



# Massachusetts Department of Revenue Data Warehouse Initiatives

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# Data Warehouse Initiatives

## Agenda

### Project Overview

- Initial Goals & Programs
  - Timeline
  - Compliance Projects (Business & Individual)
  - Collections
- Project Expansion
  - Key Outcomes (Enforcement & Collections)
- Technology
  - Architecture
  - Data Sources (Business & Individual)
- Managing the Data Warehouse (DW) Project



# Data Warehouse Initiatives

## Project Overview

- Implement an Agency-wide Data Warehouse to support:
  - Compliance
    - Business non-registration and non-filing
    - Individual non-filing and deficiency assessments
    - Desk and Field Audit selections using judgmental scoring and predictive models
    - Refund Review & Fraud Identification modeling
  - Collections with case risk management scoring and research



# Data Warehouse Initiatives

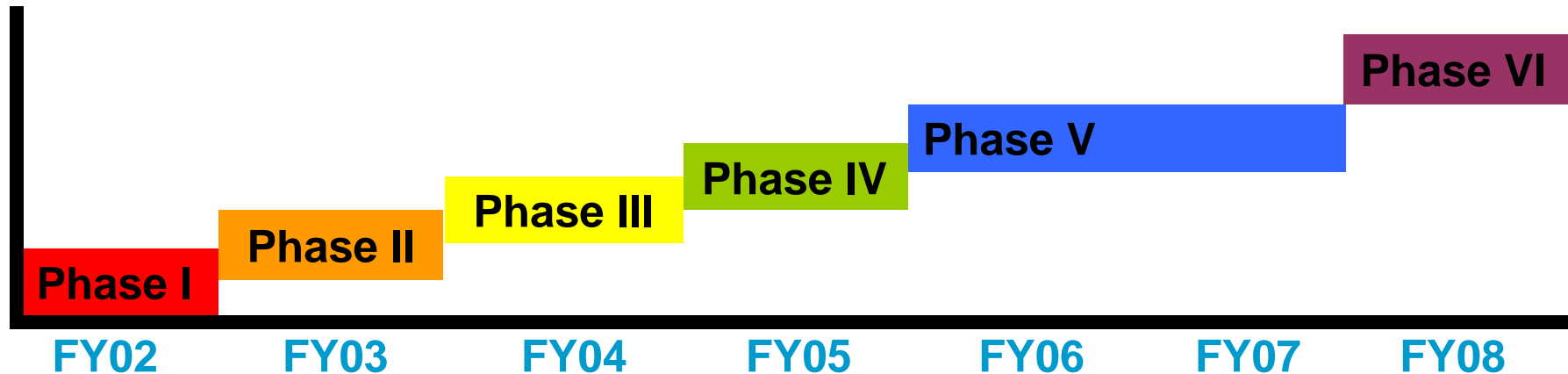
## Project Overview (continued)

- Office of Tax Policy & Analysis (OTPA)
- Executive Management Dashboard
- Electronic Audit Folders/Inventory Management System



# Data Warehouse Initiatives

## Project Phases



- Phase I – Pilot 1999 PIT (Inquiry, TaxCalc, Gateway)
- Phase II – Expand data, Compliance, Case & Correspondence
- Phase III – MassTax Integration and Office of Tax Policy & Analysis
- Phase IV – Desk and Field Audit Selection programs
- Phase V –
  - Tax Compliance Project – Audit & Collections Models and Strategies, Dashboard, Fraud
  - Audit System – “Workbench” with TaxMaster and Electronic Audit case folder & Risk-Based Scoring
  - Multistate Clearinghouse – Initial Pilot (FY06) and Implementation (FY07)
- Phase VI – FY08 Plans – “Pass Thru” mining, Collections modules, Clearinghouse expansion, etc.



