Telescope

Case Providing Department: Student Affairs Office

Supported by LM

1. Background

To build a student-centered service system, the telescope system has been upgraded and restructured using a no-code platform. With business teams actively participating in system development and form design, the project meets the demands for rapid iteration and flexible adjustments. This approach reduces reliance on technical development, enhances agility in responding to business changes, and enables the independent construction of modules such as data storage, visual presentation, risk warning, and collaborative office work. This transformation from development dependency to business agility has successfully established a new multidimensional support platform for student services, significantly improving work efficiency.

The original Telescope system, serving as the core operational platform for Development Advisors (DAs), provided essential functions including student information queries, task assignments for at-risk students, activity logging, daily workflow management, and maintenance of student reward/disciplinary records. While significantly enhancing DAs'

operational experience and efficiency in daily student services, the system revealed critical limitations when confronted with growing student numbers and cross-departmental collaboration needs — manifested through functional rigidity, data fragmentation, and inefficient coordination.

System constraints resulted in information asymmetry between DAs and other support teams, forcing key collaborative processes to rely on error-prone Excel workflows. Incomplete data dimensions and lacking real-time analytics ultimately hampered holistic student support and emergency response capabilities.

As collaboration deepens among student affairs center teams and academic departments, the new Telescope system now embraces an expanded mission: evolving from a DA-exclusive platform into a multidimensional, student-centered support ecosystem that integrates diverse user groups and synthesizes multi-source information.

2. Solutions

(1) To integrate data and optimize access permissions

Integrate all student support system information into a master student data table. Standardize all fields uniformly and implement hierarchical

permission management to enable roles such as DA, MHA, and School DA to access data on-demand. Connect existing dispersed data sources to eliminate information silos and ensure complete and accurate student profiles. Through API interfaces, integrate with systems such as academic administration and psychological services to achieve automated data collection and real-time updates. All support system roles can input student support records, ultimately forming a student-centric panoramic data view that provides solid support for precise services and scientific decision-making.

(2) To Enhance System Reporting and Data Display

The data is processed through a data factory. The self-service reporting module supports multi-dimensional data filtering, dynamic chart visualization, and custom metric calculation, enabling real-time display of student data. Export and viewing functions for reports can be configured on demand, improving the responsiveness of data provision and management efficiency. Data security is ensured through granular permission controls, guaranteeing that users at each level can only access information within their jurisdiction, thereby comprehensively enhancing the scientific rigor and timeliness of decision-making.

(3) Role-Based Dashboard Configuration

Based on role responsibilities and management scope, customized

dashboard interfaces are designed for different user groups (e.g., MHA, DA, School DA), displaying key metrics and pending tasks. The system supports personalized layout configurations and quick-access shortcuts to frequently used functions, enhancing operational efficiency. Through real-time data updates and alert notifications, each role can accurately monitor the dynamics of their respective student cohorts, strengthening proactive intervention capabilities.

(4) Work Task Distribution & Follow-up

Based on daily workflows and the status of students requiring attention, operational departments assign both collective and individual tasks to Development Advisors (DAs). Collective tasks (e.g., organizing class meetings) are created once and apply to multiple students simultaneously, while individual tasks (e.g., academic probation interviews) are assigned on a per-student basis. Relevant task details can be manually imported or copied in bulk. Upon receiving tasks, DAs proceed with follow-up actions and document essential information.

(5) Collaborative Carelist Support

A unified cross-departmental collaboration module has been established, integrating permission systems for multiple roles including MHA, DA, and School DA. This enables real-time synchronization and dynamic updates of Carelist student information. Through MHA's information disclosure,

progress tracking, and reminder mechanisms, closed-loop management of intervention measures is ensured. All operations are logged with traceability, guaranteeing data security and privacy compliance while enhancing emergency response capabilities.

3. Outcomes and Benefits

Enhanced Efficiency

1. Improved Cross-Departmental Collaboration Efficiency: A unified cross-departmental collaboration module has been established, integrating a multi-role permission system that breaks down information barriers between departments. This enables roles such as MHA and DA to work collaboratively on a single platform. Real-time synchronization and dynamic updates of information prevent the increased communication costs and work delays previously caused by untimely or inaccurate information transmission, thereby enhancing the efficiency of cross-departmental collaboration.

