

# The APHL EDD

What it is

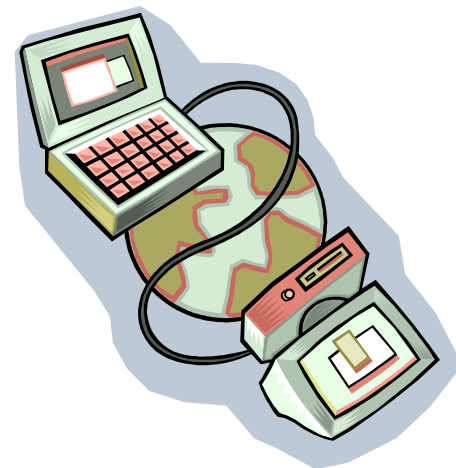
How it Differs from other EDDs

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# APHL Environmental Informatics Goal:



- 1.) Develop & implement an electronic data flow directly from environmental laboratories to multiple state and federal agencies
- 2.) Standardize this delivery with data exchange standards that are agnostic to program, matrix, and methods

Need a single, nationally-standardized lab reporting format.

Multiple data exchange templates compromise commercial production of tools to produce electronic messaging.

**That...**

Follows  
a Staged Approach

*Spreadsheet or levels  
of XML*

Includes  
Laboratory  
Generated Samples  
and Substances

*LCS, MS, MSD and  
Surrogates or DMCs*

Supports  
Automated Data  
Review

*Contains sufficient data  
for automated  
assessment*

## A Standardized Electronic Data Deliverable is Needed

**... and**

Allows the Efficient  
capture of data

*Optimized data groups,  
no redundancies*

Is agnostic to  
Method, Matrix,  
Program

*Flexibility defined  
by data requirements*

Allows Web Service  
mediated Data  
Exchange

*Data is shareable  
between end-users*

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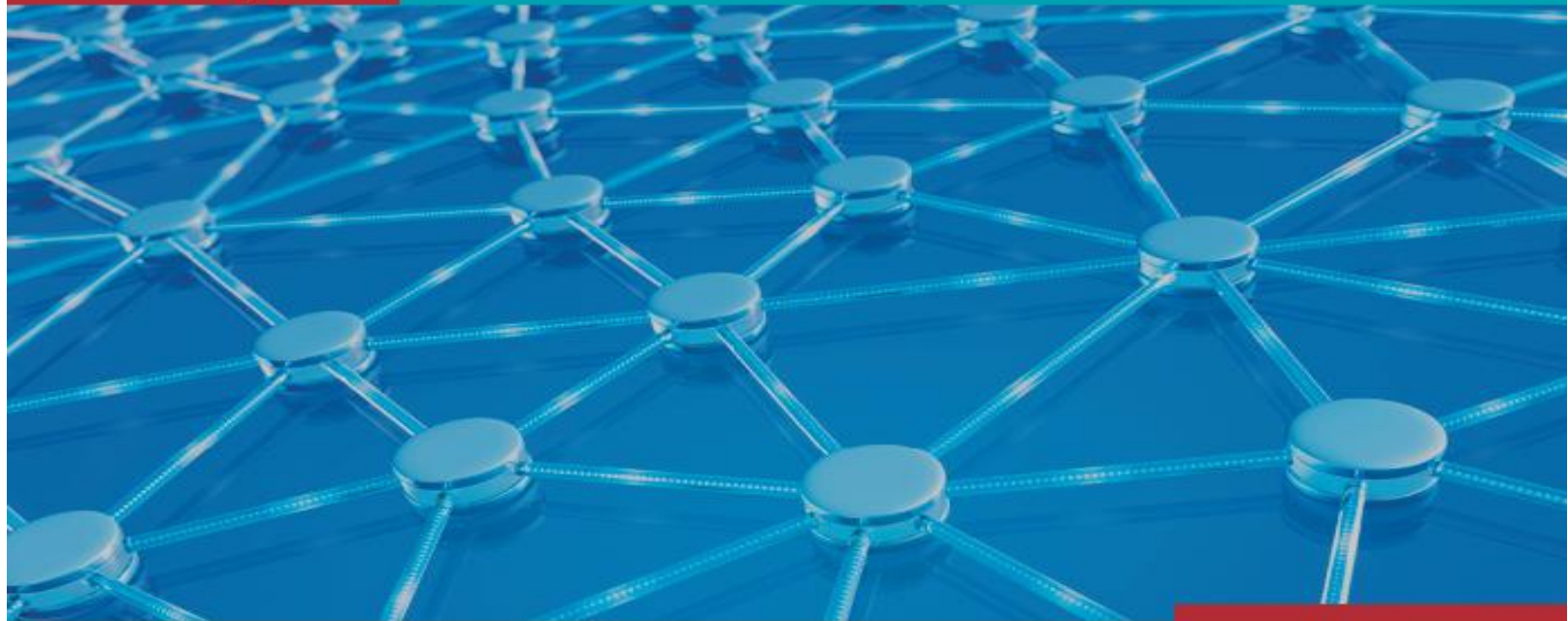
# ENVIRONMENTAL LABORATORY ELECTRONIC DATA MANAGEMENT

