

# **2003 Program Plan**

Open Scheduling System (OSS)

Decision Support System (DSS)

Market Structures Working Group

March 10, 2003

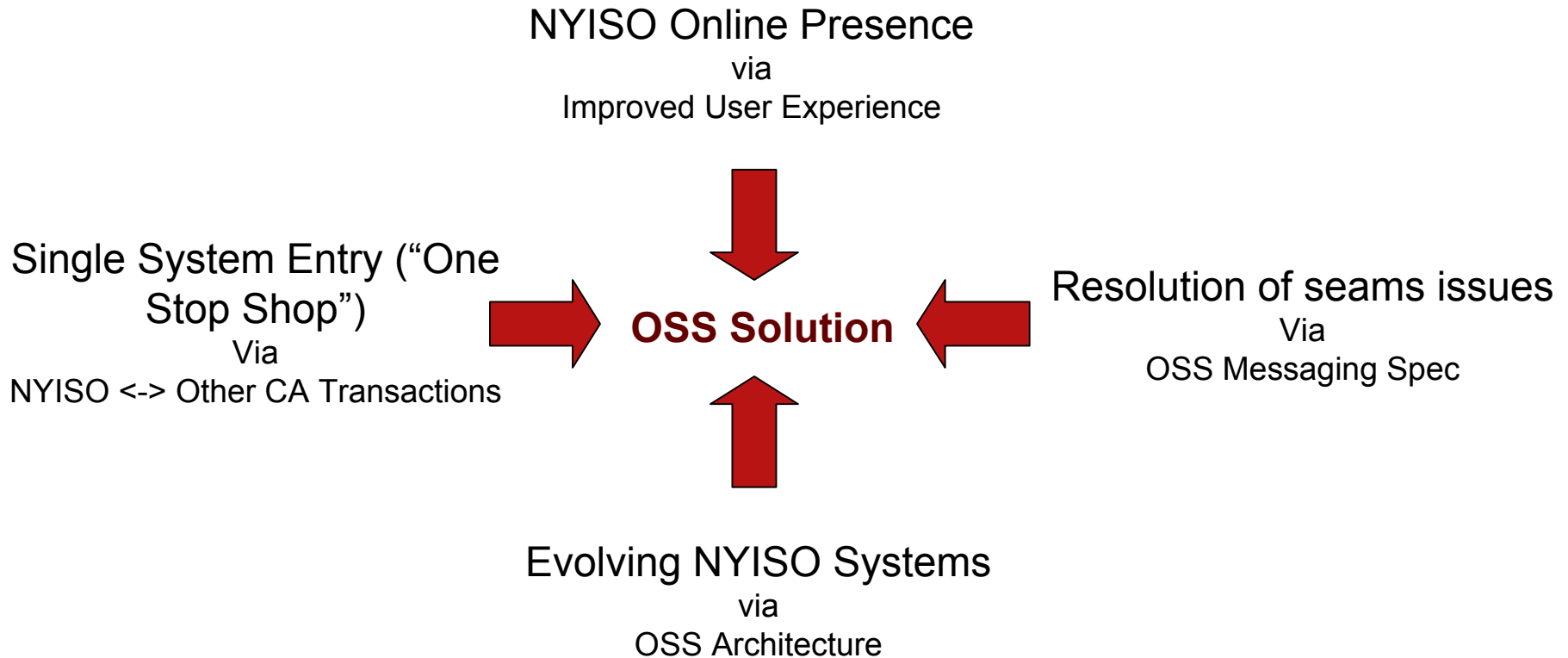
# Agenda

- ➔ OSS Issues and Purpose
- ➔ OSS Release 1.0 Deliverables
- ➔ OSS 2003 Program Plan
- ➔ OSS 2003 Deliverables
  
- ➔ DSS Vision and Purpose
- ➔ DSS Release 1.0 Deliverables
- ➔ DSS 2003 Program Plan and Deliverables
  
