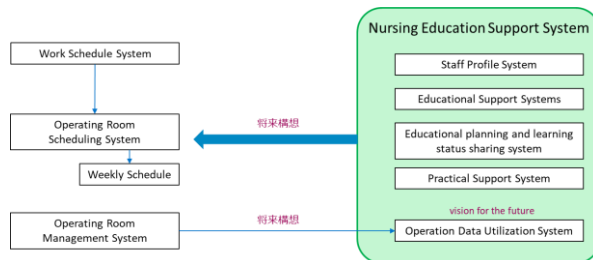**PHILIPS**

Philips Japan, Ltd.
The Project of Surgical Nursing Education Support System in Hospitals

Purpose of the Project

- Since medical facilities to be required to reform orgs and workflow to be efficient more in alignment with [Work style reform] starting in 2024, there should be an urgent need to shift tasks to nurses and other professionals.
- The turnover rate of nurses, on the other hand, has been in critical in shifting tasks of physicians', in cost of human resource management and in work load for education in recipient departments.
- Development of work environment, where new staffs are motivated to work long with necessary education opportunity, is required as a standard.
- In this project, we will develop a nursing education support system tailored to the Japanese environment, utilizing know-how from overseas medical cloud businesses to enable nurses to register their own experience of each procedures in a web application to "visualize" the development process for the entire team.
- The system aims to automatically create a skill map of which cases/operations to assign to nurses registered, and to realize efficient operation of the OR department.

Details of demonstration

■ Following project was done with the @partner company Dowell, Inc.

(1) Application development and implementation using cloud servers
(2) Prototyping utilization at verification facilities
(3) Complete digitization of surgical nursing education support operation flow with mobile terminal (web application)

■ Project timeline
Jul-No 2023   : Requirements definition
Sep-Dec 2023 : Development
Jan 2024   : Program completed, on-site verification

■Role Assignment

job	Philips	Dowell
Market Needs Assessment	◎	-
Selection of Verification hospital	◎	-
System Requirements Formulation	◎	○
Meeting at the verification hospital	◎	○
Basic system design		◎
Detailed system design		◎
acceptance test	◎	○
Testing at verification hospital	◎	○
Regular meetings (between Philips/Dowell)	◎	○

Role assignment (◎: Main, ○: Sub)

JETRO

PHILIPS

Philips Japan, Ltd.
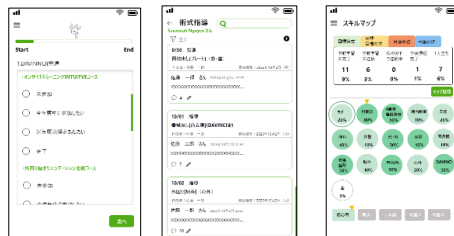## The Project of Surgical Nursing Education Support System in Hospitals

Project outcome

Implemented following functions to realize the purpose of use

■Purpose of use
- Learner to register their skills and visualize them as a skill map
- Instructor to support learners by developing an educational plan and other measures based on the learner's skill acquisition status
- Instructor to evaluate learner's performance of the surgery by the surgical teaching function.
- Instructors to share the status of education for the learner and record the next offer to the instructor.
- Organize goal interviews with the interview function.

■Functions of software
- Nurse experience input function
- Staff experience management function
- Step-up map function
- Staff Management Functions
- Technique guidance function
- Interview management function
- Educational Planning Functions

Challenges and Solutions

- Confirm that there are no problems in implementing the system as a stand-alone product using the cloud environment.
- Fond that the system in the cloud and the system in the hospital need to be able to link information in order to realize *Medical DX.
- Found the necessity of standardization of linkage to specifications and masters templates n order to make the system inexpensive.
- Confirmed succession factor achieve, 1) by investing in equipment to link data outside the hospital in secured, and 2) by upgrading human resources capability supported by governments.

*Medical DX : Government-lead strategy for transformation of healthcare

Future plans

- Propose this system to **1,000 facilities which operate 300 or more patient beds to support support reforms in the work styles of hospital staff, including nurses, not only through stand-alone operation, but also by linking the system with the existing operating department system.

**Approximately 8,400 medical facilities in Japan, 7,000 have operating rooms, 1.000 facilities with more than 300 beds