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# ADUS Program Development

North American Travel Monitoring  
Exhibition and Conference

Madison Wisconsin , August 2000

# What is ADUS ?

- **31st National ITS Architecture User Service**
- **Describes users, interfaces and flows, functions, market packages**
- **Focus**
  - **Archiving ITS data**
  - **Multiple uses of information**
  - **Integration of Transportation information systems**

# What is ADUS?

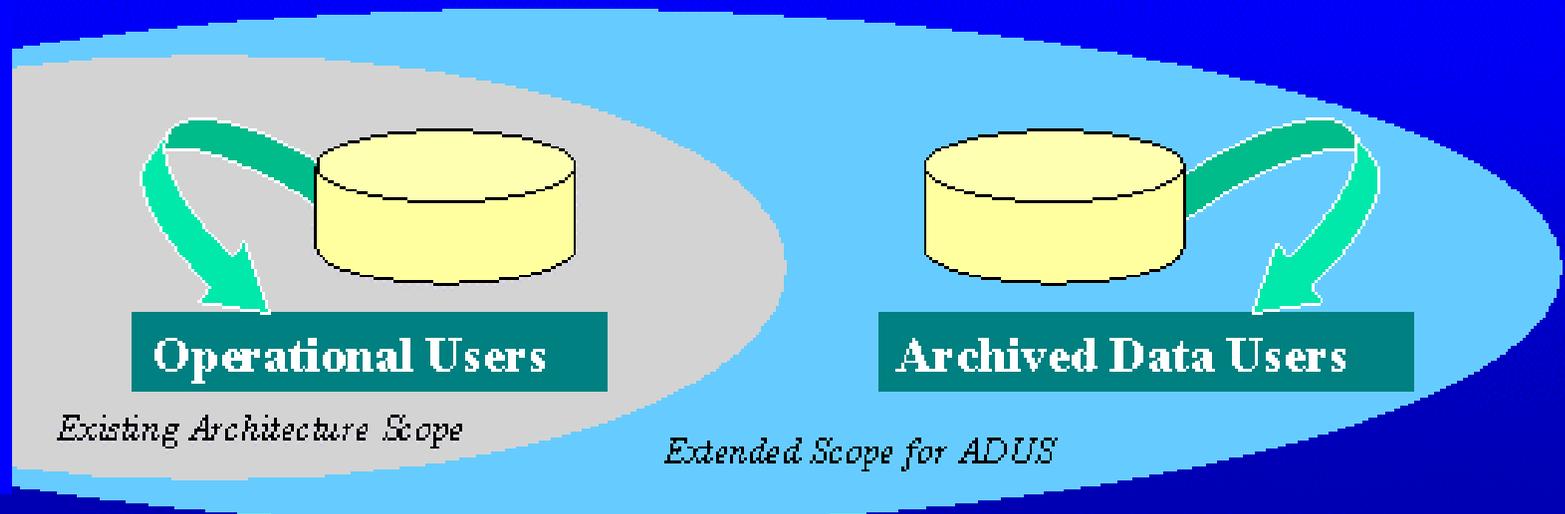
## Operational Data and Archived Data

### Operational Data

Data Collected, Stored, and Used to support the daily operation and maintenance of the transportation system.

