

# THE DEVELOPMENT AND IMPLEMENTATION OF NATIONAL DATA SERVICE PLATFORM

Hsi-En Yu, Chun-Hung Huang, Yuchin Tsai, Chia-Chuan Chuang, Yen-Wei Huang, Weicheng Huang\*

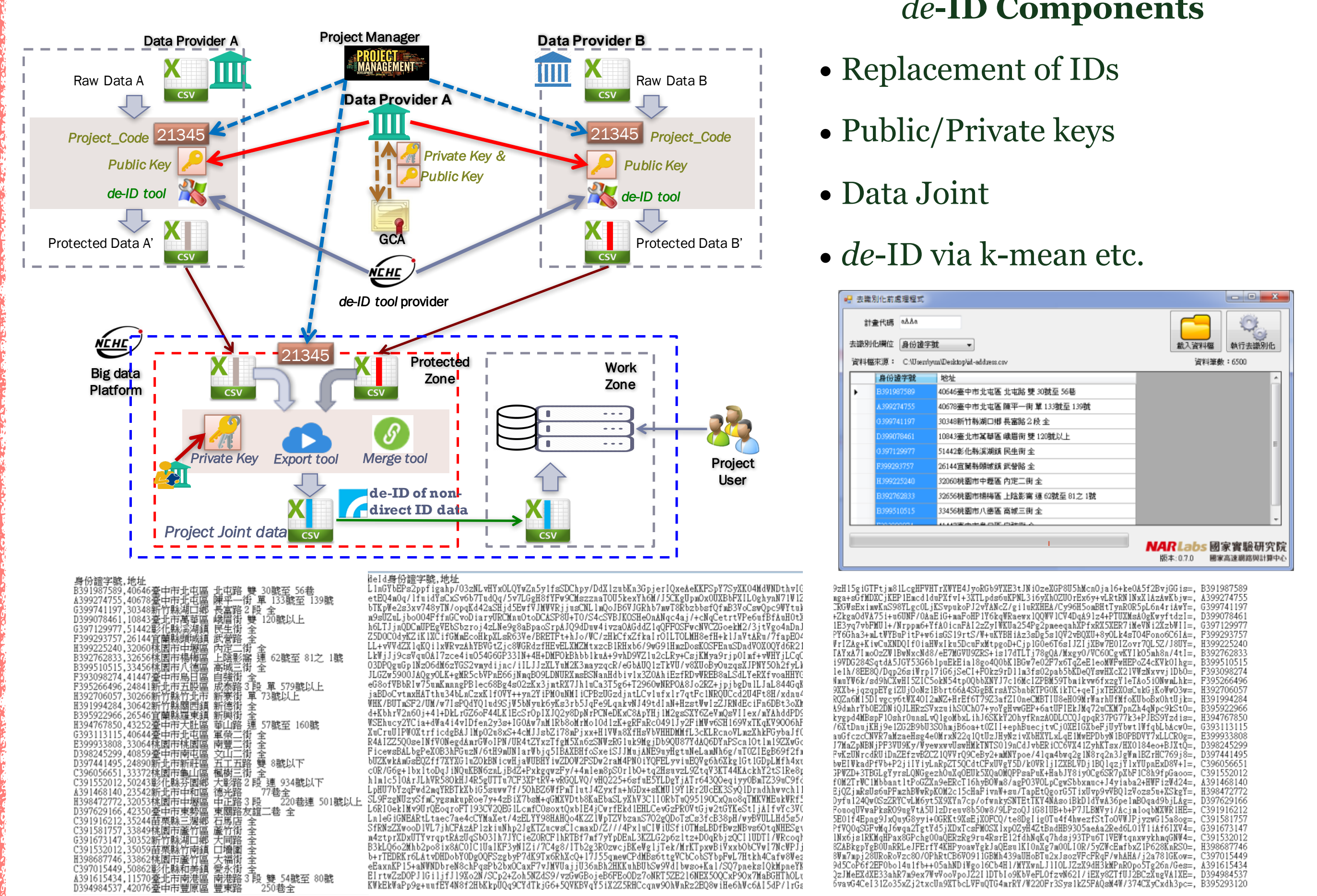
{yun, sakana, thomas, jimmy\_chuang, ellery, whuang}@narlabs.org.tw

NATIONAL CENTER FOR HIGH-PERFORMANCE COMPUTING, NARL, TAIWAN

## Abstract

Data is considered as the next crew oil which requires the refinement to be valuable. A national data effort, the Data Marketplace, was initiated to collect, manage and share data within research communities in Taiwan. The purpose is to collect various data, open and non-open alike, in the short term and provides the National Data Service (NDS) in the long run. Various open source technologies and help from international partners have boost the progress of the activity.