# Data Warehouse Initiatives

## Compliance Projects –Individual

### ■ Non-Filers

- IRTF/IRMF
  - Involves all 19 IRMF Forms, State W-2 Wage, RMV, etc.
- K-1 Based Income
- Domicile Cases
- Cigarette Tax

### ■ Deficiency Analysis

- Line item comparison (e.g., EIC, Medical, AGI)
- CP-2000
- RAR (Planned FY08)



# Data Warehouse Initiatives

## Compliance Projects - Individual (continued)

### ■ Lifestyle

- Non-Filer (e.g., High Mortgage Interest, Vehicles, etc.)
- Deficiency (e.g., Schedule C Filers & Lifestyle Analysis)

### ■ Refund Review Project

- Transition from criminal to civil approach
- Identify false claims pre-refund
- Limit impact on compliant taxpayers and DOR operations
  - Prevalidation/modeling/automation

### ■ Others (Use Tax, Excess Out of State Credits)



# Data Warehouse Initiatives

## Compliance Projects - Business

### ■ Business Filing Enforcement

#### – Non-Registrants & Deficiencies

- Business Corp/Withholding (BMF/BRTF & DET Wage)
- USE/Sales Tax (Business Customers)
- Professional Licenses (20 Types for Sales or Withholding)
- SS-4 Match
- Secretary of State
- Municipal Licensing





# Data Warehouse Initiatives

## Compliance Projects - Business (continued)

### ■ Audit Selection

- Desk Audit Programs – ***Selections***
  - Dividends taken as deductions
  - Meals tax mark-up
  - Ratio of Withholding to Use Tax
  - Retail Sales vs. Exempt Sales and/or Use Tax
- Field Audit Programs – ***Scoring***
  - Judgment & Predictive Models (by tax, size, industry etc.)