- ➔ Questions/Discussion

# Issues

- Transaction related seams issues present a significant challenge to inter-regional operations
- Seams issues manifest themselves differently for various stakeholders
  - Market Participants
    - Current inter-ISO transactions are difficult to enter
      - Lack of communication between different software systems
      - Multiple data entry interfaces for single transaction
    - Seams issues add to market uncertainty and risk
      - Lack of market transparency
  - ISOs/RTOs
    - Inconsistent bids for inter-ISO transactions
    - Inefficient Inter-Control Area checkout processes
      - Lack of communication between different software systems
- Solving seams issues is a top priority for FERC and the NYISO

# OSS Program Purpose



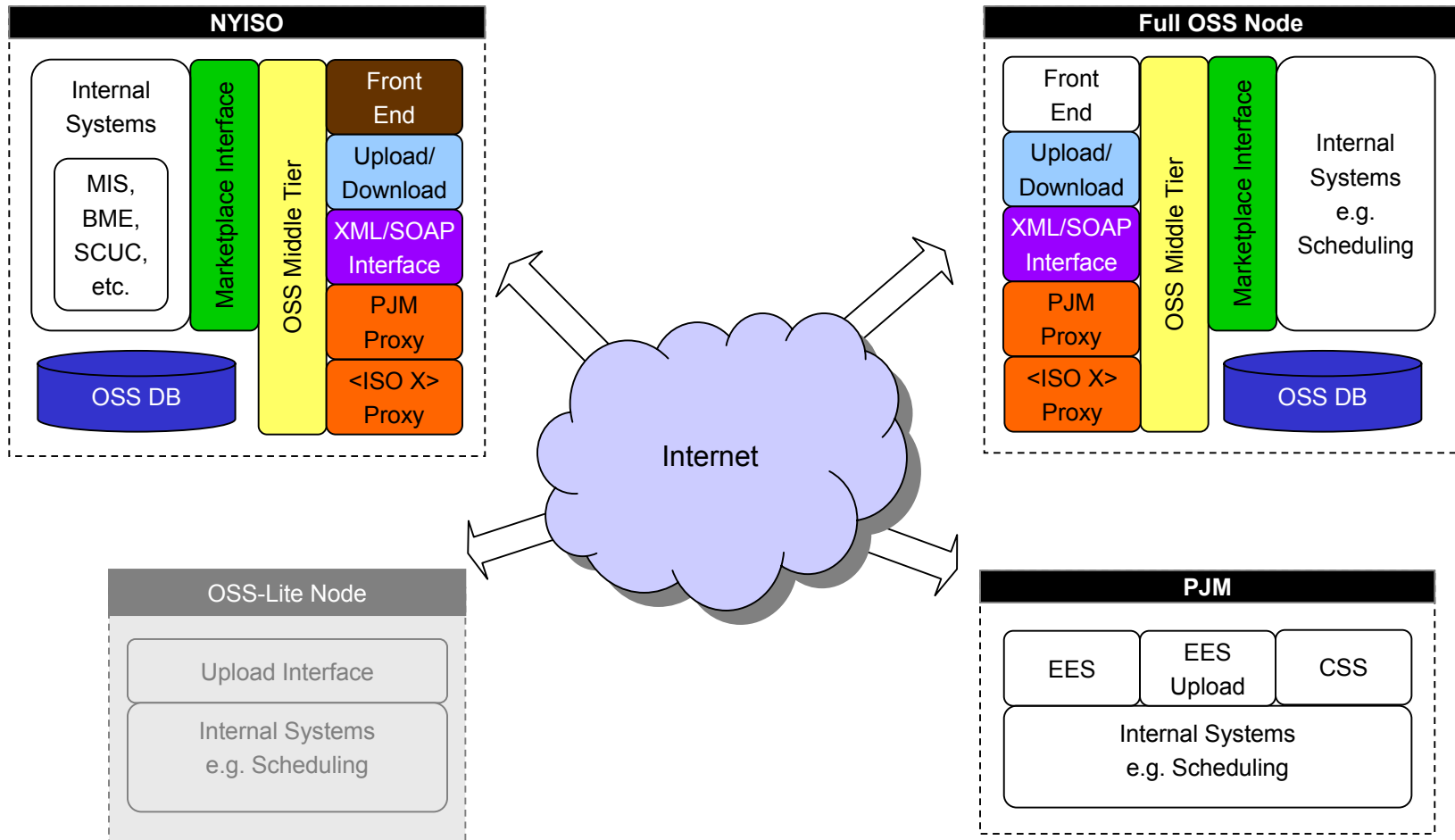
OSS is an easily adopted set of tools for coordinating information between energy market operators and participants in the Northeast.