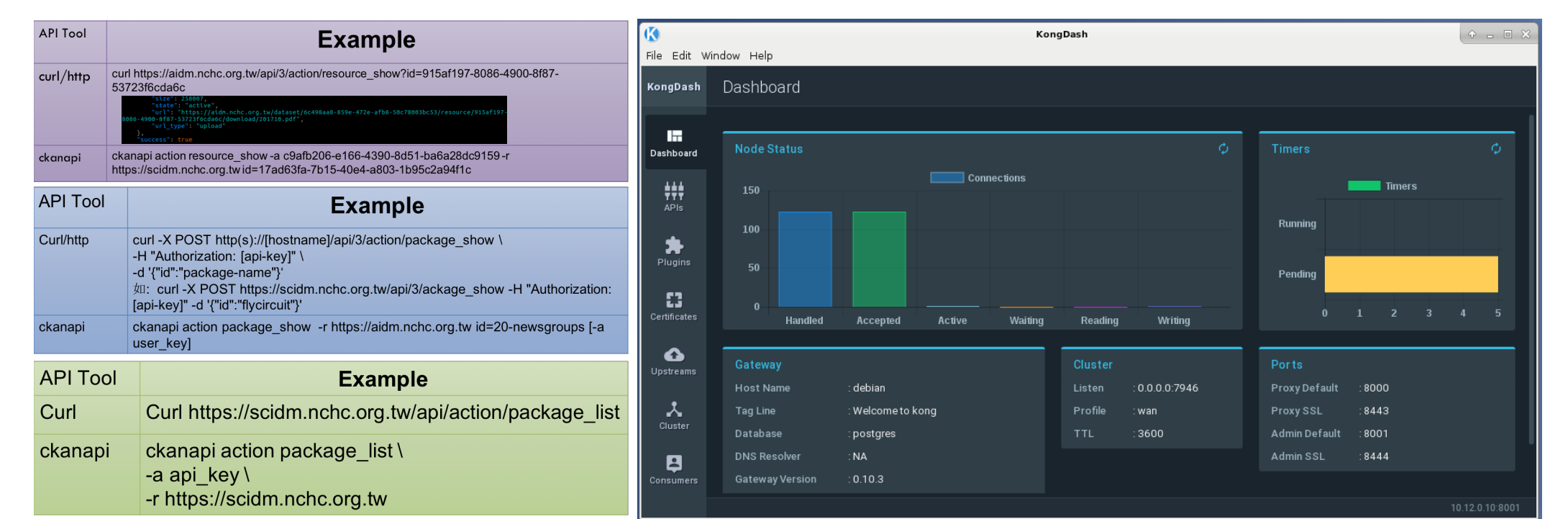
## Technologies adopted/implemented



## de-Identification Process

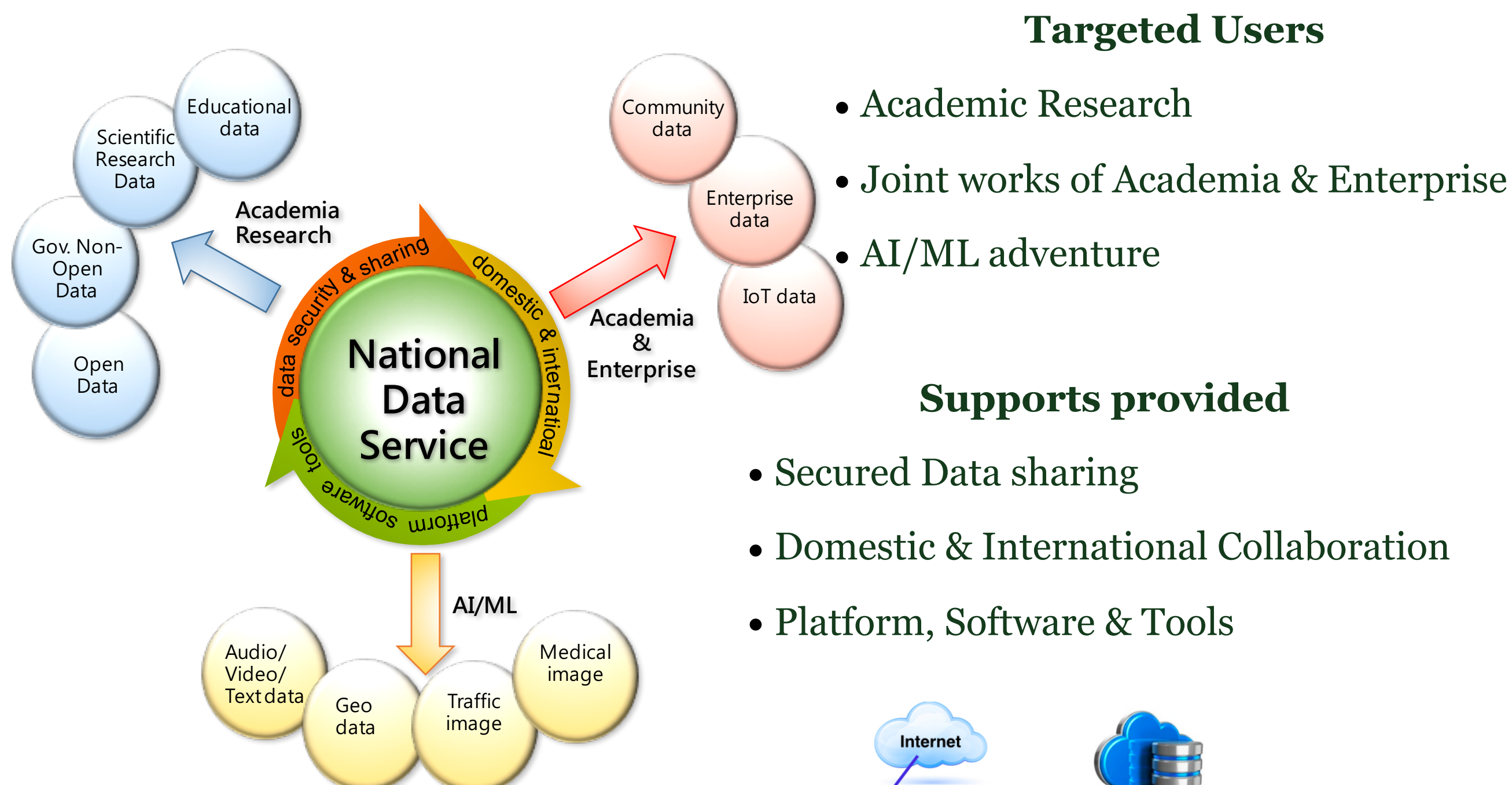
### CKAN API

- data lookup
- data display
- download
- upload
- ...etc.