# Data Warehouse Initiatives

## Compliance Projects - Collections

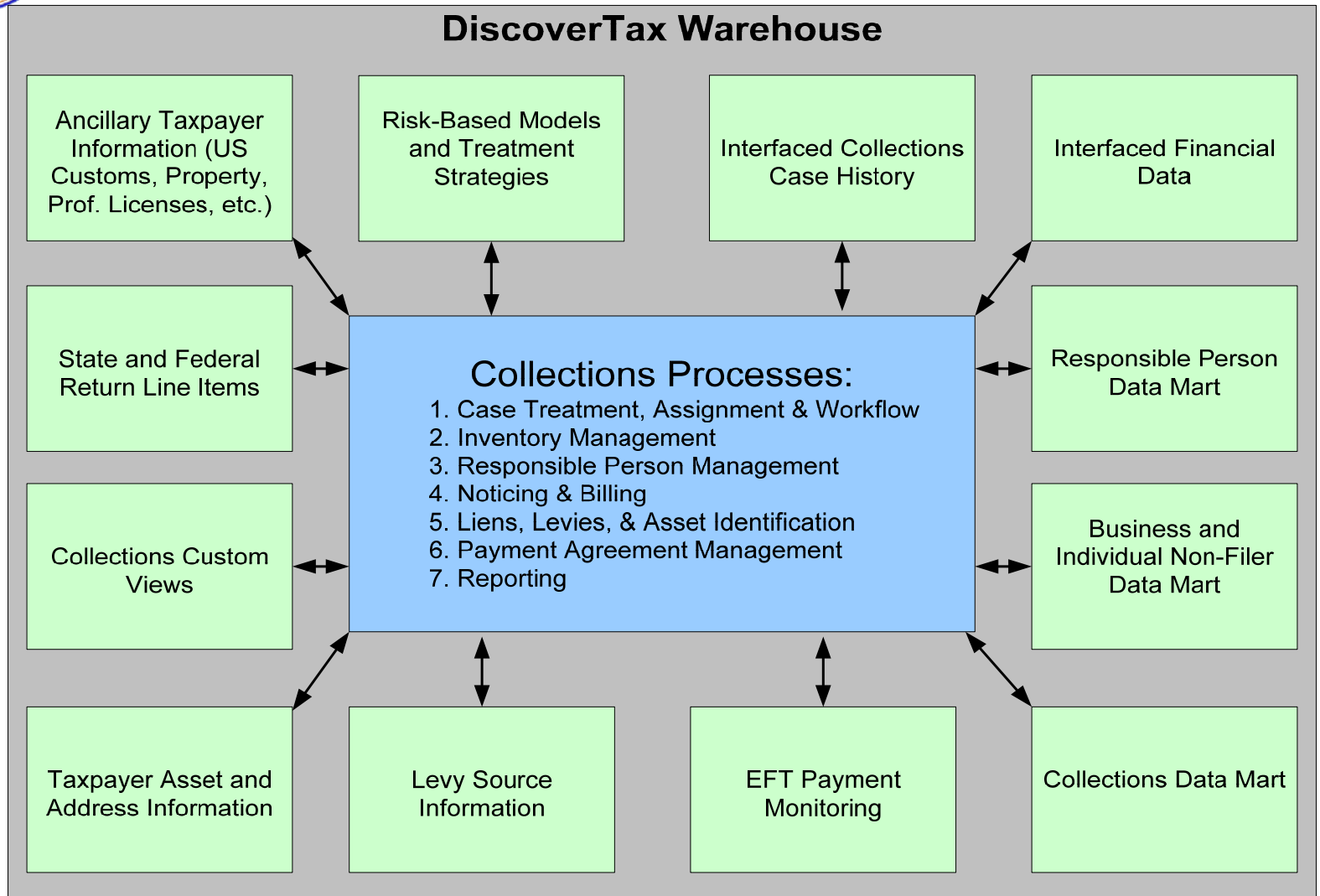
### ■ Collections Opportunities

- Risk-Based Strategy Rules and Treatment
- Collections Analysis and Reporting
- More Effectively Analyzing Accounts Receivable
- Inventory Reprioritization and Monitoring
- Identification of Assets, Bank, & Wage Levy Sources
- DiscoverTax Collector's View and Web Crawler
- Identification and Management of Responsible Person



# Data Warehouse Initiatives

## Compliance Projects – Collections (continued)





# Data Warehouse Initiatives

## Compliance Projects – Collections (continued)

### Benefits Gained

- Apply the right collection action to the right taxpayer at the right time
- Directing low risk cases to automation frees staff resources to address more pressing accounts
- More enforcement options with increased availability of information
- Empowering collectors with quick access to consolidated taxpayer information
- More effective operational planning and analysis with enhanced real-time reporting
- Estimated 20% to 25% lift in Collections = \$45M



# Data Warehouse Initiatives

## Compliance Projects – Clearinghouse

- **NESTOA Agreement**
- **Year 1 Pilot Other Jurisdiction Code (OJC)**
  - Early Results
- **Year 2 Expansion**
  - Additional States
  - Cost Sharing
  - New Projects



# Data Warehouse Initiatives

## Compliance Projects – Other Current Uses

### ■ Office of Tax Policy & Analysis

- Revenue Analysis and Legislative Inquiries
- Top 50 Corporate Reporting

### ■ Executive Management Dashboard

- Agency Operation, Revenue and Performance Metrics
- Accounts Receivable/Collectible Analysis
- Cradle to Grave Reporting

### ■ Child Support Enforcement Division

- Absentee Parent Location
- License Revocation



# Data Warehouse Initiatives

## Key Outcomes – Enforcement

- Over **\$400M** in additional revenues
- Rate of **\$2.5M** per week from Non-filer, Discrepancy & Life-style Cases
- **20% to 25%** lift in Collections
- Audit & Collections Case Management Evolution – data analytics based operations for case selection and processing resulting in:
  - Increased Auditor & Collector Efficiency
    - Automation of desk audits and research
    - Improved case selection and electronic case management
- Over **150K** income tax returns reviewed, **\$7.8M** saved YTD with 1 day increase to refund turn-around time



