Asset System Data Reporting

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1. Background

Asset data constitute a critical foundation for management operations within MITS, covering the full lifecycle management of all fixed assets, non-fixed assets, accessories, and consumables under MITS' jurisdiction. The asset system records and tracks each stage of the lifecycle in a comprehensive manner, including procurement and acceptance, inventory registration, allocation and borrowing, daily usage, disposal and decommissioning, as well as repair and maintenance. As a result, a substantial volume of historical operational data has accumulated over time.

In routine management and decision-making processes, responsible staff and senior management are required to regularly filter, aggregate, and analyze these asset data to generate various business reports. Through these reports, managers can gain timely insights into asset

inventory levels, utilization rates, circulation status, and maintenance costs across different asset categories, thereby obtaining a holistic understanding of asset operations and workload distribution. These data-driven insights also provide essential evidence to support asset procurement planning, budget preparation, and decisions on equipment replacement cycles.

However, traditional visualization platform development is often associated with high costs, long maintenance cycles, and limited flexibility in functional expansion or report adjustments, making it difficult to respond quickly to changing business requirements. As asset scale and data volume continue to grow, the existing approach can no longer effectively support the increasing demand for more refined, transparent, and real-time asset management. Consequently, there is a clear need for a more flexible, scalable, and cost-effective visualization solution that can enable efficient data processing, dynamic report generation, and on-demand business support, thereby further enhancing asset management capabilities and decision-making efficiency.

2. Solutions

Through communication with colleagues involved in the XJTLU X-Report project, we identified that the platform could effectively address the

above data analysis and visualization requirements. X-Report supports rapid report development without complex coding and offers a high degree of flexibility, allowing data presentation to be adjusted in response to evolving business needs. Based on this assessment, we decided to leverage the reporting capabilities of X-Report to pilot the visualization of asset management data.

After clarifying the application and approval process, and with professional guidance from the supporting colleagues, we first submitted a data access request to the MITS Data Governance Working Group. This request sought permission to synchronize asset system business data into X-Report and to obtain the corresponding data usage and report development privileges. Upon approval, we identified the required data fields, indicators, and chart types based on daily asset management scenarios. With continued professional support and recommendations from the project team, we independently designed and developed the report content. Throughout the process, the team continuously refined the presentation structure in line with practical business needs, ultimately achieving the initial development of multiple asset-related data visualization reports.

3. Outcomes and Benefits

By systematically reviewing business processes and leveraging the flexibility of the X-Report platform, we successfully developed a set of data visualization reports for the asset system. These reports enable more convenient, intuitive, and flexible monitoring of key information such as asset quantities, status, and circulation in daily operations. In addition, the real-time analytical outputs provided by the reports offer reliable data support for asset procurement planning, further improving the accuracy and scientific rigor of decision-making.

In response to specific operational needs, we also developed a personnel – asset inventory view, allowing engineers to quickly locate asset information associated with individual staff members when handling employee-related service tickets. This view significantly reduces manual lookup time, greatly improves the efficiency of asset verification and ticket handling, and further optimizes overall service workflows.

Figure 1. MITS Asset Dashboard

4. Replicability and Promotion Value

This case demonstrates that X-Report can effectively support data integration, visualization, and business decision-making in the asset management domain without the need for complex development. Its low cost, high flexibility, and ease of use give the solution strong replicability and promotion value.

First, this model can be readily extended to other reporting needs within MITS, such as service ticket analysis, equipment maintenance statistics, and user behavior monitoring. Different business teams can quickly build customized visualization reports by adapting their own data structures and indicators. Second, the flexible configuration capabilities of X-Report enable it to accommodate diverse departmental requirements while maintaining unified data governance standards, thereby enhancing the organization’s overall data visualization and analytical capacity.

Building on the success of this case, the approach can be further scaled across a wider range of scenarios, gradually forming standardized data access processes and report templates. This will help more business units reduce data processing costs, improve operational efficiency, and

accelerate the establishment of a data-driven decision-making culture across the university.

5. Next Steps

Following the completion of the current asset system reports, we will continue to advance the following initiatives in alignment with platform capabilities and business requirements:

1. **Expand data dimensions and reporting scenarios**: Integrate additional key data across the asset lifecycle into X-Report, such as maintenance cost analysis, asset circulation efficiency, and departmental asset consumption trends, to build a more comprehensive asset analytics framework.
2. **Optimize report structure and interaction experience**: Continuously refine report layouts, filters, and presentation logic based on user feedback, ensuring closer alignment with the daily usage habits of engineers and managers and improving query efficiency.
3. **Develop cross-system analytical reports**: Explore integrated analysis with service ticket systems, procurement systems, and other platforms to enable dynamic linkage between assets and business processes, thereby enhancing overall IT service management capabilities.

4. **Produce reusable report templates and best practices**: Standardize this case into formal documentation, including data access procedures, report structure templates, and user guides, to facilitate rapid reference and reuse by other teams.
5. **Strengthen data governance and data quality management**: Continue close collaboration with the Data Governance Working Group to ensure the accuracy, completeness, and timeliness of data sources, laying a solid foundation for more advanced analytical scenarios in the future.