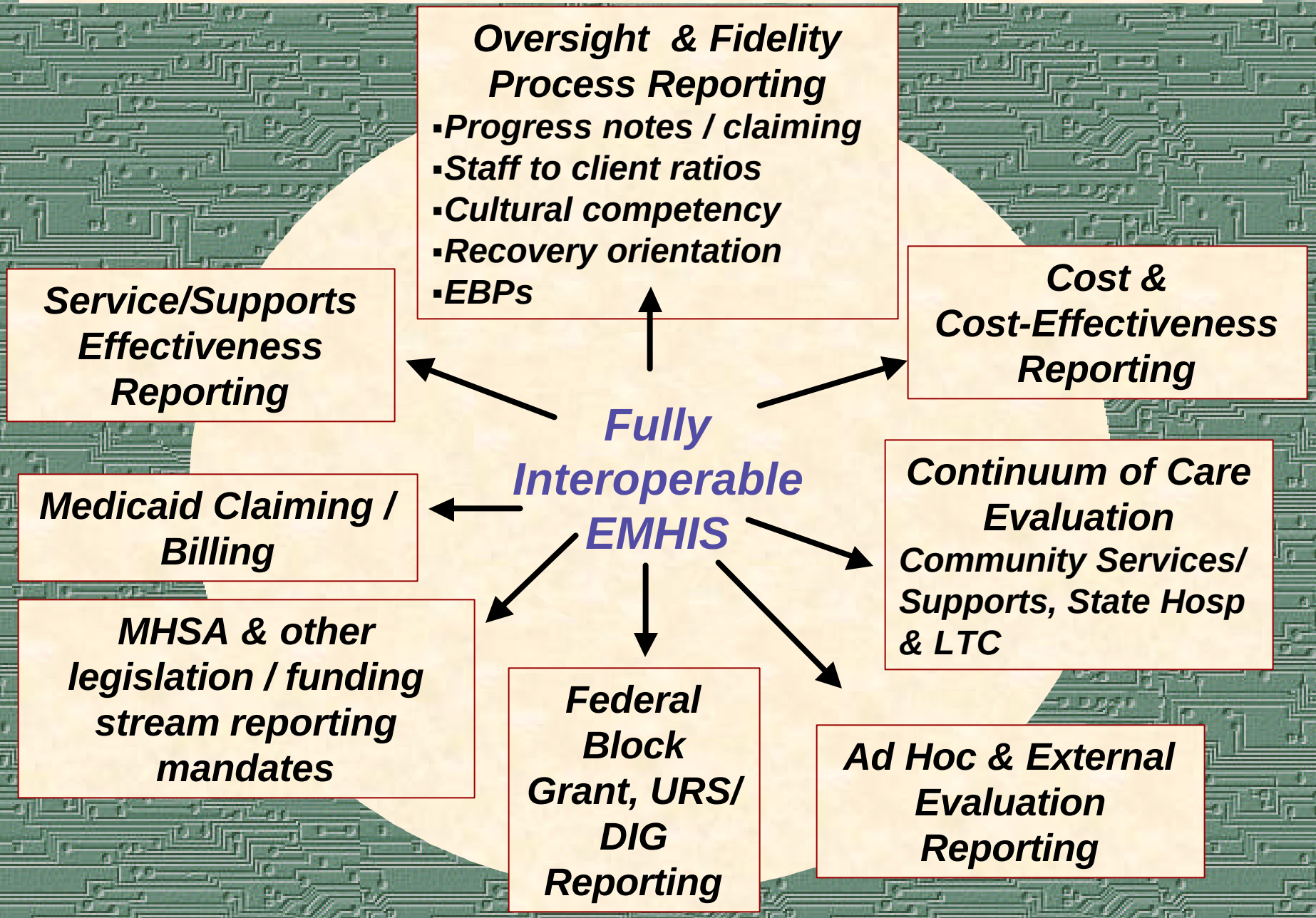
- Development of technology, data and measurement standards
- Ensuring flexibility to change & providing options to maximize feasibility
- Building on what is already there; Integration through interoperability

Adapting current systems and processes to multi-purpose EMHIS



Adaptation: improvement in relationship to the environment.

Extracts and Evaluations



What We Need to Do

Static Data Elements

Data Project Silos

Old World

New World

Systems that are:

Flexible
Adaptable
Extensible
Interoperable
Secure
Responsive

New Mental Health Information Systems

Ideal Characteristics:

Flexible

- Able to change data structures, requirements, information acquisition methods and tracking on an ongoing basis.

Extensible

- Scalable for both small providers and large county systems.
- Must be an “Open” system architecture allowing new features and functions to be added or plugged in at will.