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# Requirements for Environmental Electronic Data Delivery Submissions

APHL Report



MAY 2012

The APHL EDD is the  
**Daughter of SEDD**

(Staged Electronic Data Deliverable)

	<b>SEDD</b>	<b>APHL (based on ERLN)</b>
<b>Usage by environmental laboratories</b>	Primarily in limited use by the private sector	44 state laboratories have participated and used the ERLN
<b>Ease of use</b>	Many labs can't produce the XML due to the rigid, technical DTD	Provides a 'transitional' spreadsheet option, vastly increasing ease of use
<b>Basis of program</b>	Primary customer is the technical system; Primary use is data submittal	Modeled after EPA's ESAR standards, the primary customer is the ease of information flow; Primary use is data exchange



	SEDD	APHL (based on ERLN)
Flexibility	<p>Every new data element requires a new DTD, affecting the ability of legacy data to be uploaded;</p> <p>New DTDs require technology investment &amp; roll outs</p>	<p>Two types of data elements (MeasureValue and CharacteristicValue) allow labs to add new measurements without changing the DTD</p>
Efficiency of the data	<p>A Type 2B EDD requires 277 data elements, resulting in redundancy;</p> <p>LIMS vendors do not typically complete all 277 data elements</p>	<p>A Type 2 EDD requires only 88 data elements to provide the same data</p>

	<b>SEDD</b>	<b>APHL (based on ERLN)</b>
<b>Relational database</b>	Not normalized to reduce redundancy; Not organized in a way to establish relationships.	Four less analytical groups are used to convey data; all data elements are related efficiently.
<b>Ability to support a true XML schema</b>	Lack of relationships diminishes the ability to provide a schema; Data is limited to a DTD without significant upgrades	The relational data structure supports upgrades to a schema

	<b>SEDD</b>	<b>APHL (based on ERLN)</b>
<b>Data validation</b>	Uniquely accepts and provides data review on Type 3 data	Can accept Type 3 data, but WebEDR cannot provide automated review for it
<b>Automated data review</b>	Uses EXES; EXES only accepts SEDD	Uses WebEDR; WebEDR can accept either level 1 or 2 for both EDDs

