

Science Tokyo — Basic DX Strategy

Toward a data-driven, co-creative Institute where daily activities become information assets

Digital Transformation (DX) Philosophy

“Advancing science and human wellbeing to create value for and with society” is the mission of Science Tokyo. To achieve this goal, we will adopt digital technologies in all Institute activities, including education, research, clinical care, administration, and management. Data generated from these activities will be connected and shared across Science Tokyo. We will build a cooperative structure where departments and administrative offices work together. We will also create an environment where members need to enter data only once, or as little as possible. This will prevent duplicate data entry and reduce errors caused by manual work. As a result, information will flow efficiently and accurately.

We will go beyond simply reducing paper use and basic digital conversion (digitization and digitalization). By redesigning work processes and promoting work style reform, we will improve efficiency in education, research, and administration, and strengthen the flexibility and vitality of the organization. Through these efforts, data will be smoothly connected and circulated, enabling Science Tokyo to evolve into a “data-driven, co-creative Institute” that generates new value. We will also build a foundation that allows the use of advanced technologies such as AI, and promote future-focused education, research, operations, and management.

Principles

- **Build a DX culture with participation from everyone:** All faculty, staff, and students will be active contributors to DX. Everyone will be aware of how data is created, shared, and used in their work or studies. By making improvements in daily work, learning activities, and efficiency, and by collaborating across departments, we will build a culture in which members support one another.
- **Establish a consistent data lifecycle:** All data circulating within Science Tokyo will be designed for reuse from the input stage. Ensuring that data is entered only once at the source and linked with master data will prevent repeat data, reduce errors, and avoid inconsistencies.
- **Design digital-first processes:** Processes for daily tasks will be redesigned with digital environments as the default. This will enable adaptive and efficient workflows that can be completed online and support flexible ways of working.
- **Implement continuous improvement:** Data lifecycles and operational reforms will be regularly reviewed and improved. By preventing over-reliance on specific individuals, we aim to achieve sustainable organizational management.

Basic Strategies

1. **Promote step-by-step DX:** We will promote DX by clearly recognizing three stages: digitization (converting analog or paper-based information into digital form); digitalization (improving efficiency and automation of work processes); and digital transformation (transforming organizations and society to create new value and new ways of working). By making use of existing system renewal cycles and minimizing the burden on regular operations, we will achieve steady and practical transformation.
2. **Build and utilize a Master Data Management system*:** We will properly develop and manage “master data.” Master data is shared core data related to entities such as people, organizations, and facilities, and is commonly used across multiple Science Tokyo systems. This will ensure that accurate and up-to-date information is available across all systems. As a result, collaboration among Science Tokyo systems will be enhanced, and inconsistencies and missing data will be eliminated. In addition, simply carrying out daily activities in research, education, and other areas will automatically accumulate accurate evaluation data on faculty and organizations. This will significantly reduce the workload involved in preparing documents for evaluation and disclosure, and promote efficient use of data. Furthermore, integrating data across multiple systems will enable new analytical approaches and enhanced decision-making support, which will contribute to the improvement of operations across all Science Tokyo organizational units and lead to the creation of new value.

*Note: In this strategy, a Master Data Management (MDM) system refers to a system that centrally

manages shared core data related to entities such as people, organizations, and facilities, and maintains its accuracy and keeps it up to date. Science Tokyo systems refer to individual systems that support various activities, including education, research, clinical care, administration, and management. The MDM system will serve as a foundation for these individual systems. Integrating the MDM system and the individual systems eliminates duplicate data entry and information inconsistencies.

3. **Transform work processes:** We will analyze and visualize current work processes, and design optimal processes that include an appropriate data lifecycle, such as “input,” “storage,” “circulation,” and “reuse.” By introducing workflow management systems, we will achieve automation and standardization of processes and build mechanisms that automatically generate high-quality data just by carrying out day-to-day tasks.
4. **Develop DX talent and raise awareness:** We will implement education, training, and awareness programs to promote DX so that all faculty, staff, and students can proactively advance DX initiatives.