Interoperable and Secure

- The system needs to operate and interface easily with other systems.
- Information must be protected for privacy at all times.

Responsive

- Information should flow into the system in an “as soon as gathered mode” rather than weekly, monthly, etc. intervals.
- Business requirement changes must flow into the system as needed.

Extensible Systems

Flexibility for Meeting the Business Goals.

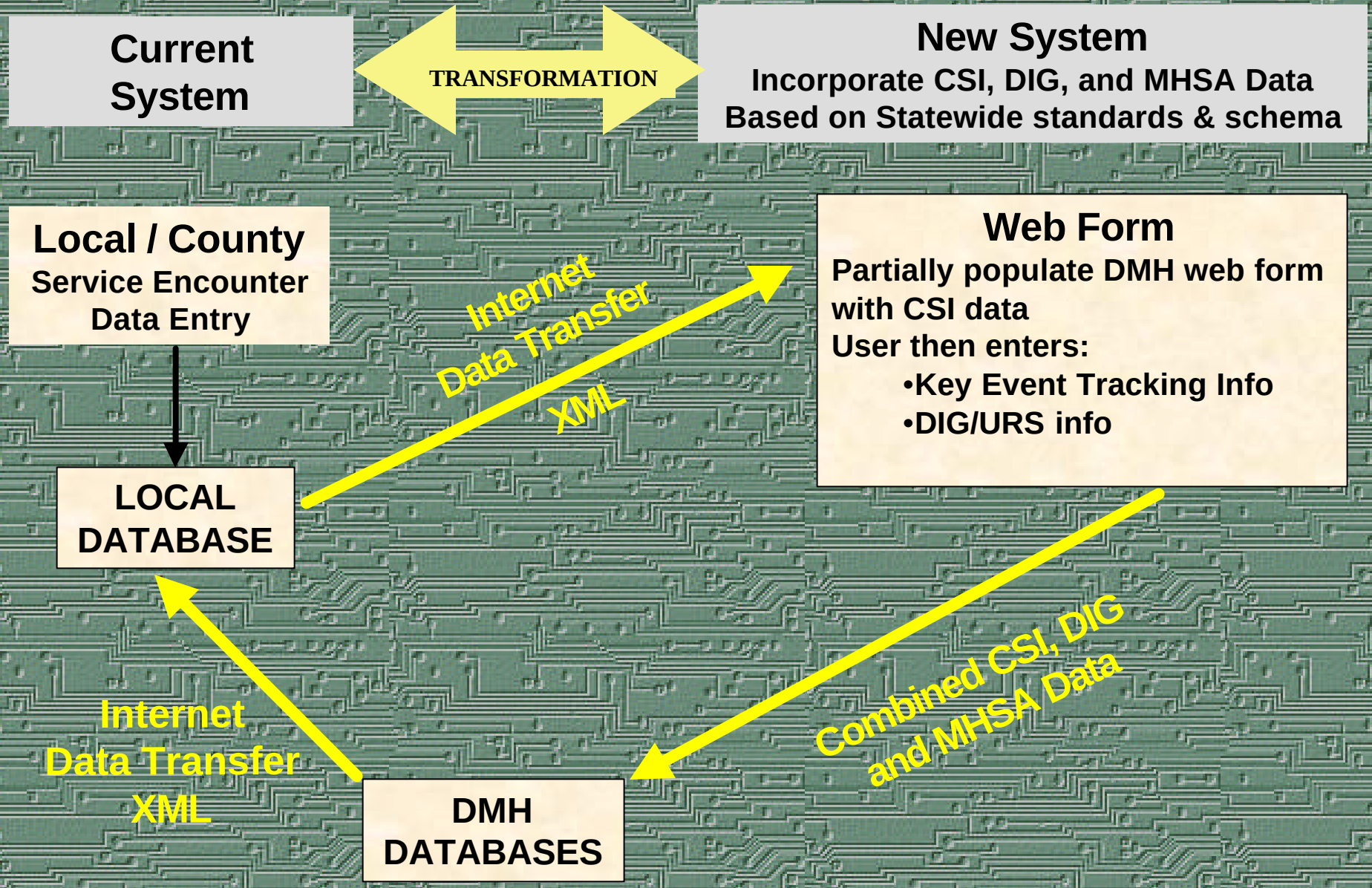
XML (Extensible Markup Language) provides data flexibility

- XML is a self describing data structure that does **not** depend on format, length or order.
- XML data dictionary (called SCHEMA) can contain data relationships, business rules and translations.
- XML tools are available to assist in building and managing an XML based system.
- XML is a robust industry standard (.NET, E-Filing, etc.)