# Data Warehouse Initiatives

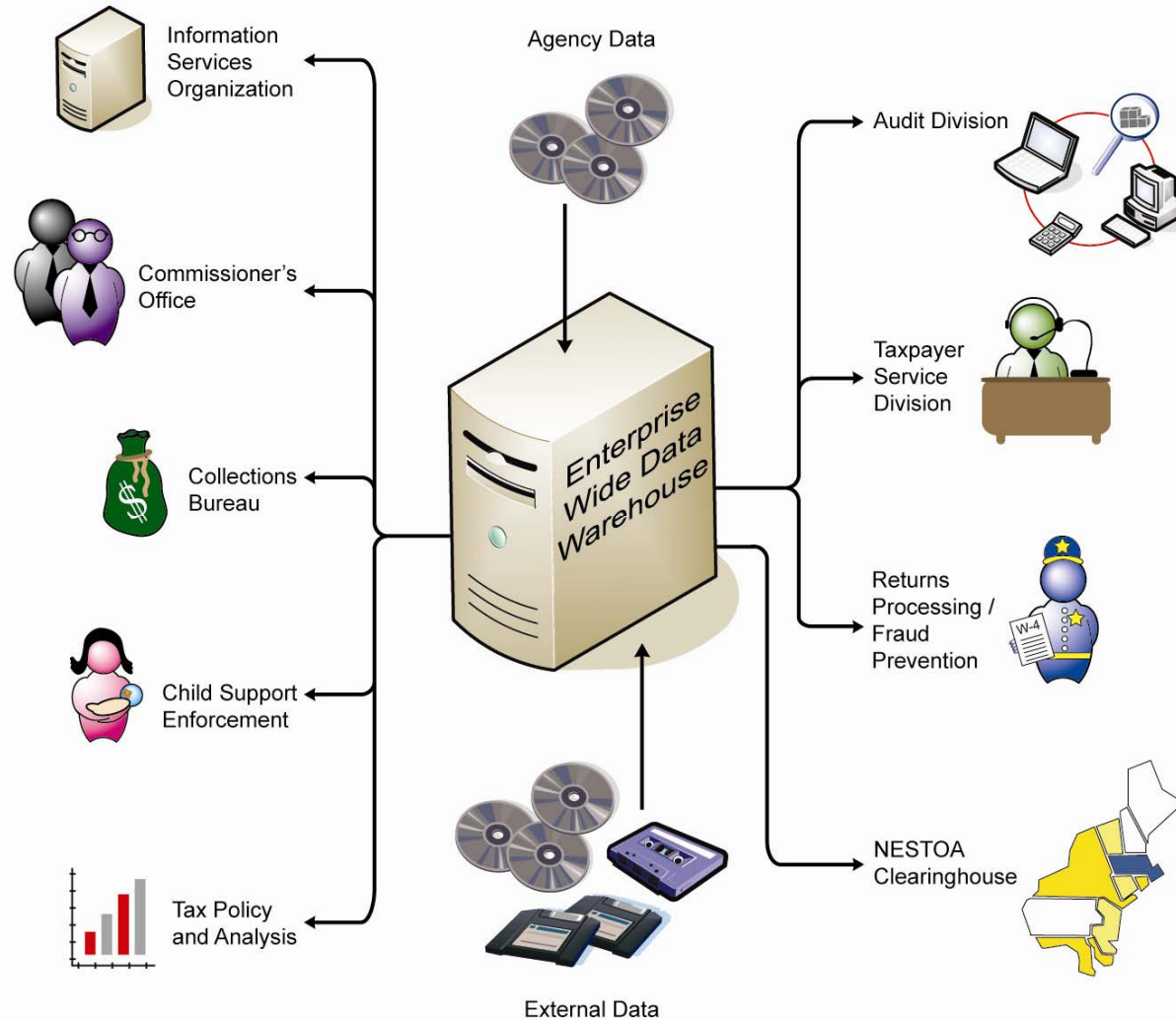
## Key Outcomes – Enforcement (continued)

- Improved Customer Service for taxpayer inquiries
- Improved Cross-divisional planning and execution of projects
- Improved analytical ability for OTPA and Executive Management to support in-house researching inquiries from Legislators and Governor
- Improved management and analysis of accounts receivable
- Reduction in burden on Legacy system