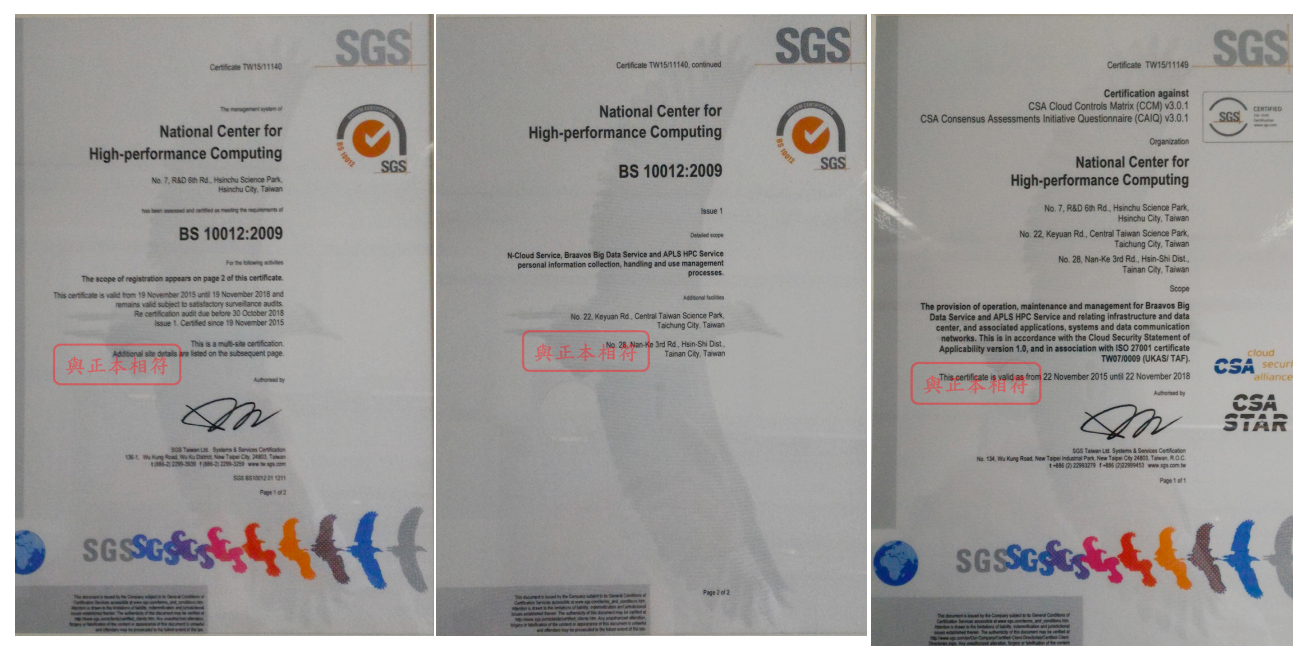


### API Gateway

## Toward NDS

