But That’s Not in Business Objects!
Managing Data Overload and Increasing Efficiency

Building User and Utilization Databases for a Recharge Facility

**User Database Goals**
Accessible and Updatable Online by Users
Gathers All Required User Information
Easy to Track IRB Approval and Grant End Dates

**Utilization Database Goals**
Gathers data on hours used and scheduled
Easy to Modify, Maintain, and Data Enter
Regularize Billing Cycle and Reduce Billing Time
Aggregate Data for Trends Analysis & Reporting

Results & Impact

**Project Cost / Benefit**
- $500 – Staff MS Access and Database Design Training
- $500 – part-time website designer; built User Database
- Used existing staff to develop Utilization Database
- Reduced staff by 0.5 FTE
- Use existing staff to maintain database and data enter

**User Database**
- Require use of online user database to schedule hours
- Regularly review user IRB approval and billing end dates to ensure compliance

**Utilization Database**
- Aggregate information used for “Data-Driven Decision Making”
- Trending usage month-month, month-year, and year-year
- Monthly usage reports to Directors
- Regulated billing cycle (15th-14th)
- Automated billing invoice creation

**Future Development**
- Share database development, billing tools, and reporting tools with other recharge facilities and at conferences.

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**Problem Statement**
Recharge facilities have the unique problem of having mounds of data about their operations, none of which is tracked in business objects, or other U-M reporting systems. With nearly 1,400 yearly user hours, dozens of users, and no electronic method for gathering data or for use in analysis, it was clear the Functional MRI Laboratory needed two databases: one to track our users (User Database), and one to track our usage (Utilization Database) to manage data overload and increase efficiency.

**Project Management**
- Present project vision to Directors gain approval for resources
- Identify staff to develop and maintain database and enter data
- Get staff buy-in for project - use existing expertise and staff time
- User Database: Online MySQL
- Utilization Database: MS Access
- Draft, edit, and finalize tables, relationships, forms, queries, & reports using process outlined in Figure 1: Rationale Database Design Process
- Incorporate use of databases into unit business processes

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**Figure 1: Rationale Database Design Process**

- Identify Customers (who, how, why)
- Determine Access (Online, Server)
- Select Questions to Answer
- Establish Table Structure
- Decide Method (calculation, look-up)
- Define Fields (what to track)
- Illustrate Table Relationships
- Build Forms & Queries
- Create Reports

**Figure 2: Billing Invoice**

**Figure 3: Online User Form**

**Figure 4: Utilization Database Objects**

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**User Database**
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**Utilization Database**
- **Results & Impact**
  - **Project Cost / Benefit**
  - **User Database**
  - **Utilization Database**
  - **Future Development**