Centralized definitions and processes

- Automated tools are available to generate views and interfaces directly from published schema.
- Changes to the schema can automatically generate new views of the information to the end user.
- Changes to schema will not require changes to applications.

PROPOSED PHASE I STRATEGY FOR DATA SUBMISSION



Fully Realized Extensible System

Phase 1 – Short-Term Strategies for Data Submission

DMH will provide a web-based application for data capture

- Centralized, schema-based web pages to allow secure, online entry for all new information.
- Incorporate CSI, DIG and MHSA in system schema and applications.
- Submitted data will be available to counties.

Fully Realized Extensible System

Phase 2 – Submitting Data to DMH

DMH will extend the schema based application:

- Enhancement of centralized, schema-based web pages to allow entry online for all new system information.
- Printable forms from the web which can be scanned in to populate the web-based form.
- County or Provider could build custom web-based forms using the provided XML schema.

DMH will build a schema based information portal:

- XML information can be sent from county/provider via secure file transfer protocols.
- Plug-ins could be developed for county/vendor systems to access county files and extract/send information.
- A staging database could be created where county information would be stored for access and processing.

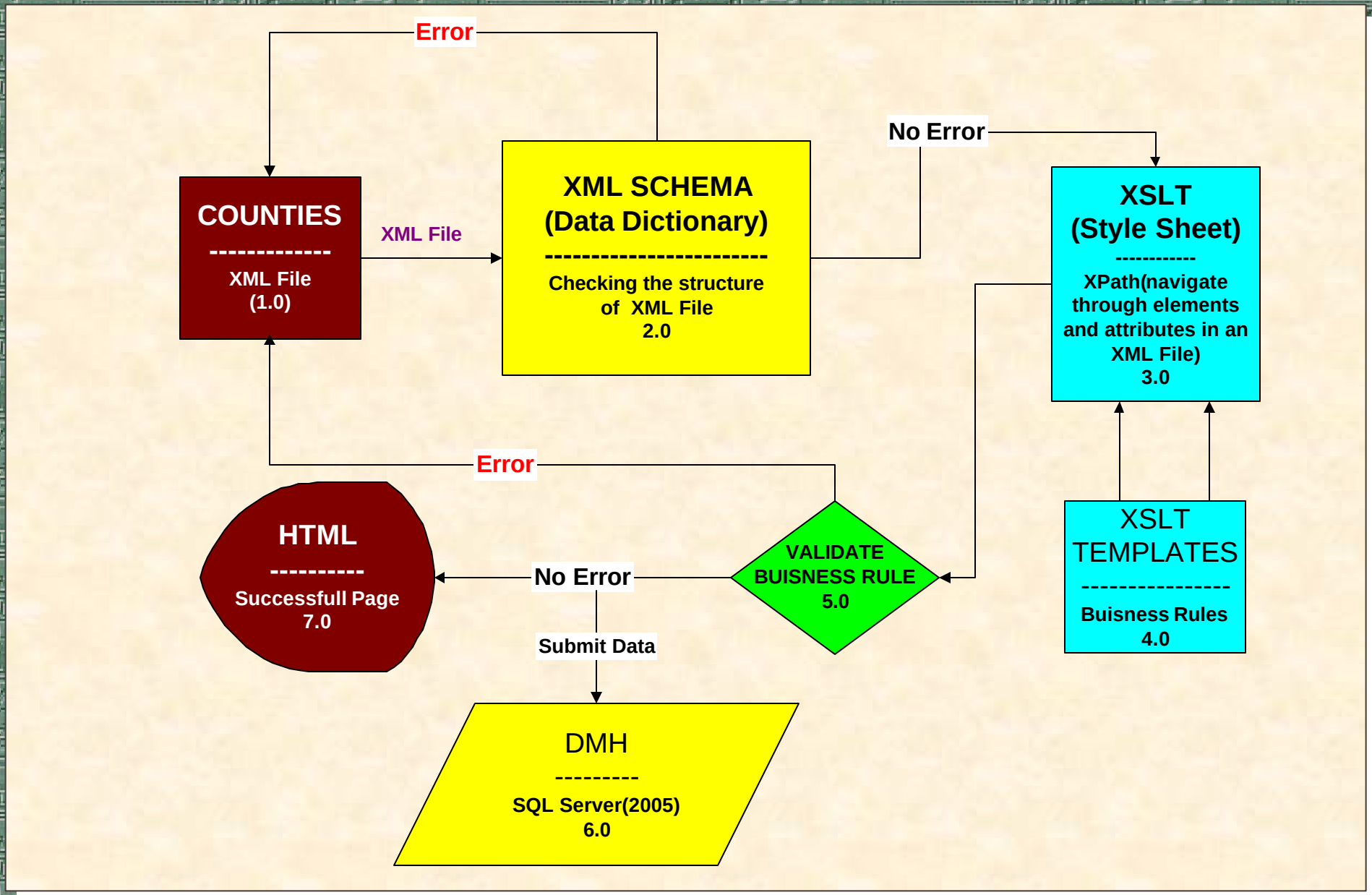
Fully Realized Extensible System

Phase 2 – Data Returned to Counties

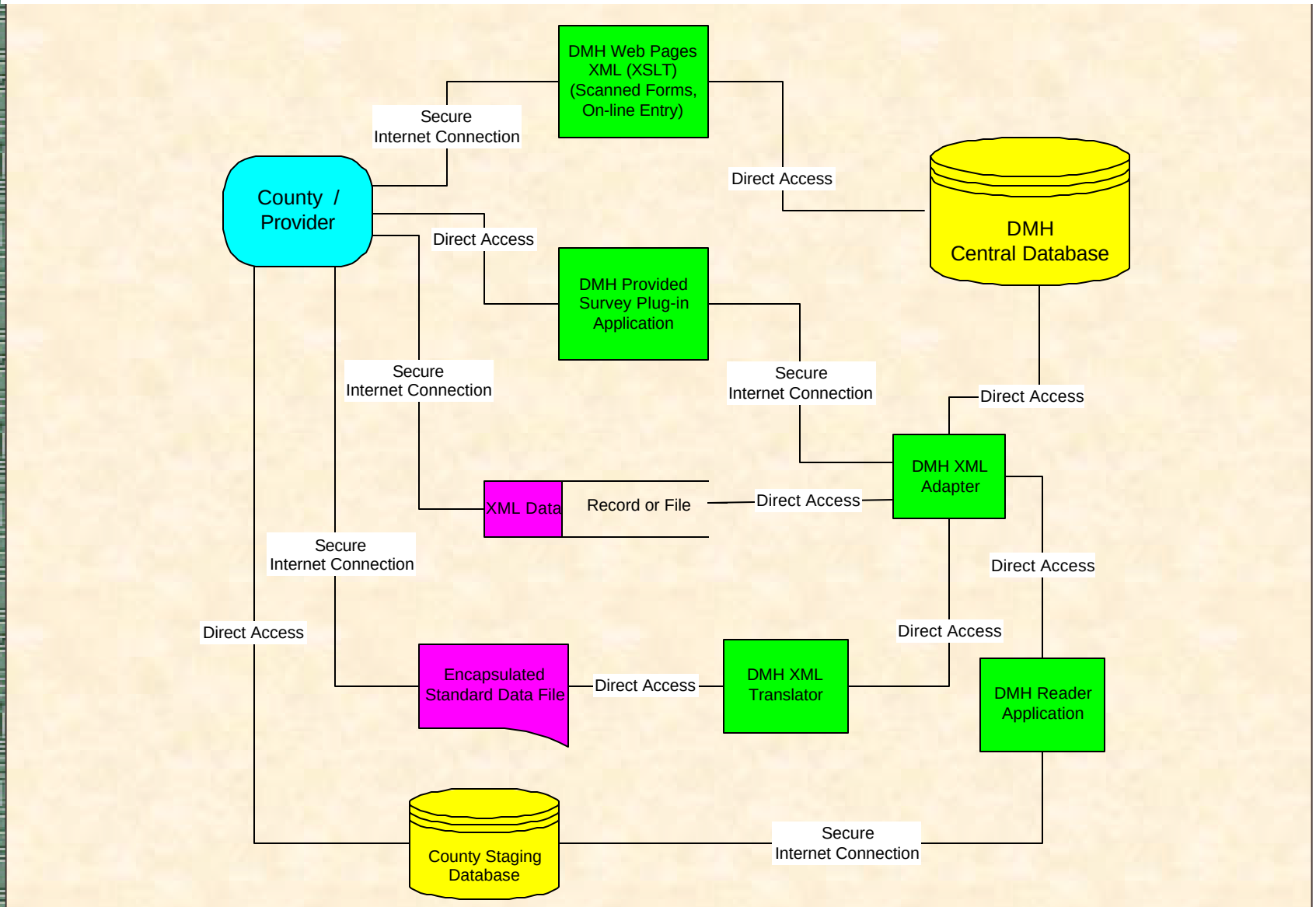
MHSA information available via access portal:

- Build a web-based reporting and charting site.
- Provide downloads of selected county/provider information via XML files and reports.
- Automatically return incoming raw information directly into staging databases at the county level.
- Reports and analyzed information returned to county/vendor application for access and processing at the county.

Fully Realized Extensible System: Schema Driven



Fully Realized Extensible System: Secure Portal



Questions / Comments