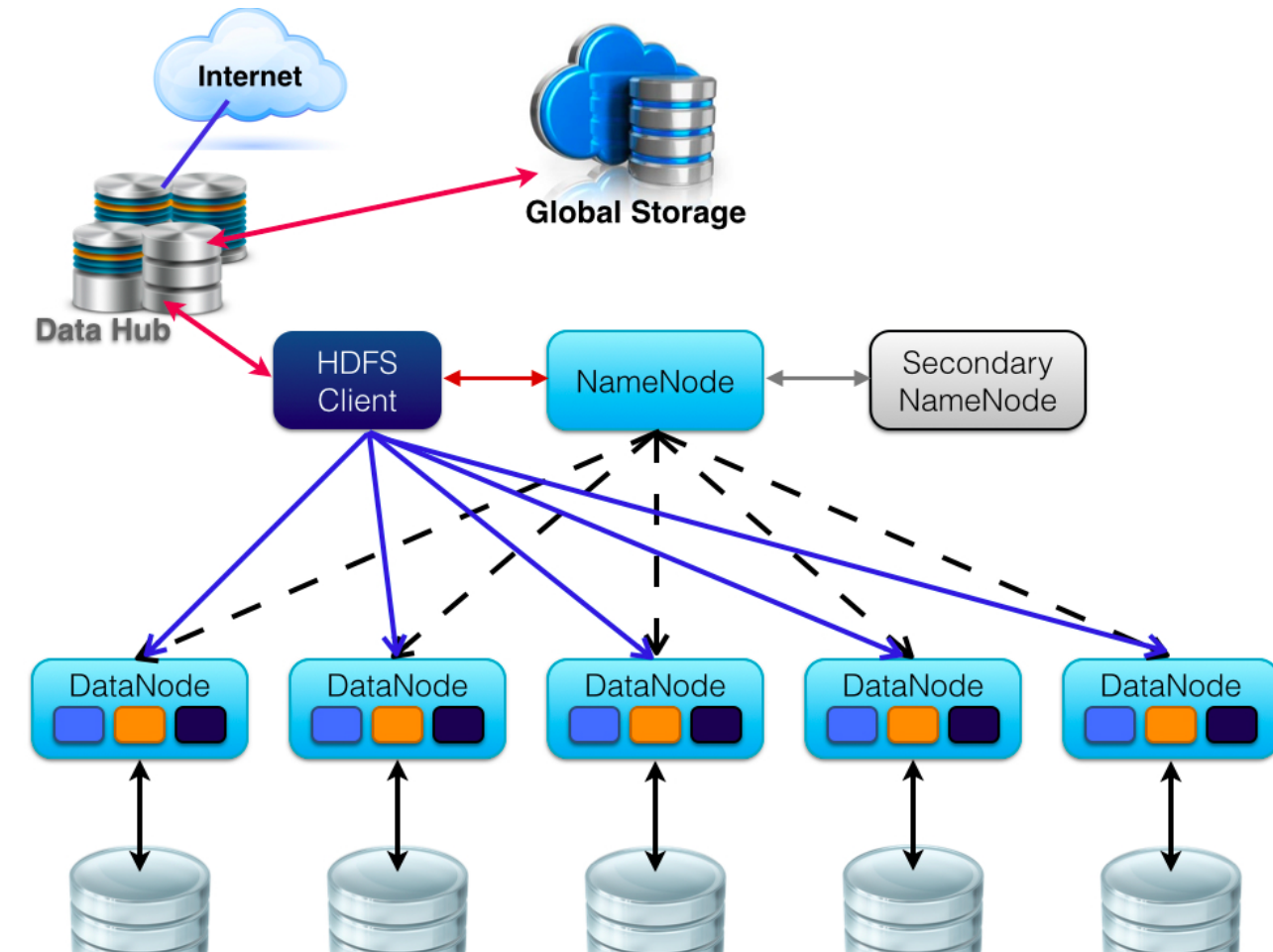


## The Scope of National Data