OSS uses open and industry-accepted communication protocols and is consistent with current and evolving market design standards.

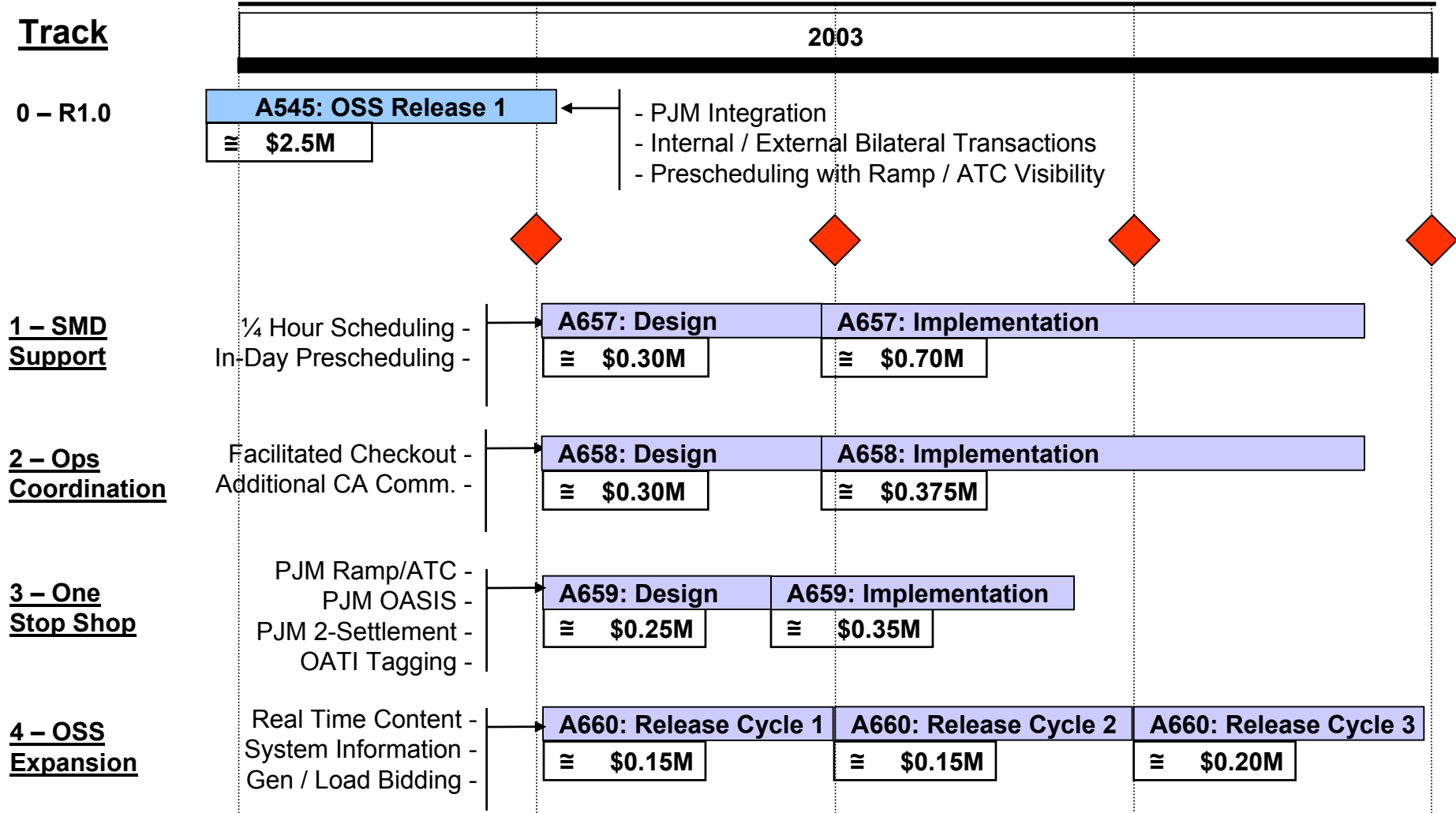
# OSS Release 1.0 Deliverables

- Implementation of XML-based common messaging standard
  - Building block for future development
  - Basis for information exchange between control areas
- A newly designed user interface to allow Market Participants to manage their bids more efficiently
  - Bilateral bidding (internal and external)
  - Ability to view bid status and schedules
- Ability to request for pre-scheduling of available transmission and ramp capability
- Ability to enter an inter-ISO bilateral in one application and have the relevant information automatically sent to the corresponding ISOs
  - PJM in Release 1.0
  - Implemented as proxy

# Node Architecture



# OSS 2003 High Level Program Plan



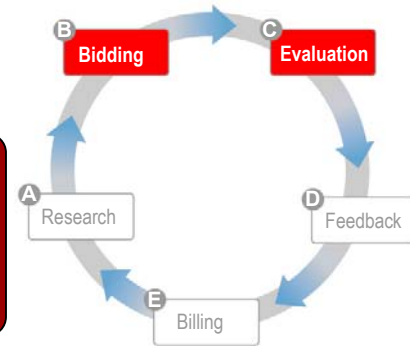
# Assumptions

- No dependencies between tracks
  - Work can continue if one track is stopped
- No dependencies on work in future years
  - All planned work to be complete in 2003
  - Project and budget planning cycle for 2004 to begin in June
- SMD Support required to be in place for November 2003 market trials
- Completion of inter-Control Area work dependent on cooperation with another ISO/RTO
- Resources can be easily shifted from one track to another
  - Account for changes in priorities
  - Account for inter-CA dependencies



# Track 1 – SMD Support

Support approved project A510 – “SMD 2.0 Planning and Specification” by providing a bidding platform for 15-minute intervals and in-day pre-scheduling.