# Data Warehouse Initiatives

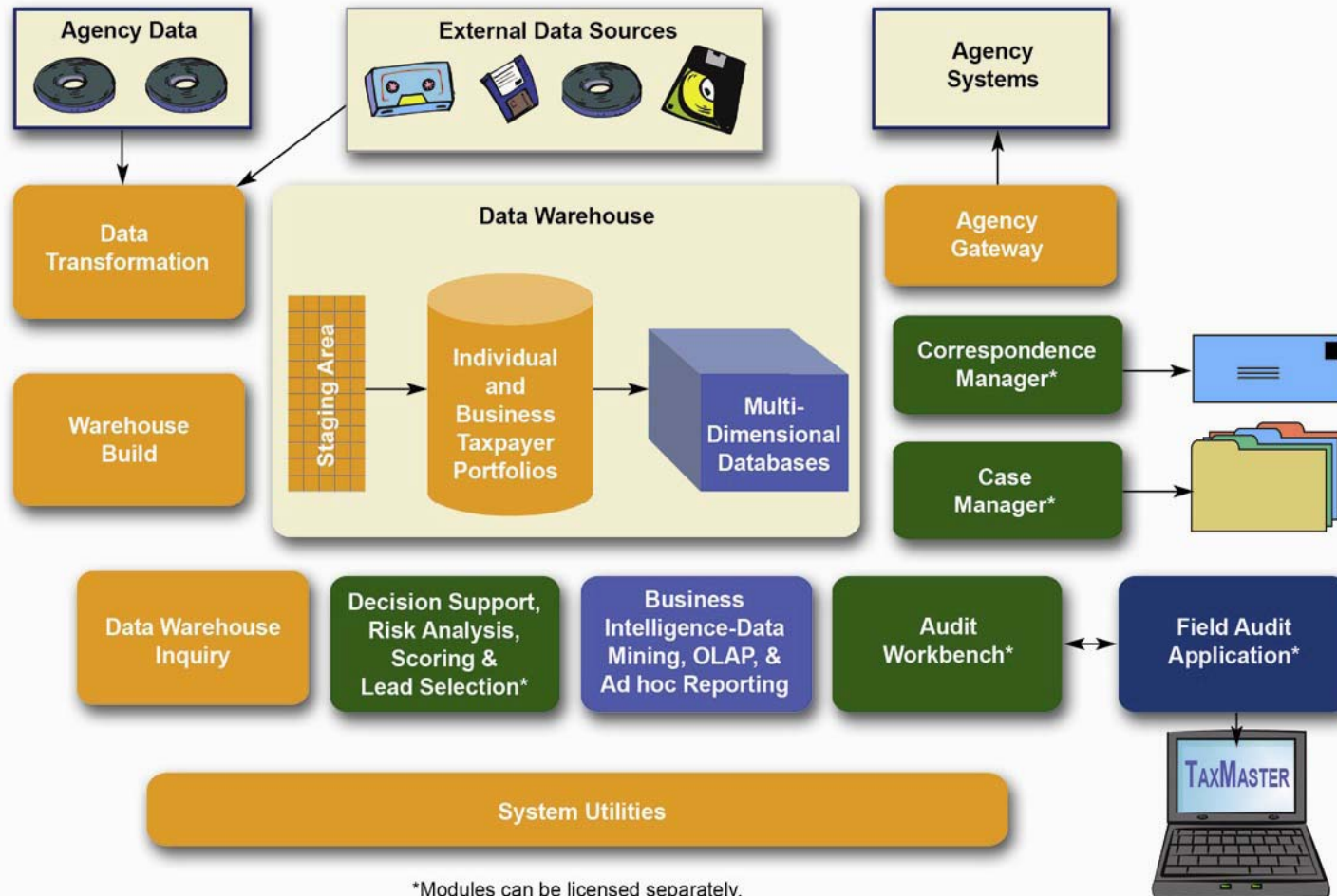
## Key Outcomes – Agency Impact





# Data