Service



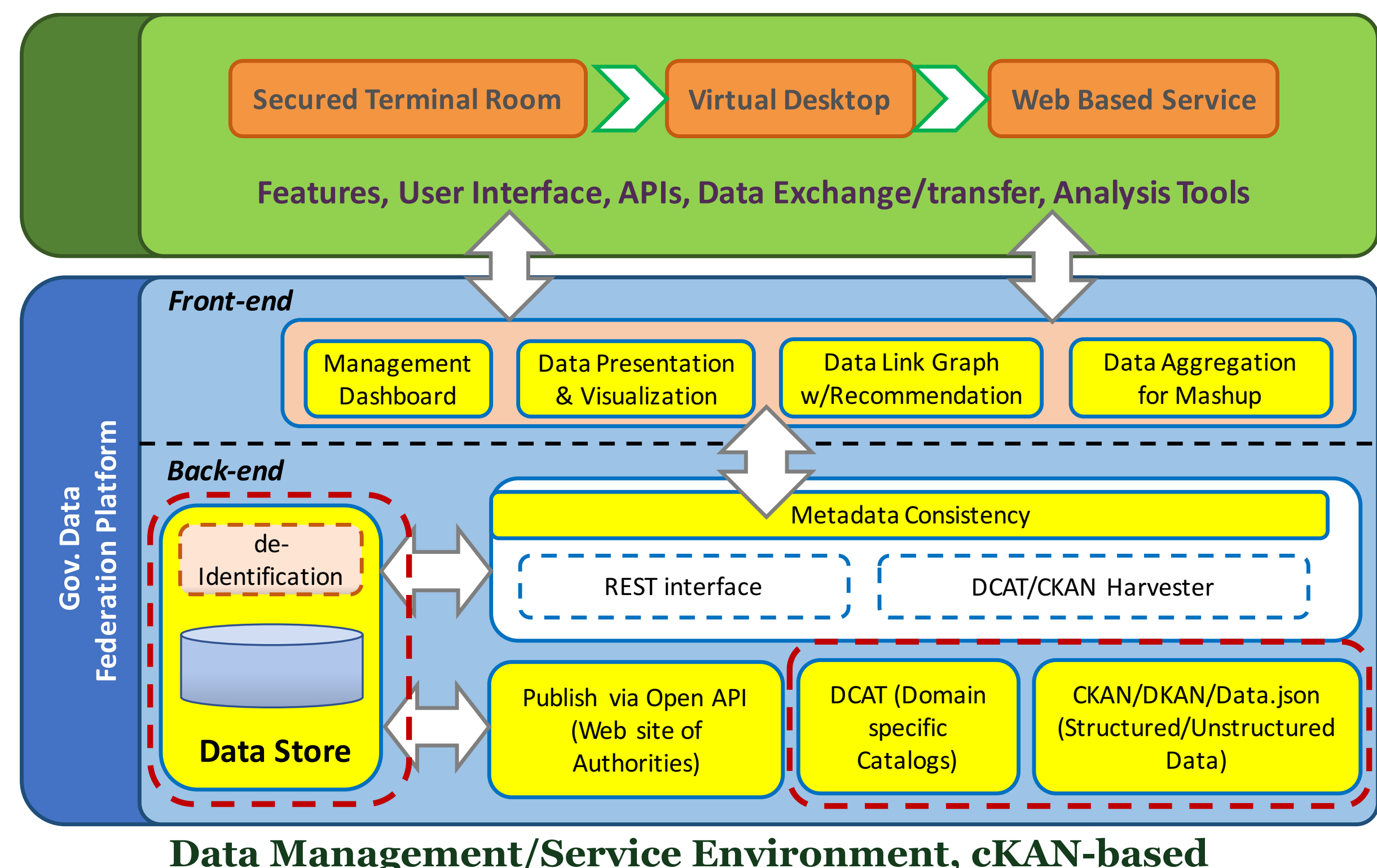
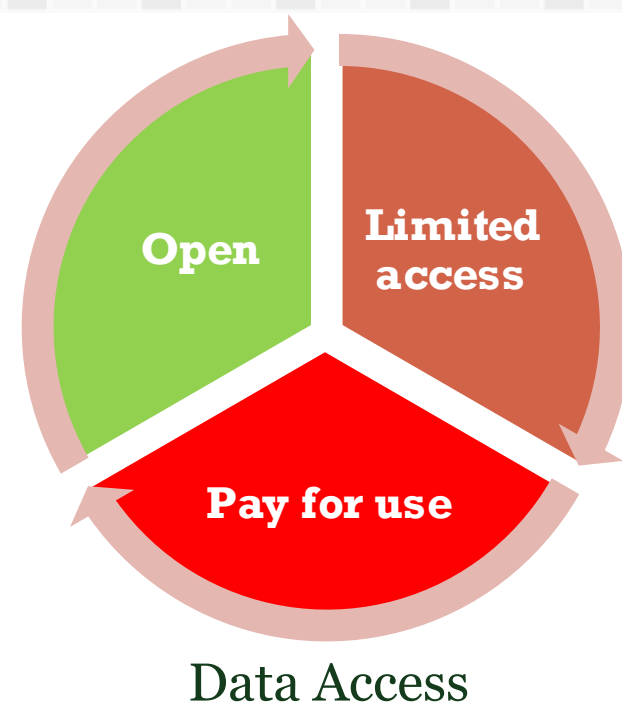
