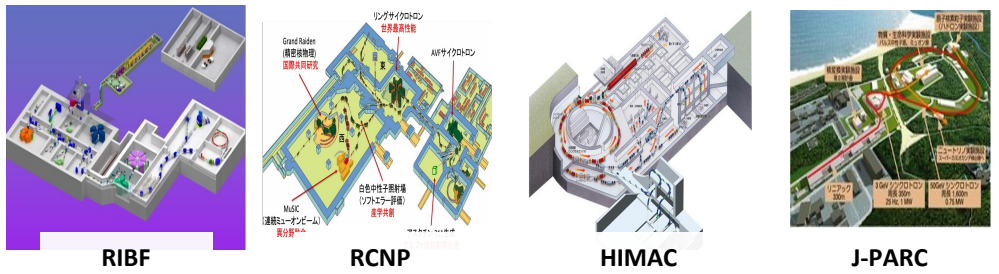
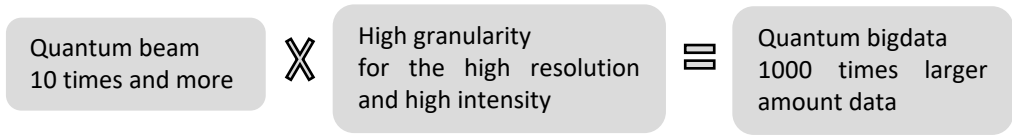


# A Packaged Streaming-Readout Data Acquisition System by the SPADI Alliance for Nuclear and Particle Physics Experiments

N. Kobayashi<sup>A</sup>, R. Honda<sup>B</sup>, Y. Igarashi<sup>B</sup>, S. Ota<sup>A</sup>, T. N. Takahashi<sup>A</sup>, and S. Y. Ryu<sup>A</sup>  
<sup>A</sup>RCNP, Osaka University, <sup>B</sup>IPNS, KEK

## Explosive increase of the data flow (e.g., in Japan)



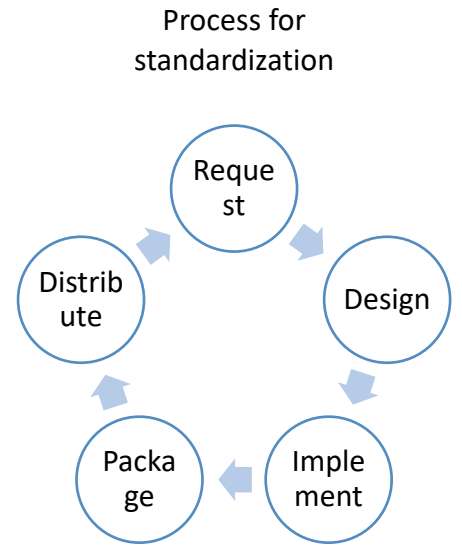
What is smart solution?

## SPADI Alliance

>190 researchers (23 institute)



Strategy committee  
Chair : R. Honda  
Vice-Chair: H. Baba and N. Kobayashi



- Goals:
- Common system
  - Standardization
  - ➔ Reducing costs to develop and construct the DAQ system

Beyond the limitation of the present data acquisition and processing


# Strategy of SPADI-A DAQ packaging

J-PARC (Synchrotron)



T103 / E50 test bench@K1.8BR K. Shirotori et al

RCNP (Cyclotron)



DAQ Commissioning: S. Ota, NK et al.,  
E585: S. Ota, M. Dozono et al. @Grand Raiden

- First version was released
- Alot of facilities using the package

## SPADI Alliance DAQ package

Hardware

- \* AMANEQ
- (\* Network dev.)
- (\* Server)

Protocols/format

- \* MIKUMARI
- \* Raw data format
- \* Channel Mapping

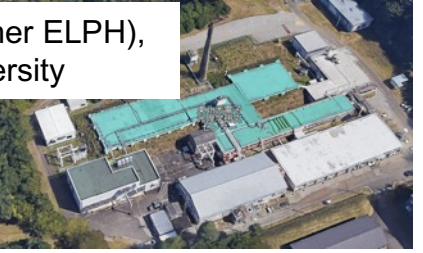
Software

- \* NestDAQ
- \* ARTEMIS
- \* All-in-1 container

Manual

- \* Examples of system
- \* Use cases
- \* Quick start
- \* List of link to each element
- \* Update history
- \* Version list (BBS or Mattermost)
- \* Consult, support (Mattermost)

RARIS (Former ELPH),  
Tohoku University



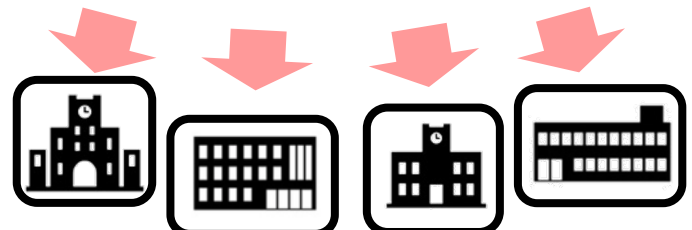
BLM development, R. Kino, S. Nagao et al.

KIST Tandem  
Ion accel.,  
South Korea



Physics exp. w/ LaBr3, J. K. Ahn, S. Y, Ryu et al.

Other facility



Contribution  
EIC-Japan, EIC etc.