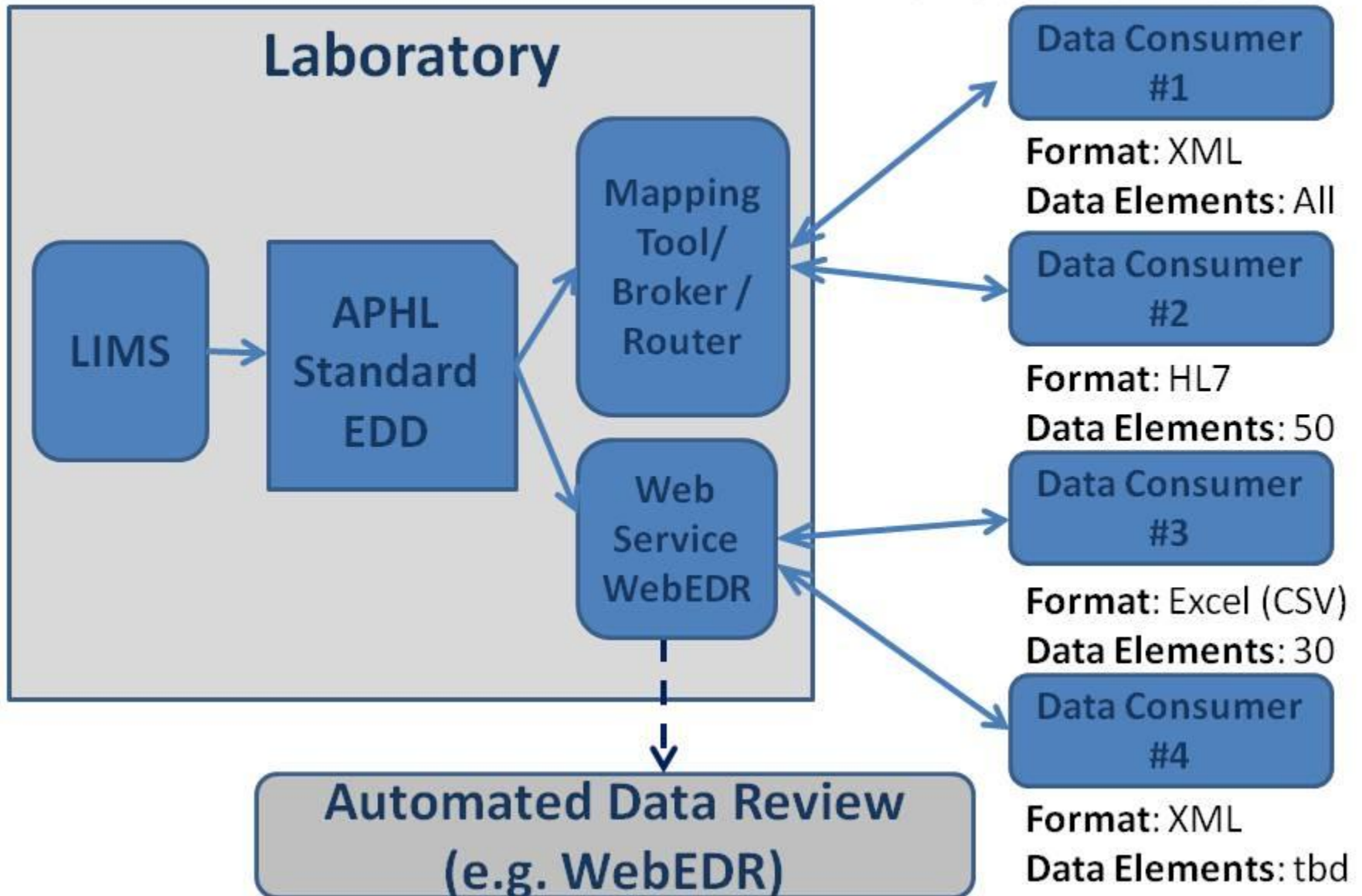
APHL recommends that  
interoperability and  
Automated Data Review  
be based upon the  
**ERLN WebEDR**