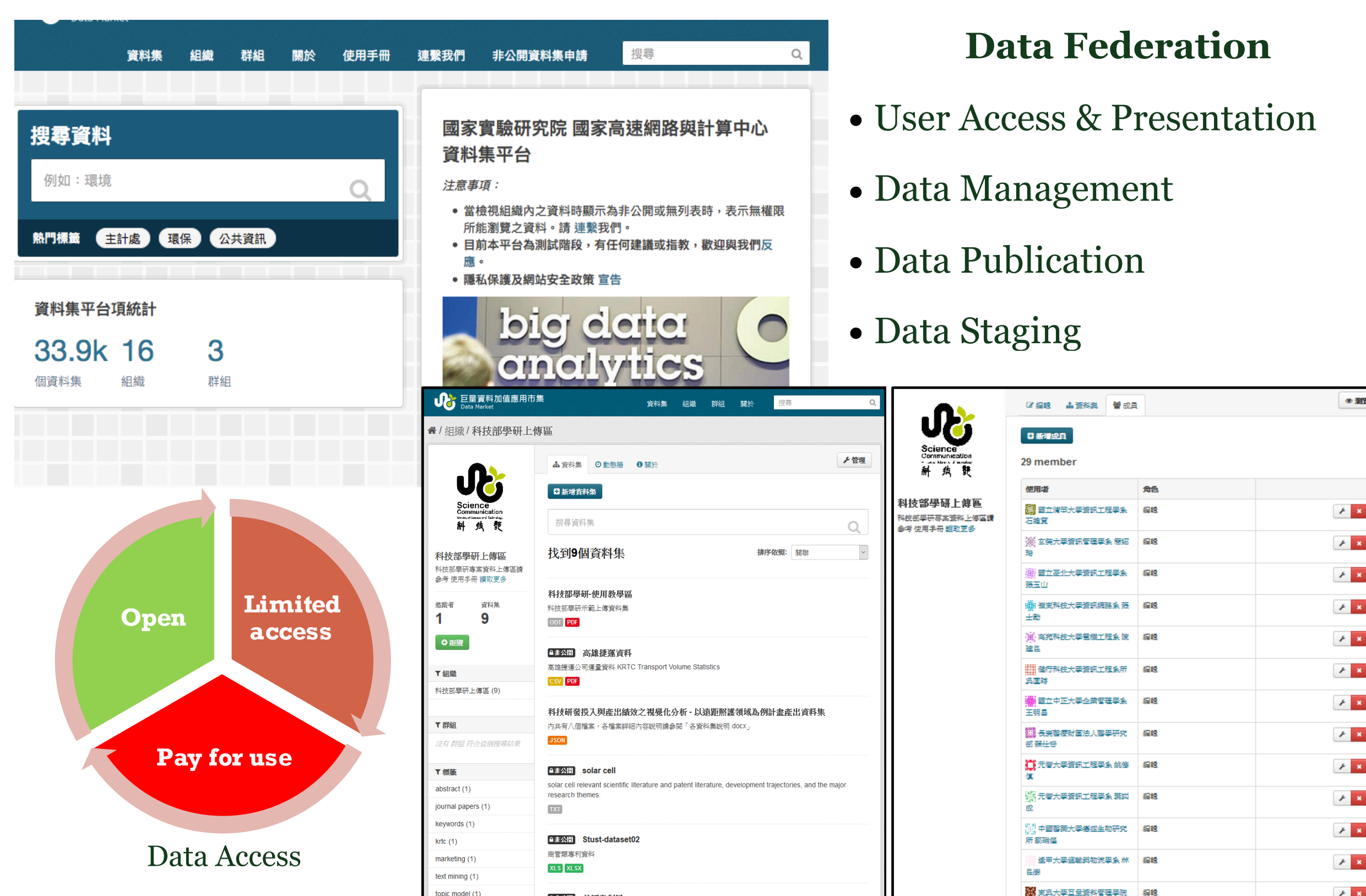
### Certificates :