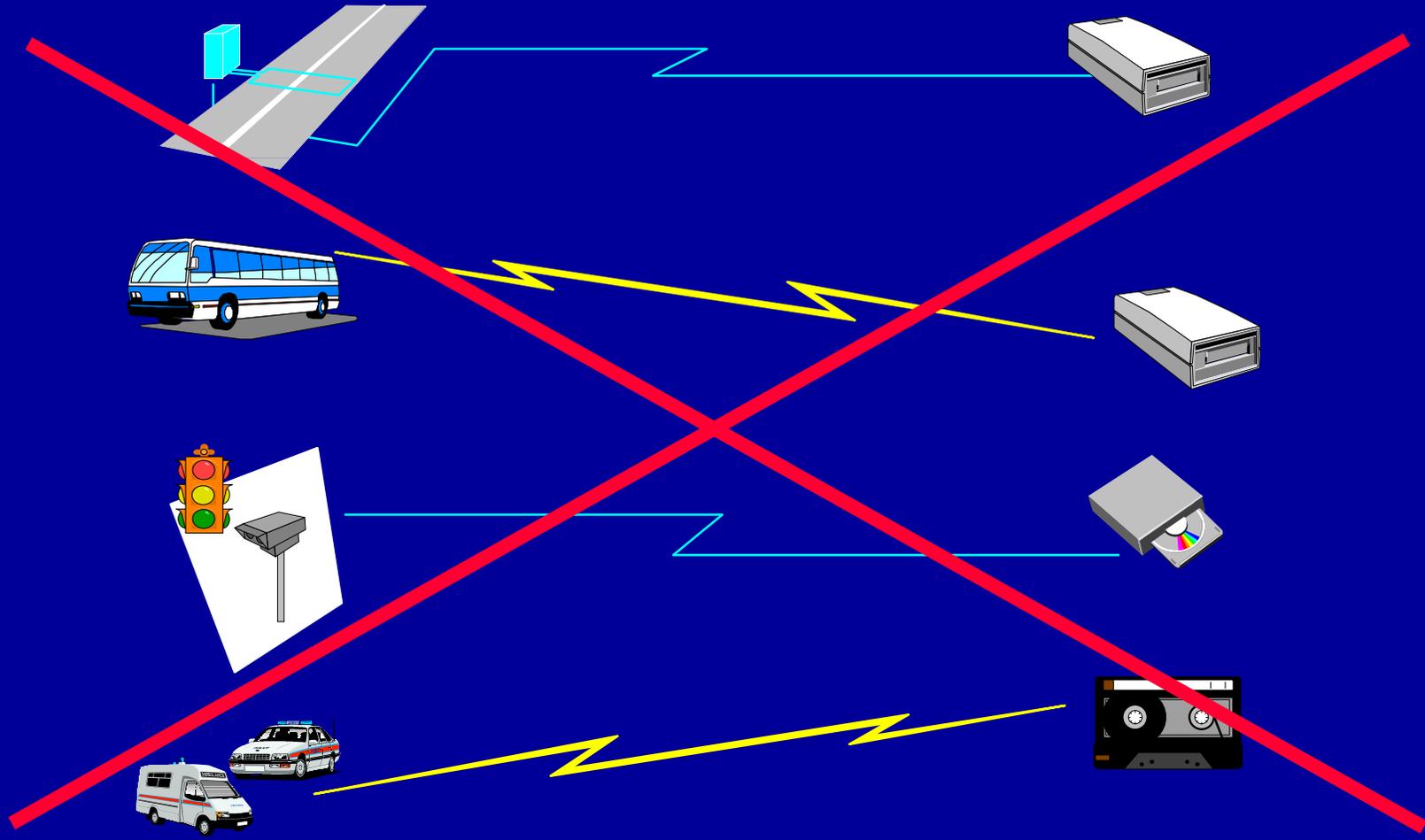
### Archived Data

Data Collected, Stored, and Used to support research, planning, and other off-line analysis of the transportation system.



# ADUS Vision

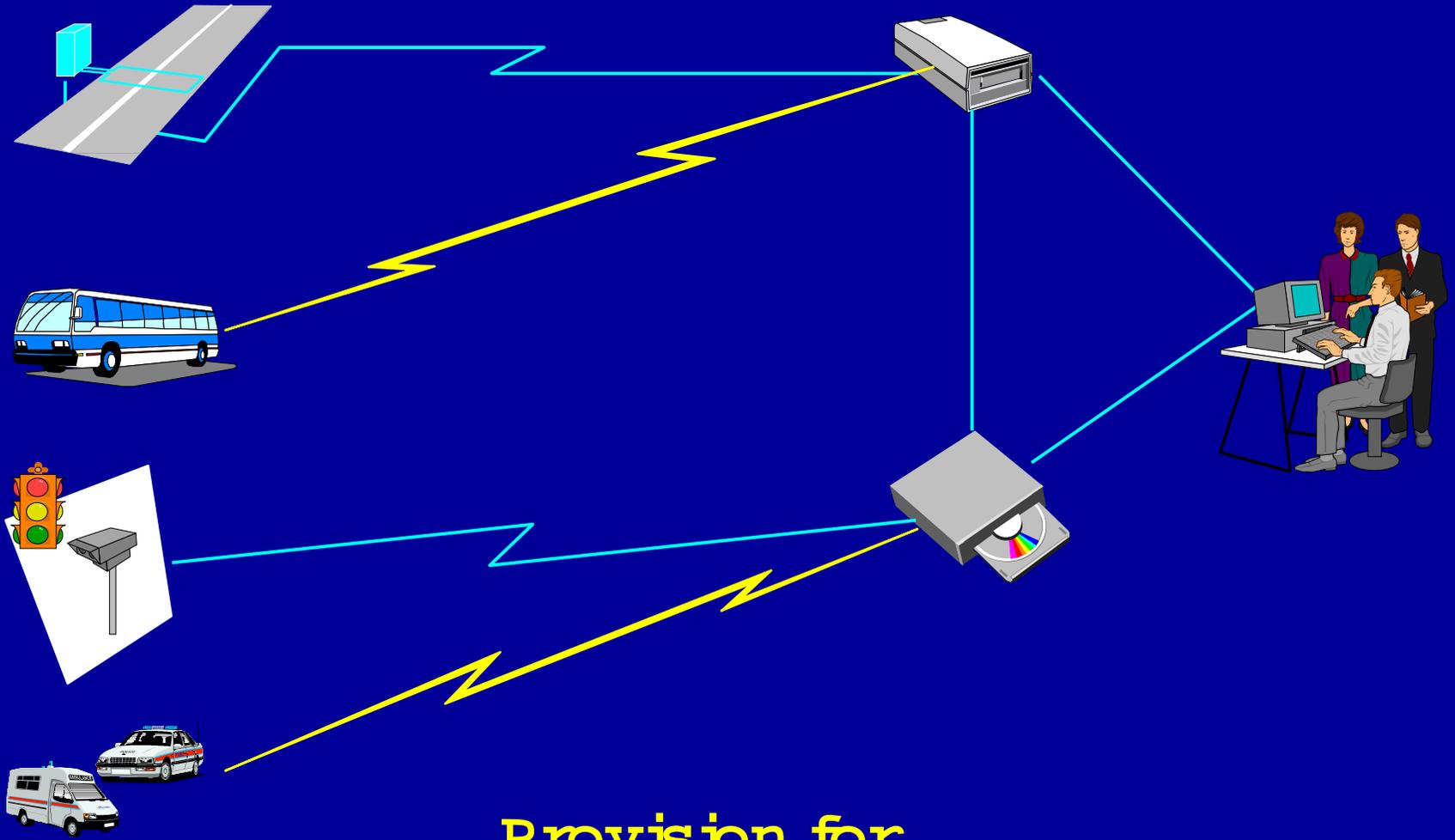
## ADUS IS NOT...