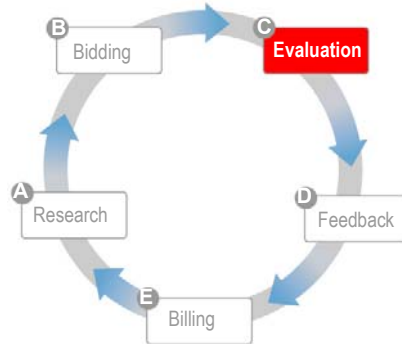


## Deliverables

- 15-Minute intervals and 15-Minute starts and stops for all types of bids and transactions, allowing for simultaneous:
  - Hour-long economic bids
  - 15-Minute non-economic bids
  - 15-Minute external bilaterals with neighbors who support them
  - Hour-long external bilaterals with neighbors who do not support 15-minute
  - 15-Minute scheduling of all bids and transactions
- In-day pre-scheduling
- Deliverables to be in place for November 2003 SMD market trials

# Track 2 – Operations Coordination

Create a facilitated checkout to increase cross-visibility and transparency of transactions across the control rooms of NYISO and PJM, ISO-NE, or IMO. This will enable pre-checkout and speed up the checkout cycle.

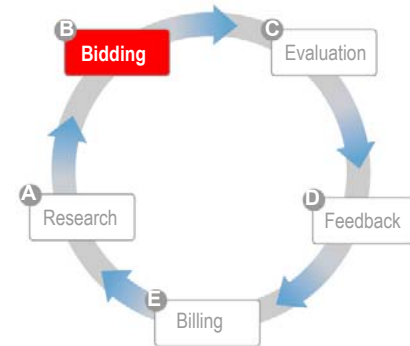


## Deliverables

- Extend the OSS data exchange to include the sharing of Operations data through Web Services or other agreed-upon standards
  - Leverages existing work with PJM and MISO
  - First implementation of OSS messaging in another CA
- Modify the Control Room applications (e.g. IS+) to show the matching and highlight the non-matching transactions and enable updates between CAs
  - Provides visibility between ISOs/RTOs

# Track 3 – One Stop Shop

The complete entry of a transaction between NYISO and PJM through NY's OSS. Without OSS, the process requires multiple system interactions: PJM OASIS, PJM EES, NYISO MIS, and NERC Tagging.