ISO 27001, CSA STAR Gold, BS10012



## Data Federation

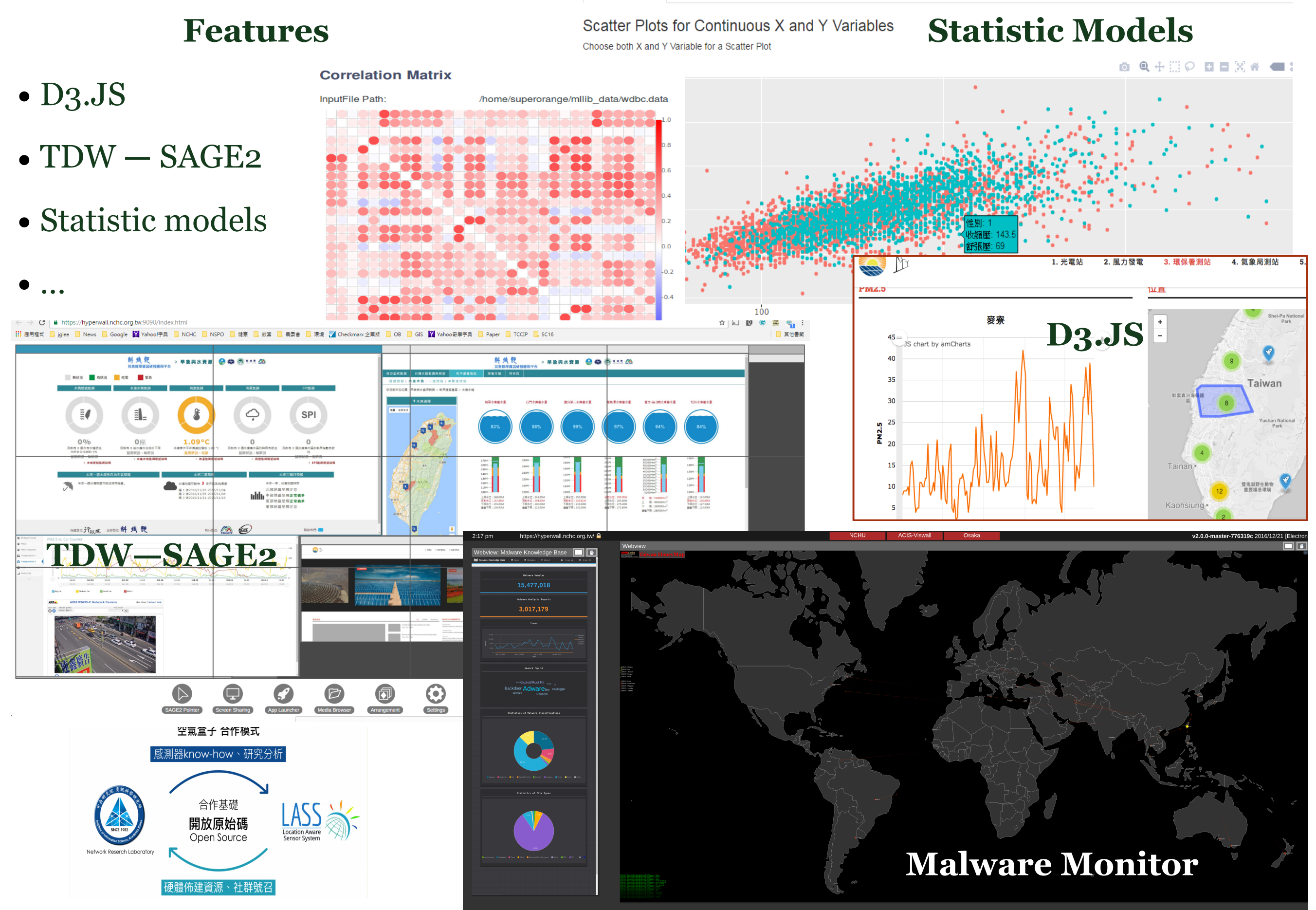
- User Access & Presentation
- Data Management
- Data Publication
- Data Staging



## Data Presentation

### Features

- D3.JS
- TDW — SAGE2
- Statistic models
- ...