# Simply Saving Data !

# ADUS Vision

## ADUS Is ...



### Provision for Saving, Merging, and Retrieving Information

# ADUS Vision

*Improve transportation decisions through the archiving and sharing of ITS generated data.*

## Principles to Achieve this Vision:

- Archiving of data is considered and encouraged for all ITS deployments
- Data are archived to maximize integration of information with other data sources/systems
- Data are archived to ease retrieval for those with access
- Information provided is integral to transportation practice

# ADUS Federal Program Goals

- **Increase awareness of and professional capacity to implement ADUS**
- **Advance and expand the application of the state of the practice of ADUS**
- **Understand impacts (benefits/costs) of ADUS**
- **Resolve technical ADUS issues**
- **Resolve institutional/organizational ADUS issues**
- **Advance and develop the state of the art of ADUS**
- **Promote use of archived data in making better transportation decisions**
- **Promote use of archived data in streamlining federal reporting systems and performance monitoring**

# 5-Year Program Objectives

- **Plan and implement one or more integrated systems that combine information from multiple ITS data sources**
- **Provide case studies to illustrate implementation issues, costs, quantitative benefits and uses for better decision making**
- **Quantify costs of various market packages and components necessary to implement, maintain and operate archive data systems (i.e., data marts, data warehouse, virtual warehouse)**
- **Develop and provide multi-faceted ADUS awareness program**
- **Conduct research and issue guidance on:**
  - **Single stream data management (technical issues addressed)**
  - **Data integration across different ITS sources and organizations (institutional and technical issues addressed)**

# **5-Year Program Outcomes**

## **Indicators of Success**

- **Sharing of ITS generated data between and within agencies will be common**
- **Federal reporting system procedures allow for ITS generated data where appropriate**
- **Regional architectures include data archiving functions and concept of operations (100% of 78 Major Metro Areas)**
- **ITS projects consider and include data archiving**
  - **All ITS projects that receive Federal funding consider archiving data**
  - **50% of ITS-funded projects involve archiving consistent with regional architecture**
  - **25 of 78 Major Metro Areas actively archive (based on deployment tracking surveys)**

# ADUS Program Development

- **Aimed at Integrated ADUS Systems and Data Sharing**
- **FHWA Office of Policy Information: Champion/Coordinator**
- **Champions/Involvement in Focus Areas**
  - **Roadway Traffic**
  - **Transit**
  - **Safety**
  - **Freight/Goods Movement**
  - **Rural/Statewide**
- **Leveraged / Piggyback Efforts.**