Warehouse Initiatives

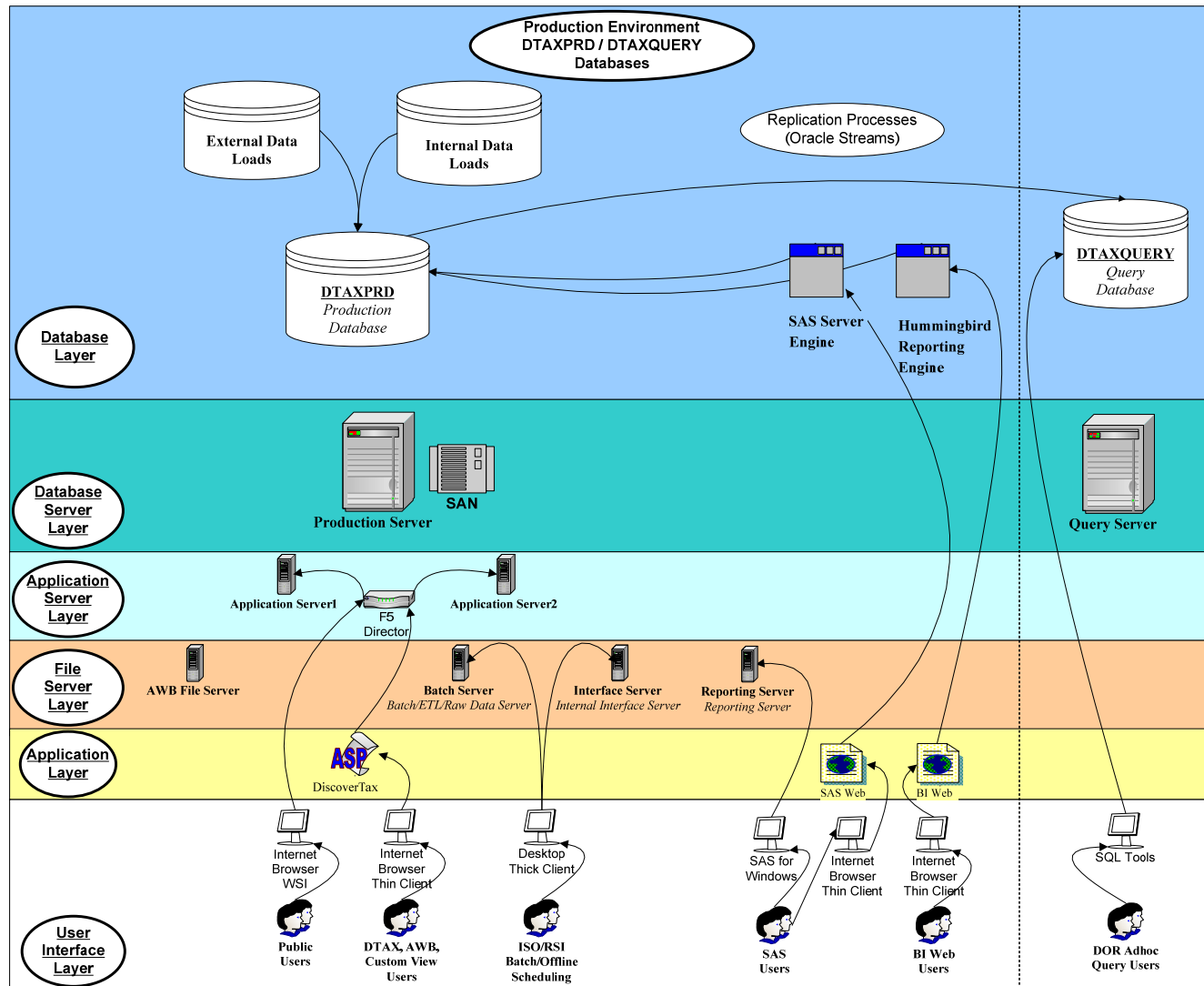
## Technology – Application Architecture





