



OPETUSHALLITUS
UTBILDNINGSTYRELSEN

KOSKI - a National Registry and Data Transfer Service for Study Rights and Completed Studies

Juho Mikkonen

Action Grant
EQAVET - European Quality Assurance in
Vocational Education and Training National Reference Points
Agreement number - 2019-0493/001-001
Project Nr 609143-EPP-1-2019-1-FI-EPPKA3-EQAVET-NRP



FINNISH NATIONAL
AGENCY FOR EDUCATION

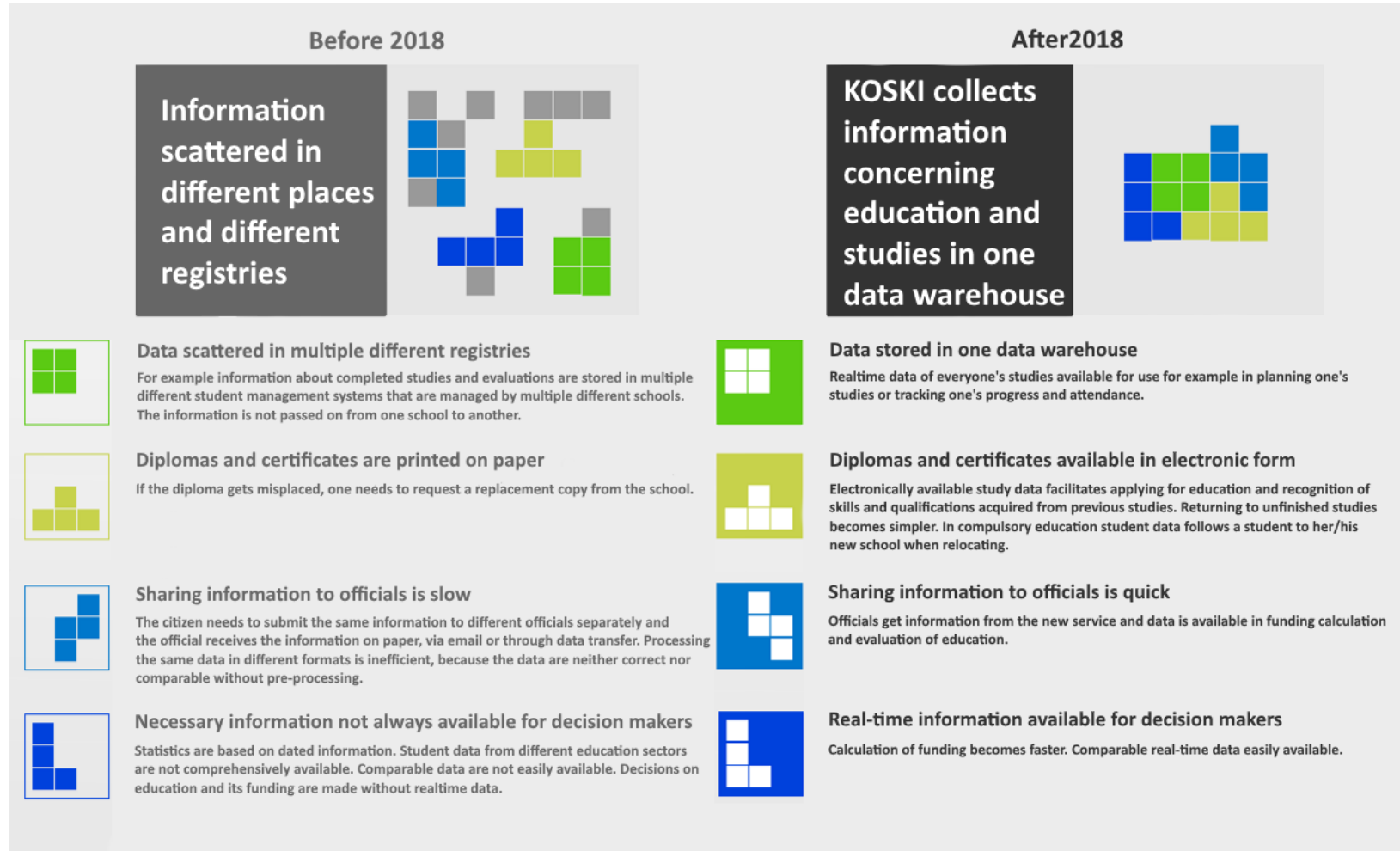


Co-funded by the
Erasmus+ Programme
of the European Union

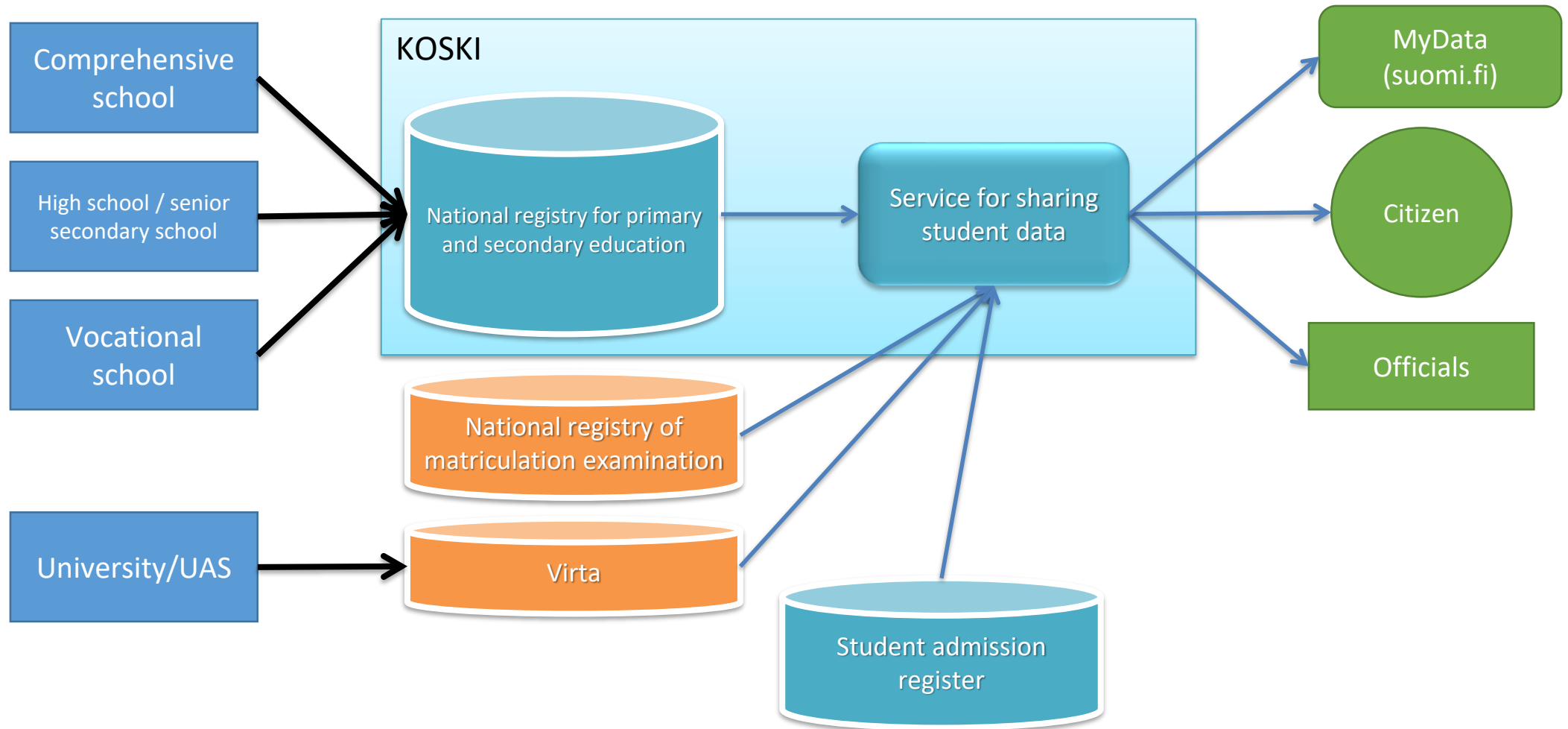
KOSKI in a nutshell



KOSKI – study records and study rights available through one national registry