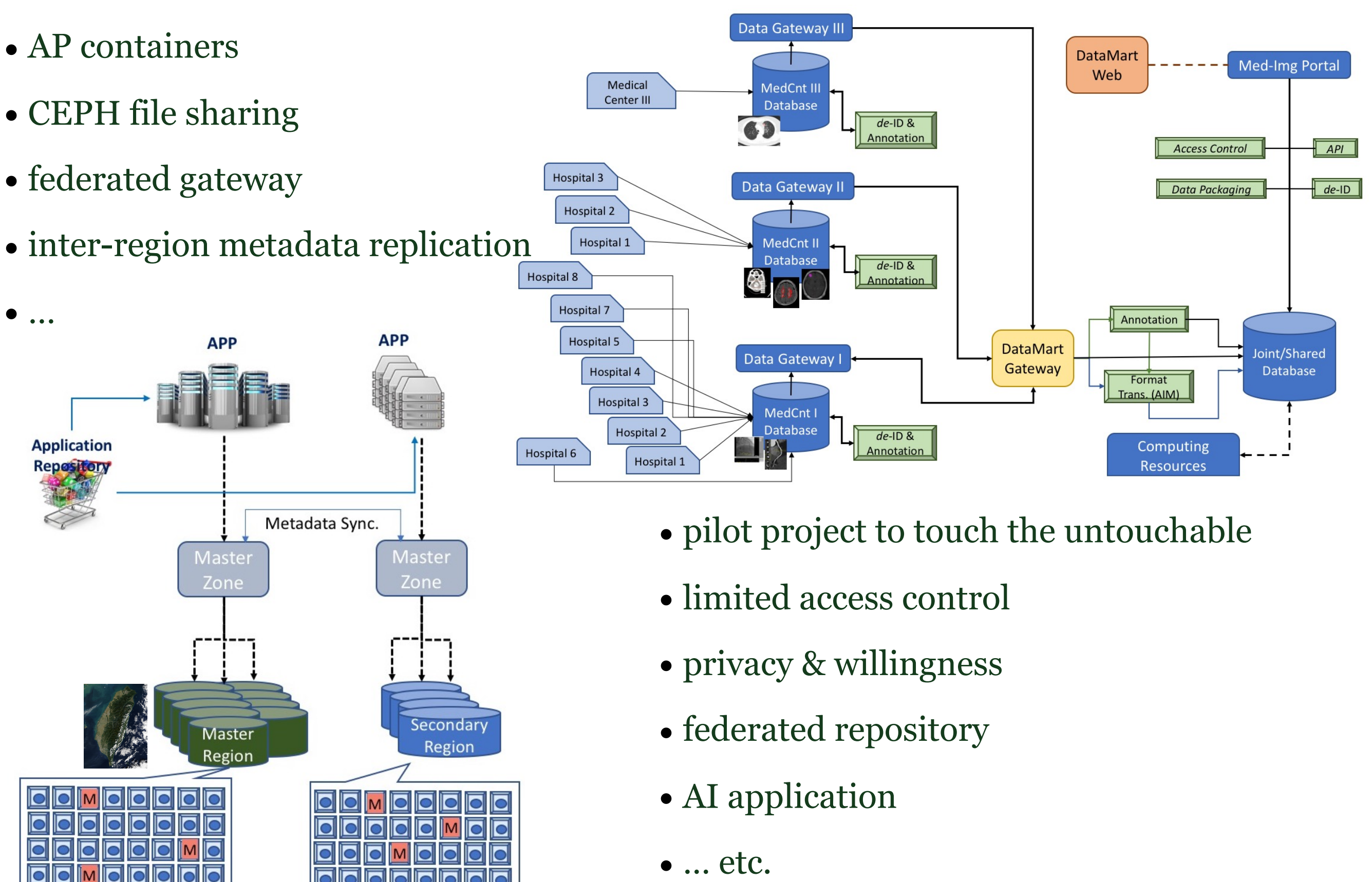


## On going Development – touch the untouchable

### International Data Cloud

- AP containers
- CEPH file sharing
- federated gateway
- inter-region metadata replication
- ...

### Medical Image Repository



## References

- [1]. CKAN, <https://github.com/KSP-CKAN/CKAN>
- [2]. National Data Service, US, <https://www.natinaldataservice.org>
- [3]. <http://docs.ceph.com/docs/jewel/radosgw/federated-config/#multi-site-data-replication>
- [4]. <http://sage2.sagecommons.org/>

## Acknowledgements

- ★ The project team would like to address our gratitude toward our international partners, NCSA and AIST, for their support and sharing.
- ★ Funded by the Ministry of Science and Technology (MOST), "Toward the Realization of DataMarketplace", grant MOST-106-2634-F-492-001