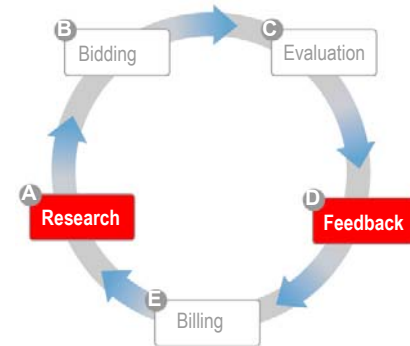


## Deliverables

- Provide current Ramp and ATC data from PJM in OSS
  - Currently in development
  - Expected as part of first post-Release 1 update
- Enable auto-reservation of capacity in PJM's OASIS
- Enable auto-assignment and creation of NERC tags to OSS transactions
- Provide an interface into PJM's Two-Settlement Market
  - Dependent on PJM interface update to allow a flag to be sent programmatically
  - Flag update already complete in ISO-NE

# Track 4 – Expanding OSS

Usability enhancements to Market Participants enabling more transparent market information via regular releases that expand the value of the OSS solution.



## Deliverables

- Expand the OSS UI to a consolidated dashboard where MPs can view and manage their complete market position
  - Alerts
  - Prices
  - Trends
  - Outage and other system information
  - Generator and Load bidding
- Web Services for retrieval or upload of market information
  - Maintain backward compatibility with existing interfaces
  - Leverages existing common messaging standard
- Many of these items have been requested by MPs previously

# Summary

- ➔ Seams issues are a consistent problem in the Northeast region
- ➔ OSS is solving seams issues by attacking the problem from four different angles
- ➔ Each OSS solution track will generate a different level of business value depending on the interests of the stakeholder
- ➔ Collectively, the set of OSS solutions will make tremendous progress in solving seams issues in the Northeast region
- ➔ This progress will drive market efficiency and operations reliability that produces tangible benefits for ISOs/RTOs and Market Participants
- ➔ OSS 2003 work will also enhance the application and communication infrastructure for future initiatives

# DSS Vision and Objectives

The NYISO is committed to delivering timely, accurate and accessible information to our employees and the market.