Figure 47 In-site Message Notification

2. Privacy Protection and Intervention Management: Student privacy is safeguarded by restricted access to information prior to disclosure. Once disclosure conditions are met, the MHA can initiate information sharing, track progress, and activate reminder mechanisms for relevant personnel with a single click, achieving closed-loop management of intervention measures.

3. Enhanced Data Access and Entry Efficiency: The data fields have been expanded from 81 to 151, integrating 24 cross-departmental data forms. Data channels with systems such as academic affairs, student clubs, dormitories, and psychological counseling centers have been connected, and 22 user-level precision reports have been developed. This achieves hierarchical control of data permissions and completes 32 data flow configurations. In terms of data integration and permission optimization,

all student support system information is consolidated into a master student data table, with fields standardized and managed under a hierarchical permission system. Different roles can access necessary data on demand, eliminating the cumbersome process of searching through multiple dispersed data sources and thereby improving data access efficiency. Meanwhile, respective support system roles independently record student support entries, centralizing and standardizing data input. This reduces instances of duplicate or erroneous data entry, enhancing data entry efficiency.

4. Enhanced Report Generation and Viewing Efficiency: Following the upgrade of system reports and data presentation, data is now processed through the data factory. The self-service reporting module supports multi-dimensional data filtering, dynamic chart visualization, and custom metric calculation. Users can quickly generate required reports on demand without manual data processing or complex analysis, significantly reducing report generation time. Additionally, export and viewing functions can be configured as needed, enabling users to access relevant data anytime, anywhere, thereby improving the responsiveness of data delivery and management efficiency.

5. Enhanced Dashboard Operational Efficiency: Customized dashboard interfaces have been developed for different user groups, supporting personalized layout configurations and quick-access shortcuts to

frequently used functions. Users can personalize their dashboard interfaces according to their work habits and needs, placing commonly used features and key metrics in prominent positions for quick viewing and operation, thereby improving operational efficiency.