KOSKI architecture



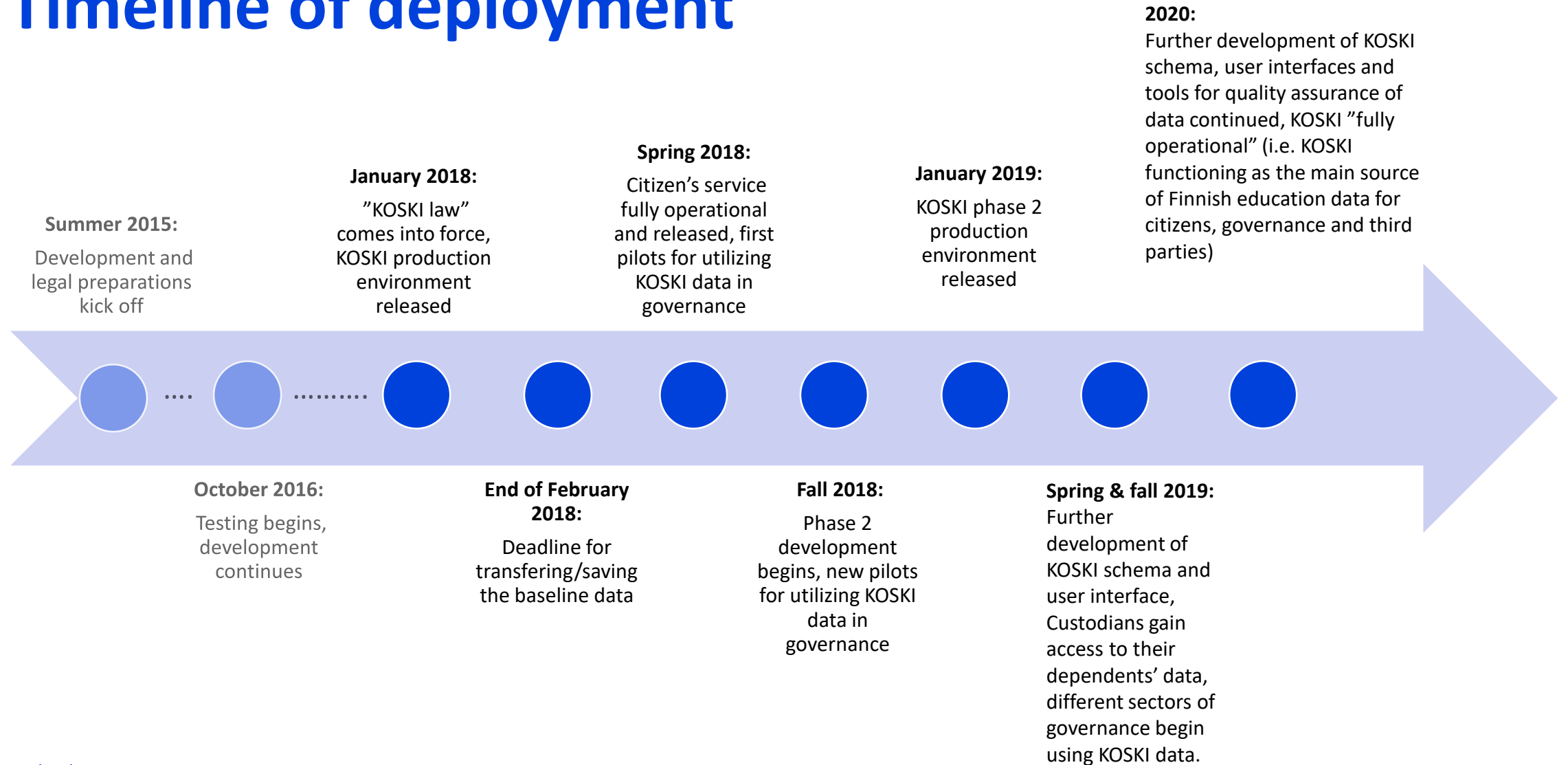
Utilizing KOSKI data

Secure availability of real-time student data enables:

- better planning and personalization of studies
- recognition of skills/qualifications acquired from previous studies
- tracking progress and attendance
- sharing information for example when applying for a job
- calculation of funding distribution
- compiling statistics
- evaluation of education

➤ Anyone with a need to utilize education data in the society can benefit from KOSKI

Timeline of deployment



KOSKI development in 2021

- Further improvement of the services for the citizen (possibility to share just certain parts (course, vocational qualification unit etc.) of a certified degree, user interface in English, PDF versions of the certificates etc.)
- Development of separate registry/service for monitoring of compulsory education
- Development of better tools for the quality assurance of data and development of other tools for data analytics
- Integration of liberal adult education into KOSKI
- Further development of MyData services and new applications using KOSKI through the MyData pipe
- New services for the schools/legal entities for education (better APIs for schools to access their own data etc.)