## ➔ Long Term

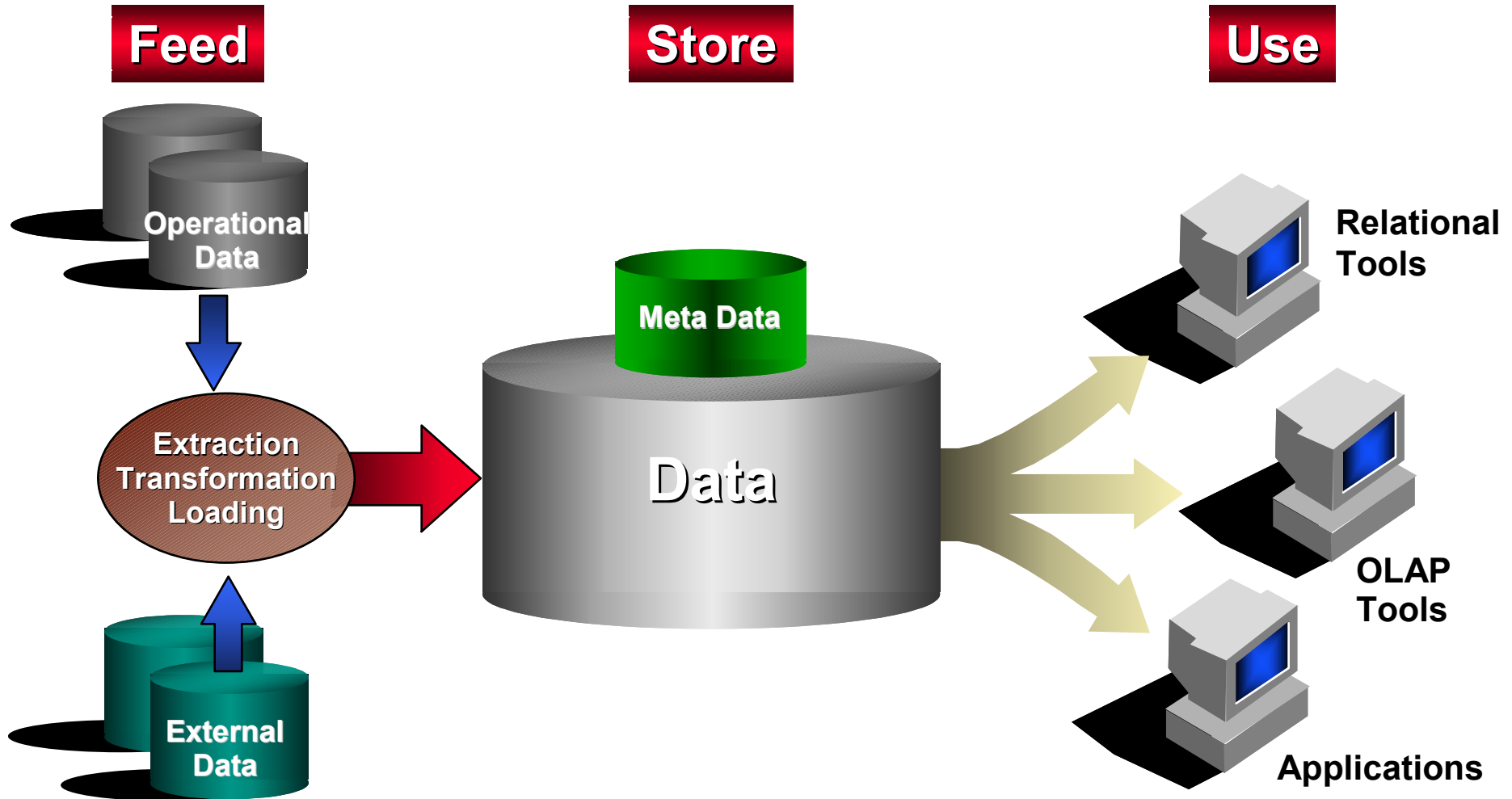
Provide NYISO internal and external customers with timely and accurate information, along with the tools to analyze it, thereby enabling them to manage their business efficiently and effectively.

## ➔ Short Term

Establish flexible, scalable DSS infrastructure for content delivery. Infrastructure can be reused for future data needs.

Provide Market Participants with access to information that empowers them to reconcile their bill efficiently and effectively. (Settlements Data Marts)