# ADUS Program

## Wave I

*Program definition*

*Needs Analysis, Assess State-of-Practice*

*Technical & Institutional Issues Identification*

*Program Awareness & Standards Coordination*

*( \$ 1,200 to \$1,700 K )*

## Wave II

*Research Technical and Institutional Issues*

*Initiate Integrated Archive Pilots/Field Ops Tests*

*Meta-Data and Other ADUS Specific Standards Efforts*

*Provide Training, and Issue Initial Guidance Documents*

*( \$ 2,000 to \$2,500 K )*

## Wave III

*Deployment Results & Best Practices*

*Benefits and Costs & New Uses of ADUS Data*

*Draft ADUS Standards*

*Integrated Archive Guidance and Awareness/Outreach*

*( \$ 800 to \$1,200 K )*

*Wave I*

*Wave II*

*Wave III*

FY 1999

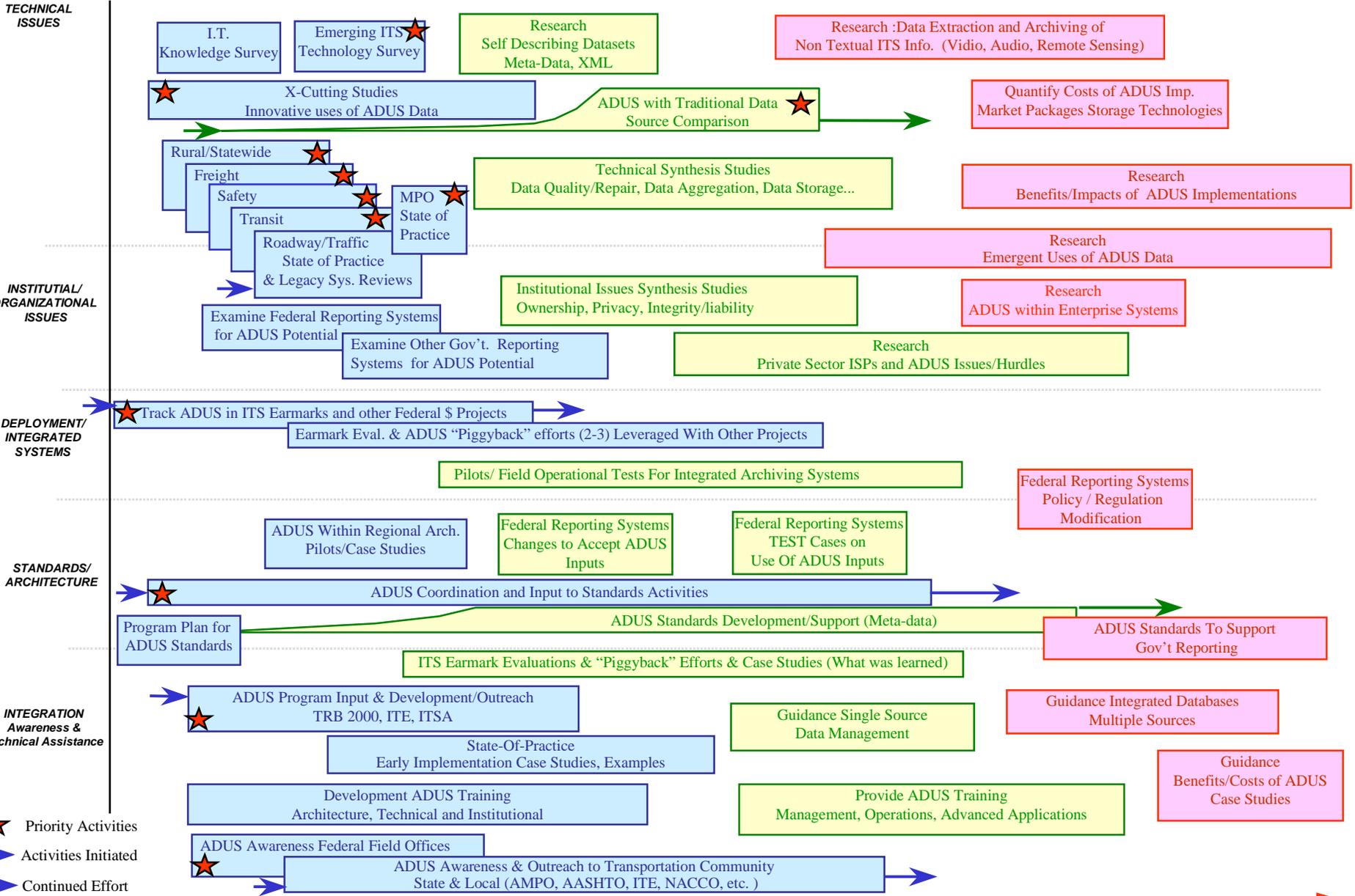
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**Estimated Funding Level \$ 600 to \$1,000 K Per Year**