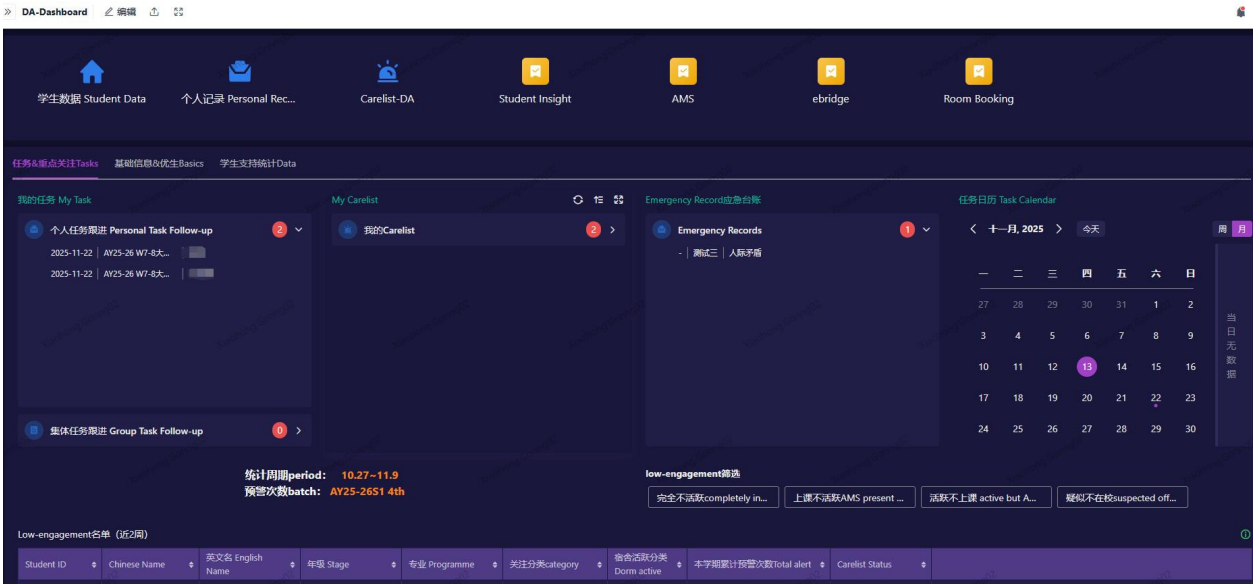
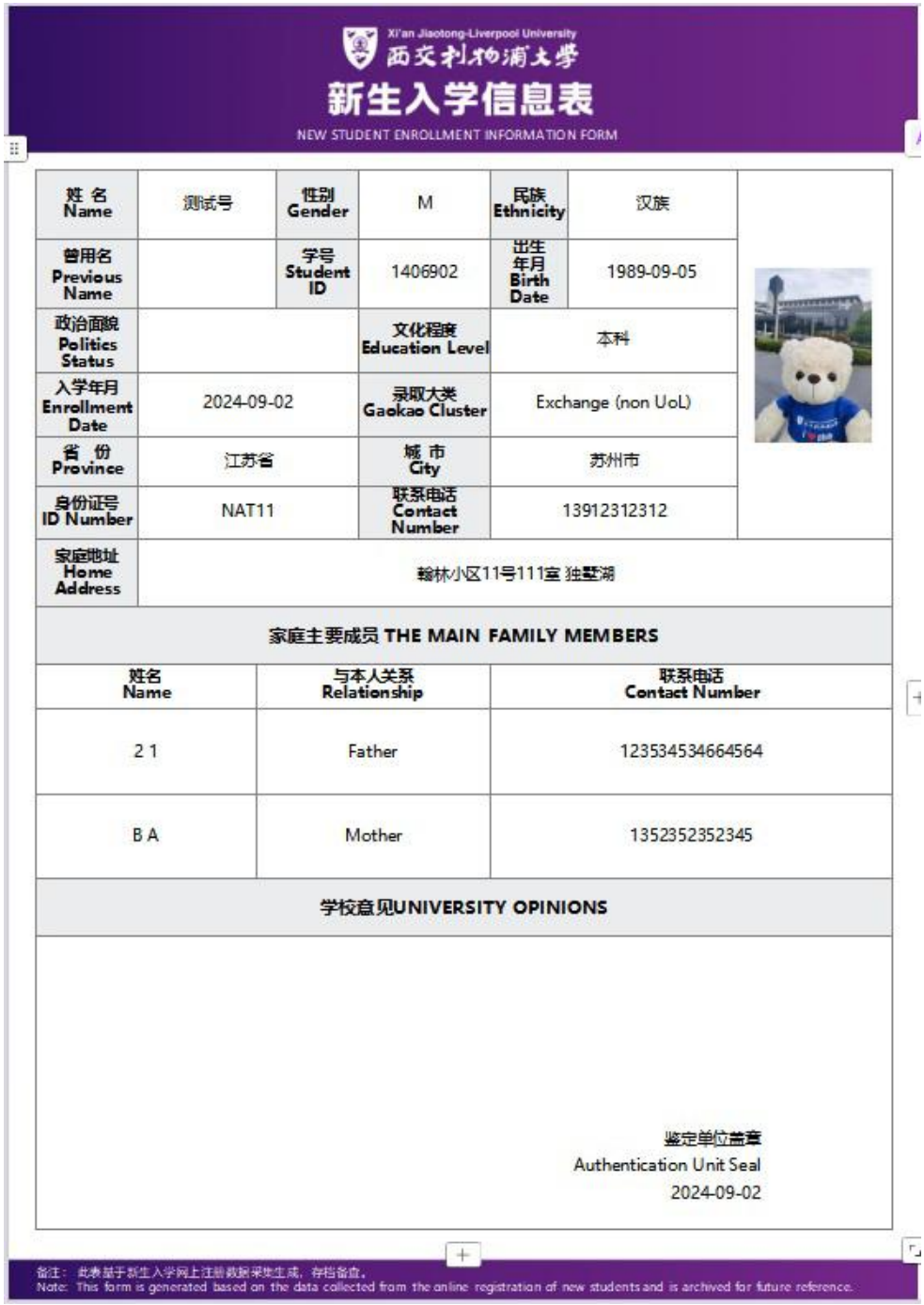


Figure 48 DA Dashboard View

6. Personalized Printing with Custom Templates: The system now enables the printing of various documents using custom templates, including new student enrollment files and class leadership appointment certificates.