# Data Warehouse Components



# DSS Release 1.0 Deliverables

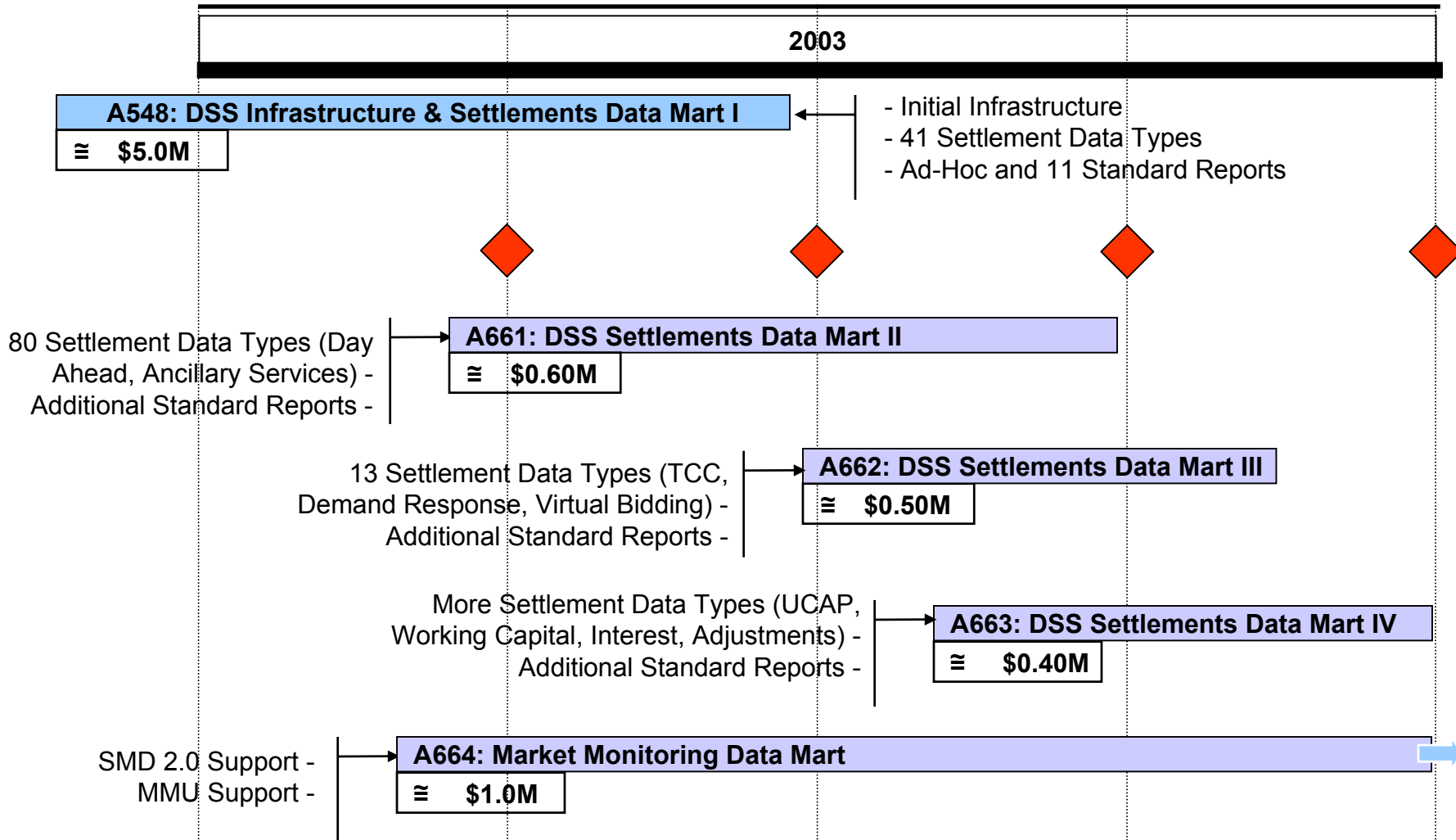
- Establish infrastructure for future content delivery
  - Robust, flexible and scalable
  - Customizable for future needs
  
- Data scope
  - Balancing Market Energy for Power Suppliers
  - Real Time BPCG for Power Suppliers
  - Balancing Market Energy for Load Serving Entities
  - Balancing Market for Transaction Customers
  - 41 data types in all



# DSS Release 1.0 Deliverables (cont'd)

- Application scope
  - Roll-up, drill down, and drill through functionality
    - Month → Day → Hour → SCD Interval → Determinants
  - Portal-like user interface and query tools
  - Ad-hoc reports plus 11 standard NYISO reports
  - Ability to schedule reports for later delivery
  - Administrative tools
  
- Complement to current operational data stores
  - Operational data remains in MIS and BAS
  - Current settlements reports to be maintained
  - Data mart is a read-only store optimized for large-scale queries
  - Data mart to be updated daily after normal billing run

# DSS 2003 High Level Program Plan



# Assumptions

- No dependencies between tracks after Release 1
  - Work can continue if one track is stopped or slowed
  - Settlements Data Mart tracks arranged serially
- No dependencies on work in future years for Settlements Data Mart tracks
  - All planned work to be complete in 2003
- Any SMD Support needed should be in place for November 2003 market trials
- Market Monitoring Data Mart work to continue into 2004
  - Dependent on project and budget planning
  - Other data marts may be given priority

# Future Phases

- Architecture must accommodate real time / high volume data integration
  - Operations
    - Reliability analysis and planning
  - Market Monitoring
    - Gaming detection and general oversight
  
- Solution should leverage existing investments
  - PI
  - EAI
  
- Must support SMD 2.0 data and analysis requirements

# Questions?