# Wave I

# Wave II

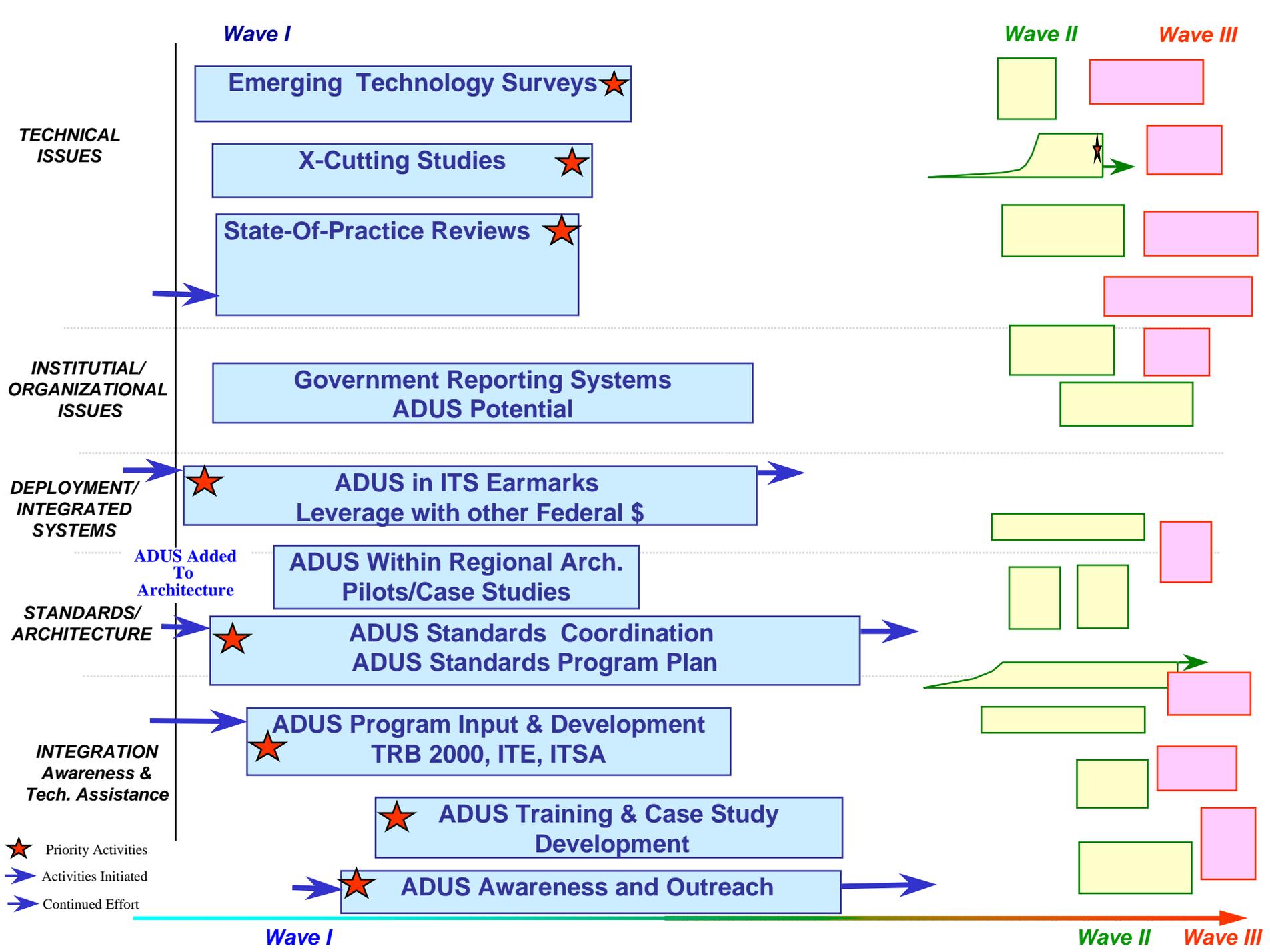
# Wave III

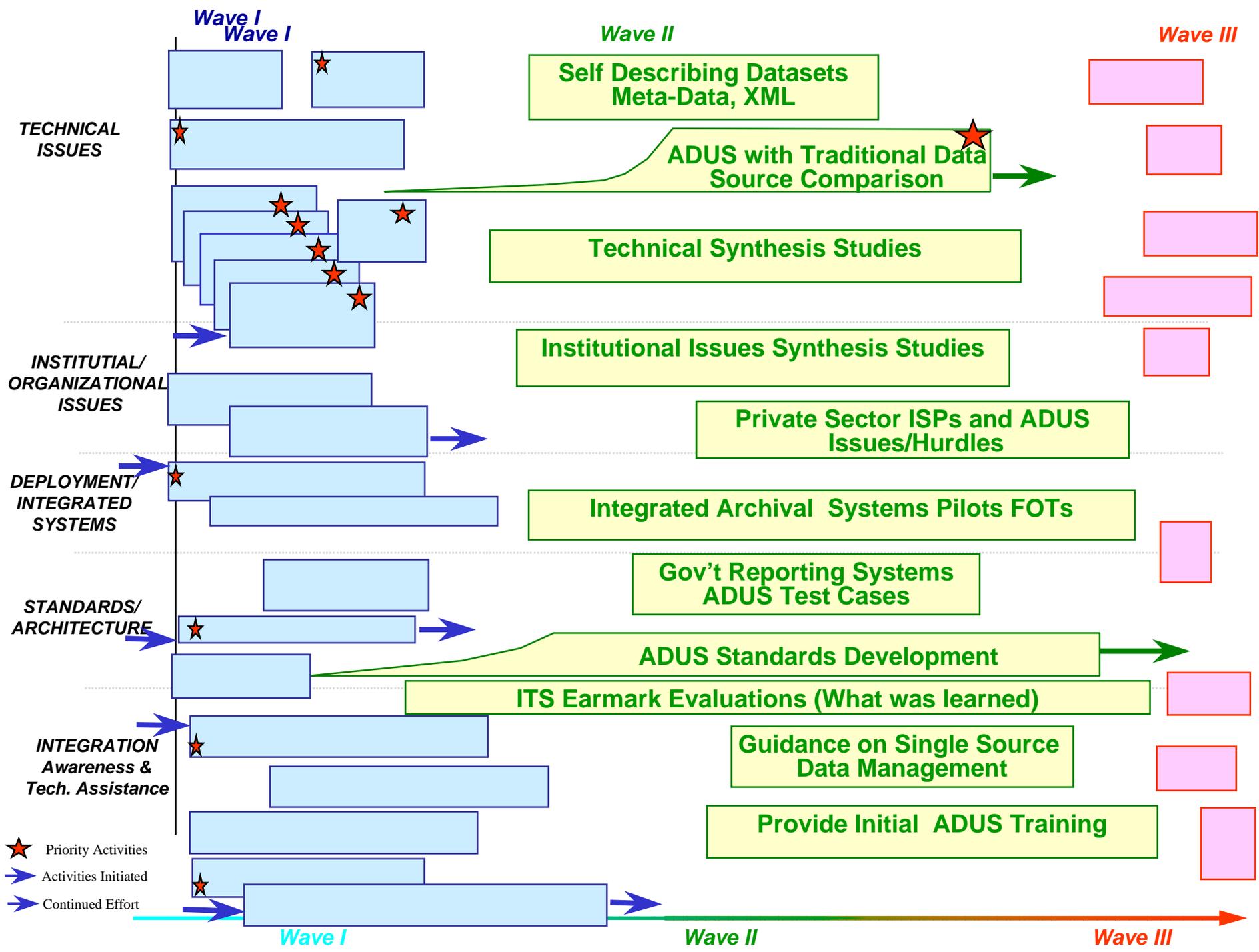


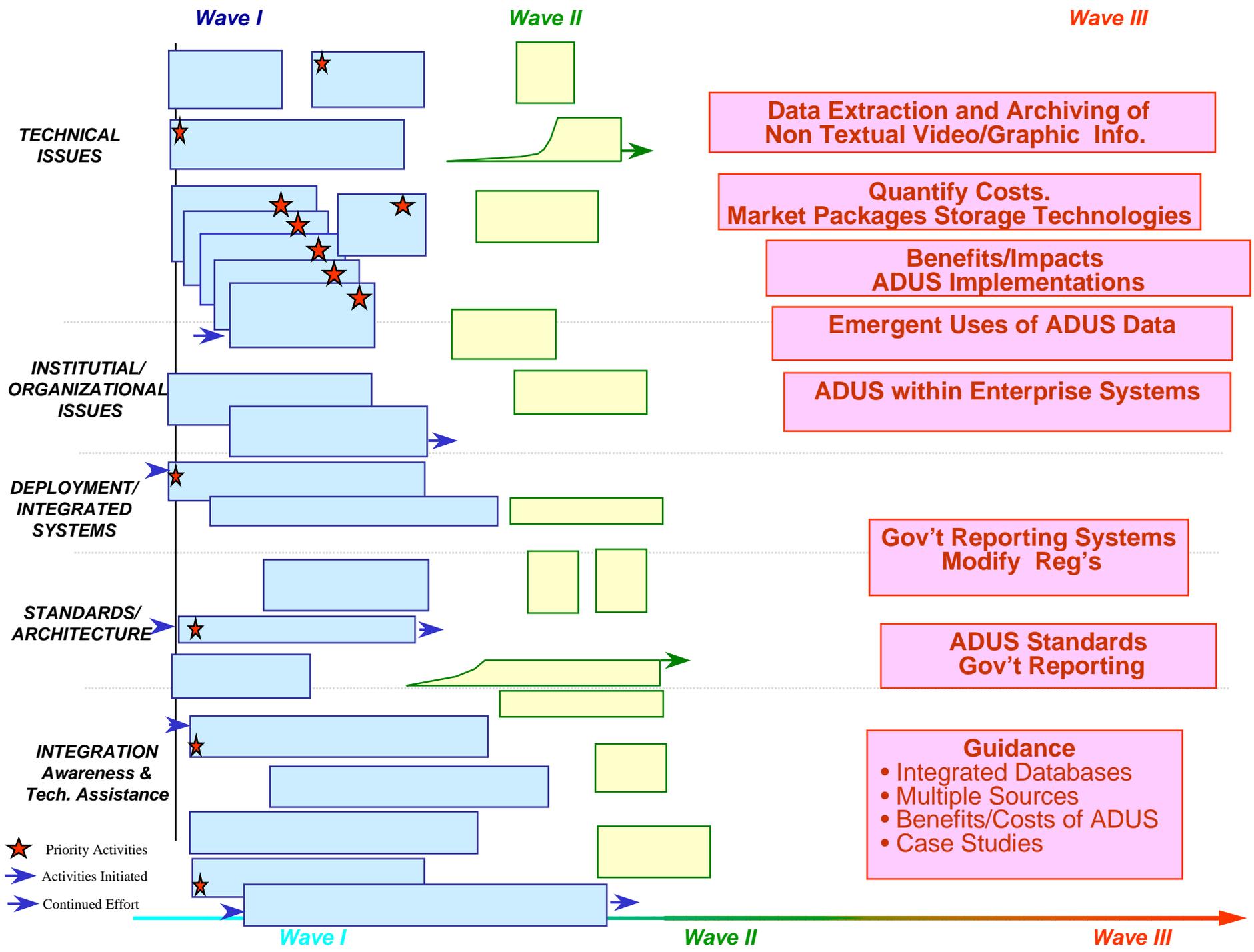
# Wave I

# Wave II

# Wave III







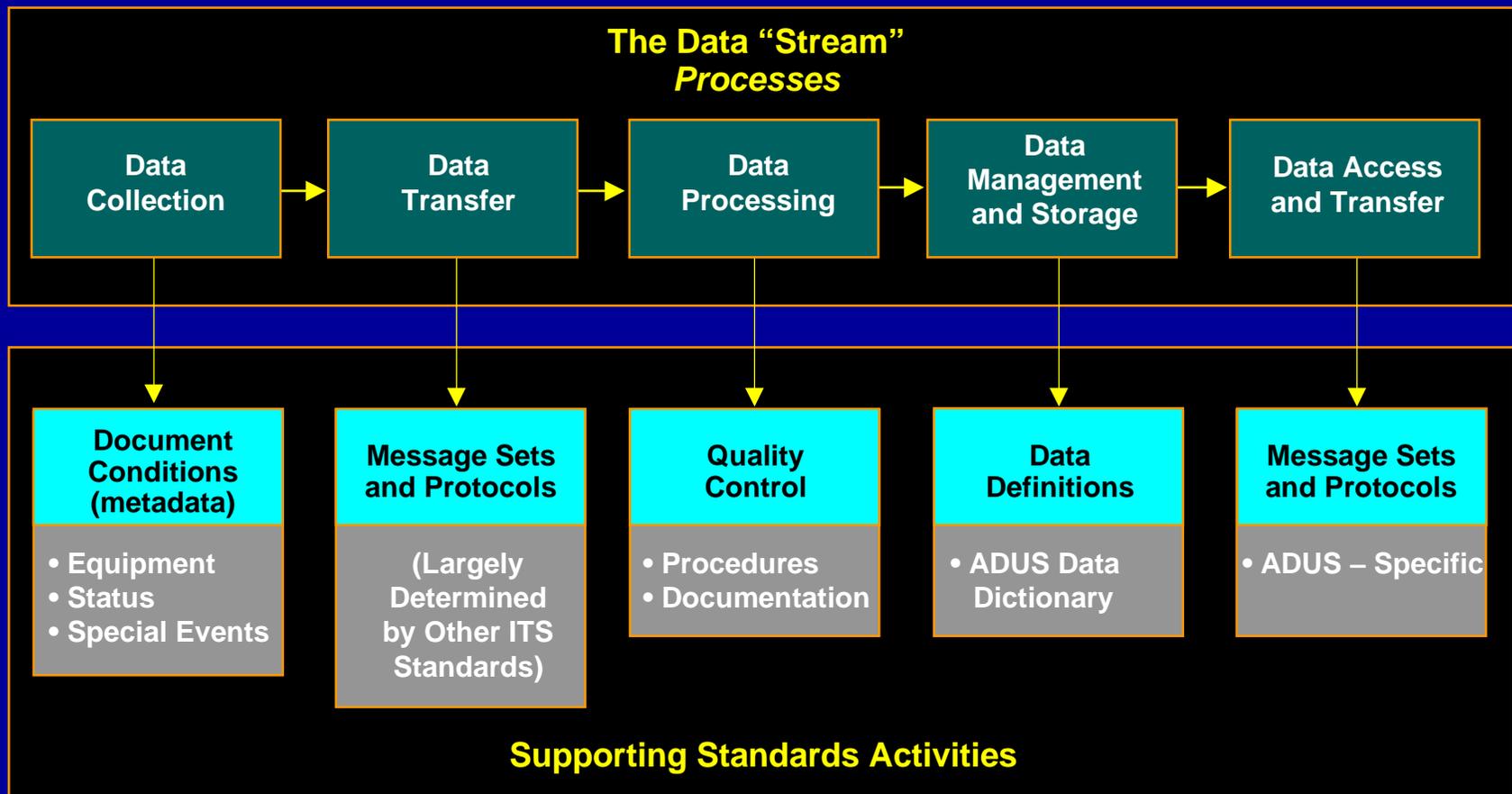
# Current Efforts

- **Program Champions**
- **Annual phasing (projects and budgets)**
- **Initiation of Wave I Activities**
- **ADUS standards activities**

# ADUS Standards: Why Needed

- **Acceptance/Mainstreaming of ITS**
- **Provide guidance for system designers and private software vendors**
- **Promote Architecture and consistent ADUS deployments**
  - **operations planning/benchmarking**
  - **ATIS data gap**
  - **private sector data sources**