# Data Warehouse Initiatives

## Technology – Application Architecture





# Data Warehouse Initiatives

## Technology – Data Sources Individual

- **Legacy ITS Data With Refresh**
  - Demographics
  - Financial Transactions
  - Return/Schedule Line Items
- **MA W-2's**
- **IRS**
  - IMF/IRTF
  - IRMF
  - 1099 – Misc.
  - CP2000/RAR
  - Vital Statistics
  - US Customs
  - 8300's
  - TAR
- **Wage Reporting**
- **Registry of Deeds**
- **Professional Licenses**
- **Registry of Motor Vehicles**
  - Individual/Commercial Driver Licenses
  - Individual Vehicle Registrations
- **Sales Tax on Boats**
- **US Coast Guard Data**
- **Other States Non-resident returns**



# Data Warehouse Initiatives

## Technology – Data Sources Business

- **Legacy ITS Data with Refresh**
  - Demographics
  - Financial Transactions
  - Return/Schedule Line Items
- **IRS**
  - BMF/BRTF
  - IRMF (Business Entities)
  - Corporate Affiliations
  - SS-4
  - US Customs
- **Employment**
  - Employer Returns
  - Unemployment Information
- **Secretary of State**
- **Business Professional Licenses**
- **Registry of Motor Vehicles**
  - Commercial Vehicle Registrations
- **Lottery Vendors**
- **Municipal Licensing Information**
- **Internet Cigarette Sales**
- **ABCC Liquor Licenses\***
- **Registry of Deeds\***

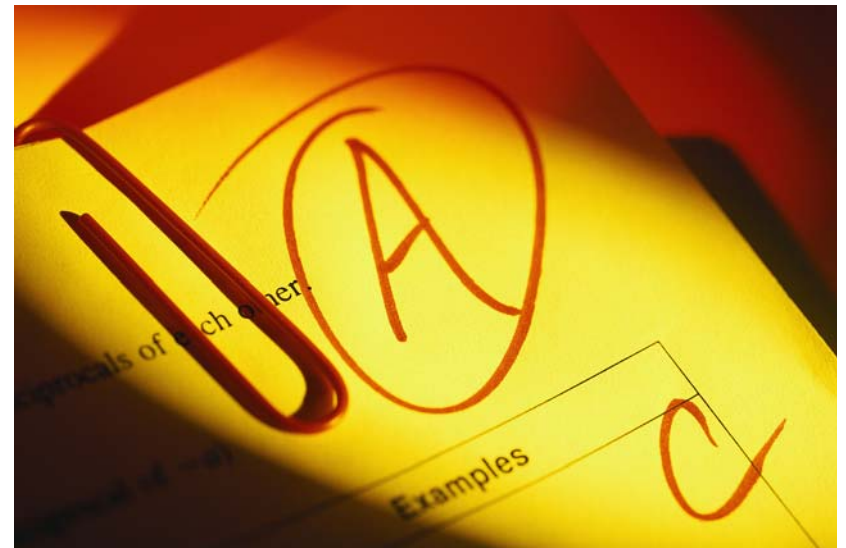
\*Planned



# Data Warehouse Initiatives

## Managing the DW Project (continued)

- Top level executive support is essential for consistent project progression
- Communications strategy is critical
  - Continuous outreach with Governor, Legislature, and public
  - Sensitivity to taxpayer reaction
  - Employee education and training is imperative due to impact!
- Prepare for increased noticing, calls, letters, payments, and returned mail
  - Processing
  - Contact Center
  - Taxpayer Assistance





# Data Warehouse Initiatives

## Managing the DW Project (continued)

- Manage anticipated increase in receivables
  - Increased noticing from Discovery front-loads receivables
  - Collections lag interval and net increase
  - Potential impact on state balance sheet
- Techniques to manage risk
  - Pilot all programs
  - Refine estimating techniques with best data available
  - Throttle all programs and manage “sub-populations”
- Staffing
  - Non-Filer Recovery in Desk Audit, Taxpayer Services
  - IT resources
  - Centralized Audit selection



# Data Warehouse Initiatives Questions & Answers