# Future Discussions

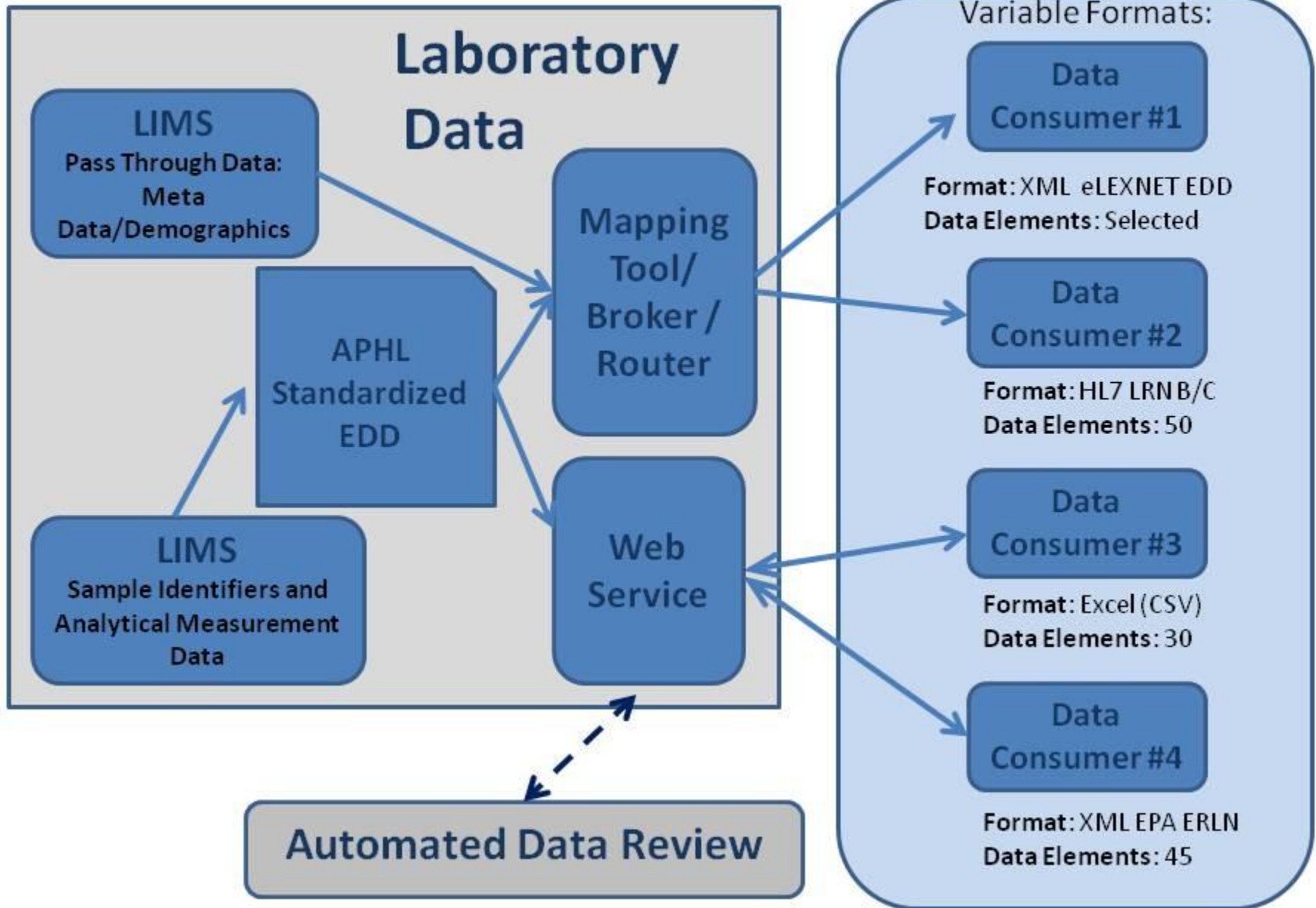


# Data Exchange Consumers

Variable Formats:



# Data Exchange Consumers



# Contact Information



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ALL REFERENCED DOCUMENTS ARE AVAILABLE  
AT: [www.aphl.org](http://www.aphl.org)