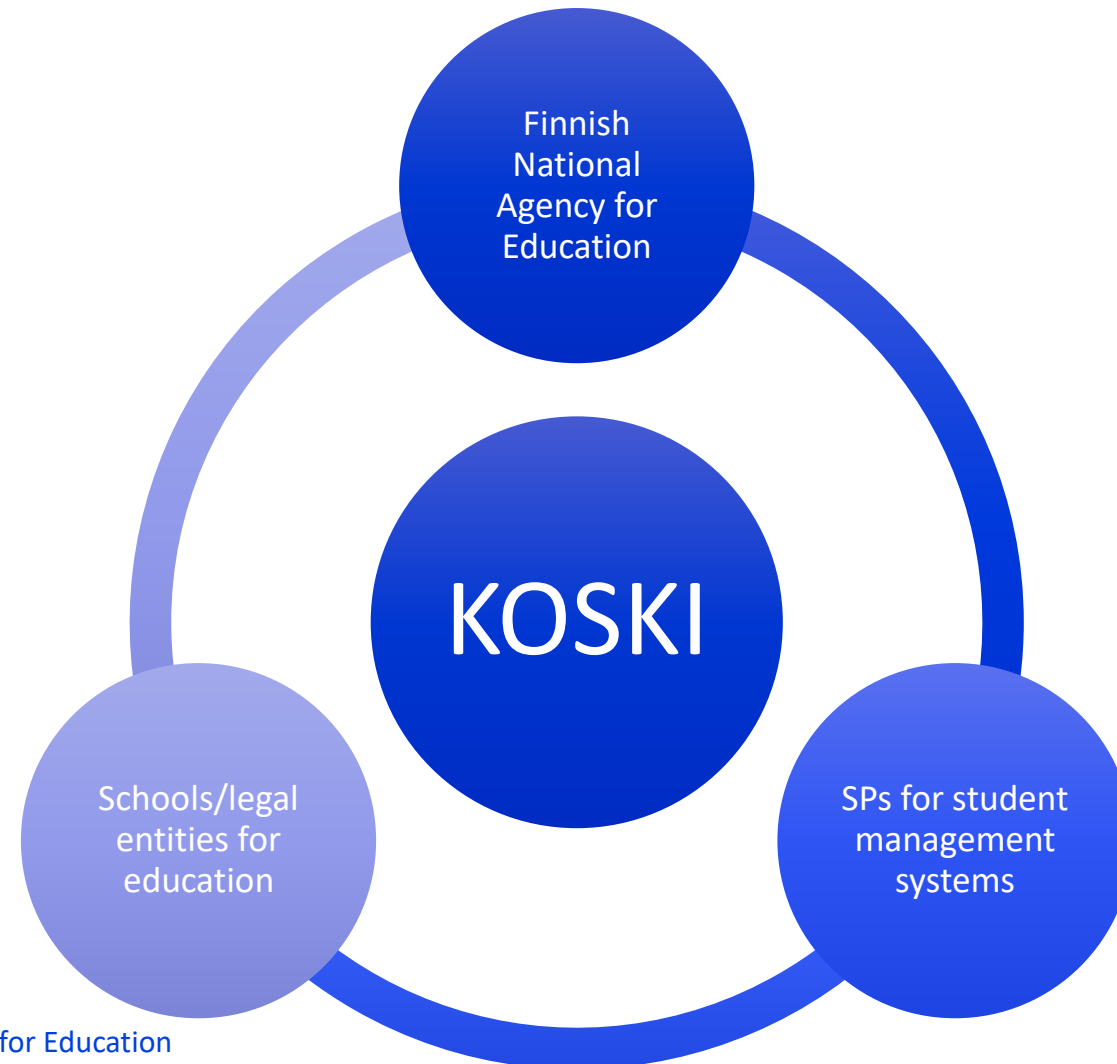
The institutions/governing bodies/other actors using KOSKI-data

- The Social Insurance Institution (*Kela*)
- Finnish Centre for Pensions (*Eläketurvakeskus*)
- Finnish Immigration Service (*Maahanmuuttovirasto*)
- Statistics Finland (*Tilastokeskus*)
- National Supervisory Authority for Welfare and Health (*Valvira*)
- Finnish National Agency for Education & The Ministry of Education and Culture (for coordination of funding & other strategic/operational purposes)
- HSL (local authority managing public transport and the transport system in the Helsinki region)

**How do we produce the KOSKI
service?**

A decorative graphic consisting of thick, wavy lines in green and blue. The lines curve and overlap, creating a dynamic, abstract shape that frames the text on the left side of the slide.