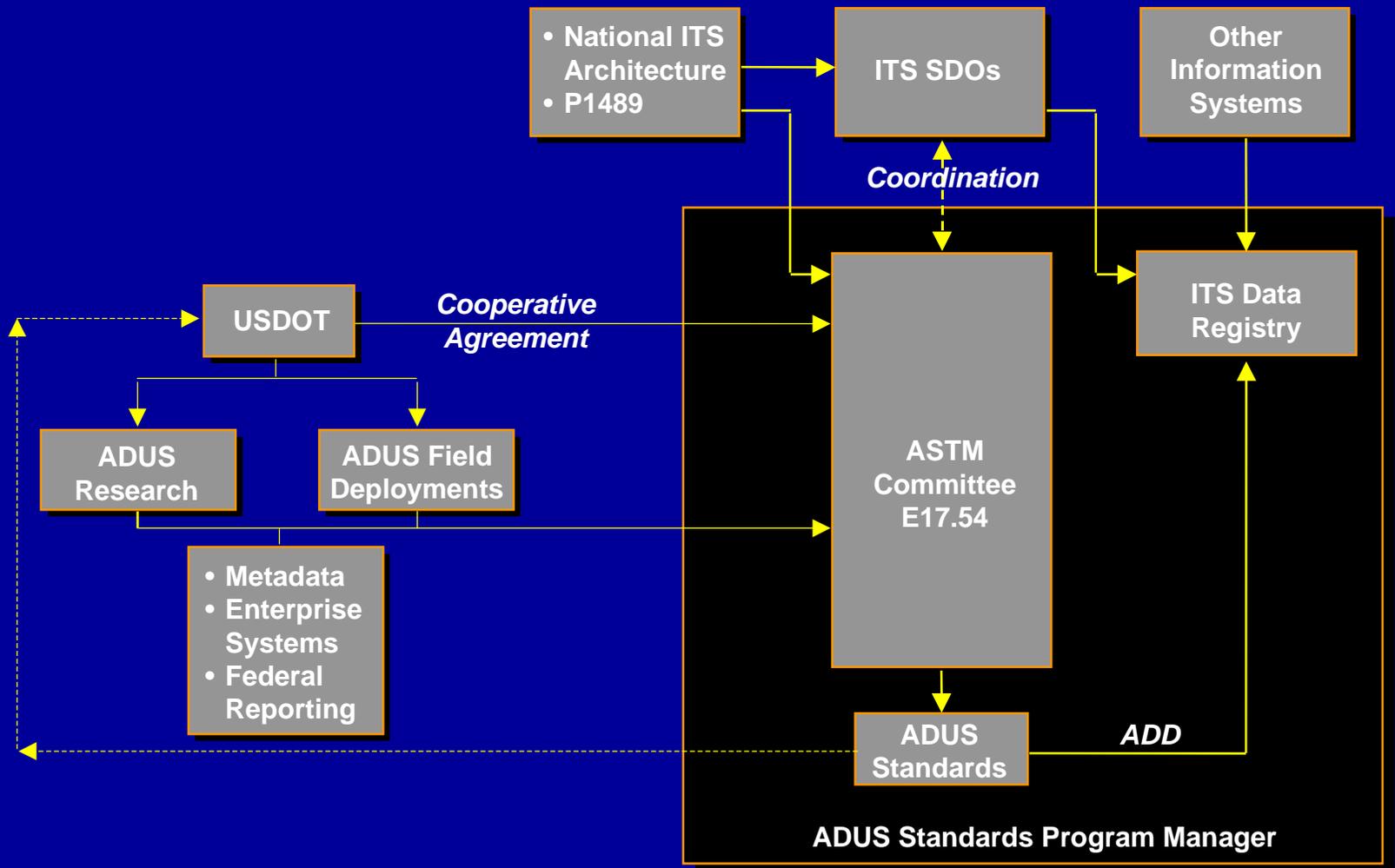
# ADUS STANDARDS : Possible Areas



# POLICY CONSIDERATIONS

- **Coordination with other ITS standards is essential, especially the DDs**
- **ADUS standards can not be “overkill” or “excessive” to achieve coordination**
- **Recognize that main influence may be when other ITS standards are revised on their own cycle**

# ADUS Standard Development



# NEXT STEPS

- **Four data types: travel monitoring, transit, incident/safety, freight**
- **Seek FHWA funding for acceleration**
- **Two ASTM Working Groups**
  - E17.54.00.1 *Standard Guidelines for Archiving ITS-Generated Data* (Bob Winick)
  - E17.54.00.2 *Standard Specifications for Archiving Travel Monitoring Data* (Shawn Turner)

# Contacts

- **US DOT**

- **Ralph Gillmann (202) 366-5042**  
**ralph.gillmann@fhwa.dot.gov**
- **James Pol (202) 366-4374**  
**James.Pol@fhwa.dot.gov**

- **Cambridge Systematics**

- **Rich Margiotta (865) 670-8516**  
**ram@camsys.com**

- **Mitretek Systems**

- **Greg Hatcher (202) 488-5704**  
**ghatcher@mitretek.org**