Xi'an Jiaotong-Liverpool University
西交利物浦大学

新生入学信息表

NEW STUDENT ENROLLMENT INFORMATION FORM

姓 名 Name	测试号	性别 Gender	M	民族 Ethnicity	汉族
曾用名 Previous Name		学号 Student ID	1406902	出生年月 Birth Date	1989-09-05
政治面貌 Politics Status		文化程度 Education Level	本科		
入学年月 Enrollment Date	2024-09-02	录取大类 Gaokao Cluster	Exchange (non UoL)		
省 份 Province	江苏省	城 市 City	苏州市		
身份证号 ID Number	NAT11	联系电话 Contact Number	13912312312		
家庭地址 Home Address	翰林小区11号111室 独墅湖				

家庭主要成员 THE MAIN FAMILY MEMBERS

姓名 Name	与本人关系 Relationship	联系电话 Contact Number
2 1	Father	123534534664564
B A	Mother	1352352352345

学校意见UNIVERSITY OPINIONS

鉴定单位盖章
Authentication Unit Seal
2024-09-02

备注：此表基于新生入学网上注册数据采集生成，存档备查。
Note: This form is generated based on the data collected from the online registration of new students and is archived for future reference.

Figure 49 Template for the New Student Enrollment Information Form

Maximized Data Value

1. Enhanced Data Integrity: By integrating existing dispersed data sources and eliminating information silos, all student support system

information has been consolidated into a master student data table, ensuring the completeness and accuracy of student profiles. The comprehensive student data provides all departments with more holistic and in-depth student information, facilitating a better understanding of student needs and characteristics. This serves as a foundation for developing personalized education plans and support measures.

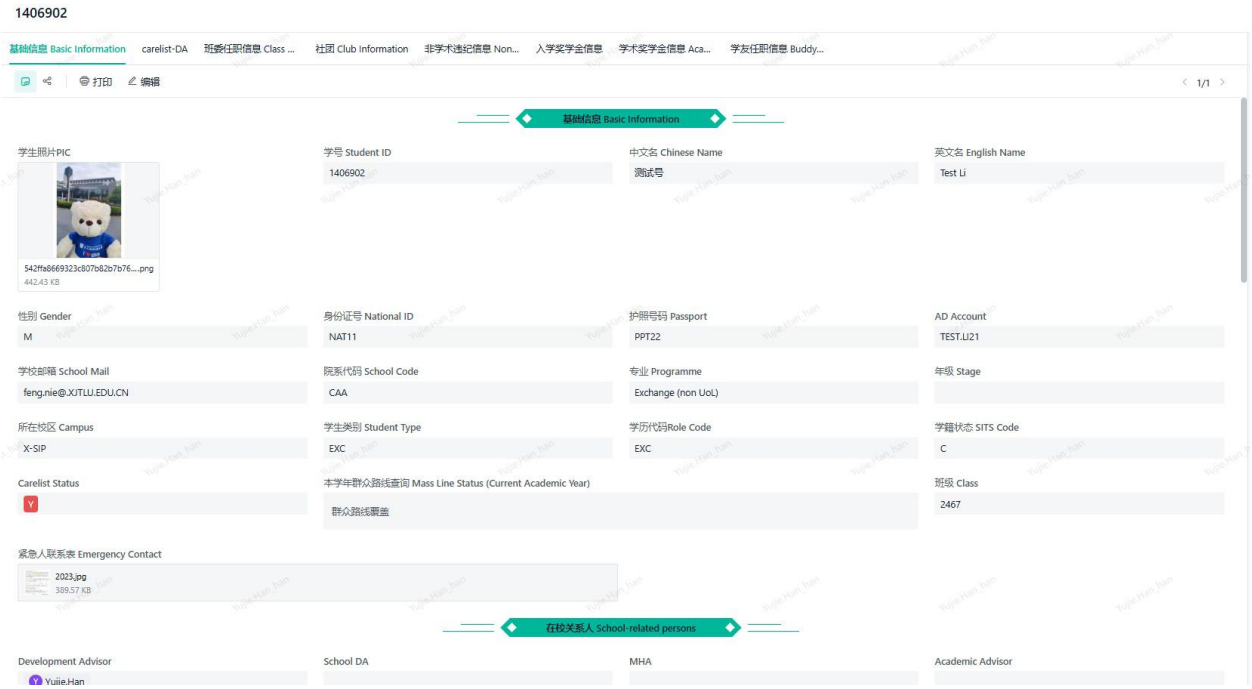


Figure 50 Student Profile View with Tabs

2. Improved Data Timeliness: Through API integrations with systems such as academic administration and psychological services, automated data collection and real-time updates have been achieved. An intelligent assistant enables real-time synchronization of specific fields across various forms. This real-time updated data promptly reflects students' latest status, enabling relevant personnel to stay informed of student

dynamics and make more timely and accurate decisions.

3. Enhanced Decision-Making through Data Visualization: New modules including the Carelist watchlist, automated low-engagement alerts, and multi-user collaborative emergency tracking have been implemented to establish a closed-loop student support process. Leveraging Fine BI and the no-code data factory for data processing, the self-service reporting module enables real-time display of low-engagement early warning data. Dynamic charts and custom metric calculations make information more intuitive and comprehensible, helping decision-makers quickly grasp key insights and trends. Authorized users at all levels can now deliver more targeted services and support to students based on their specific phases and needs.

4. Strengthened Proactive Intervention Capability: The role-specific Dashboard configuration delivers customized interfaces for distinct user groups, displaying key metrics and pending tasks. Supported by real-time data feeds and early-warning alerts, it enables each role to accurately monitor the dynamics of their assigned student cohorts. This allows staff to promptly identify emerging issues and potential risks, implement proactive interventions to resolve problems at an early stage, and ultimately enhance both student development outcomes and institutional management effectiveness.

4. Replicability and Promotion Value

(1) Enhanced Management Precision: The solution achieves refined management of student information through integrated data, standardized permissions, and real-time updates. This granular management model can be extended to other departments or scenarios handling large volumes of individual records, enabling more accurate monitoring of subject conditions and facilitating targeted management strategies.

(2) Strengthened Decision-Making Rigor: Leveraging data visualization, multi-dimensional filtering, and custom metric calculations, the solution provides comprehensive and accurate data support for decisions. In other organizational contexts, decision-makers similarly require reliable data for evidence-based choices, which this approach effectively supports to improve judgment quality and outcomes.

(3) Optimized Collaborative Workflows: The unified cross-department collaboration module with real-time synchronization mechanisms breaks down information barriers between units and improves cooperative efficiency. In scenarios requiring multi-departmental or multi-team coordination, this collaborative model significantly reduces communication overhead while preventing redundant efforts and delays.

(4) Assured Data Security & Compliance: Comprehensive audit trails and granular permission controls ensure full data security and privacy regulation adherence. In an era of increasing data sensitivity, these features make the solution universally applicable across sectors, meeting diverse departmental and operational requirements for information protection.

5. Next Steps

To enhance system performance and user experience, optimization initiatives will be implemented, including a comprehensive interface redesign that adopts a simple, intuitive, and user-friendly design philosophy. Personalized interface layouts and operational workflows will be tailored to the habits and needs of different user roles, reducing operational steps and learning curves. Interactive elements and feedback mechanisms will be strengthened to provide immediate confirmation of actions and status updates. Additionally, new student support roles such as Career BP will be introduced in line with business development to enrich the user ecosystem. System forms and reports will be continuously optimized in response to evolving business requirements, ensuring data processing remains accurate, timely, and effective.