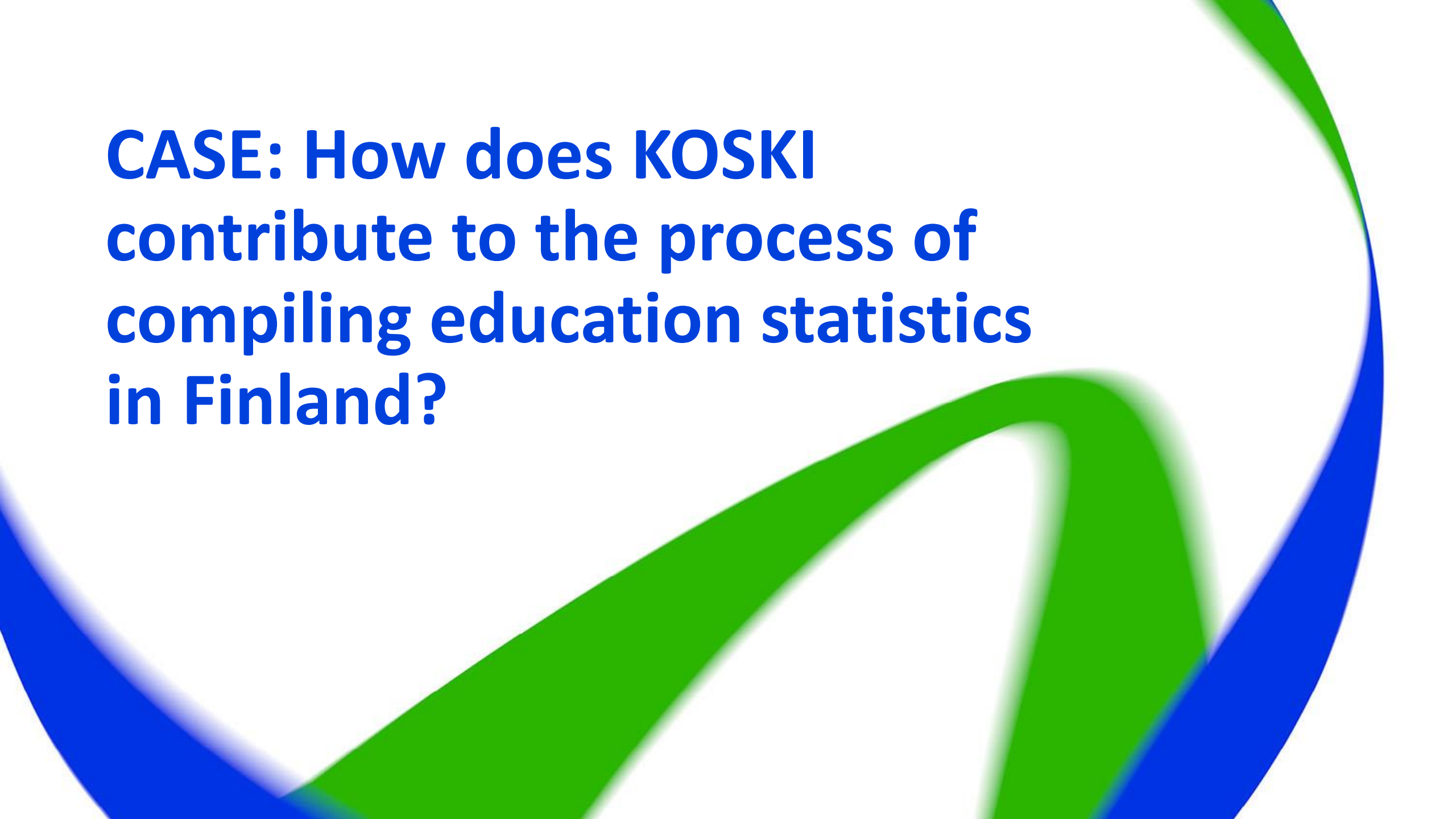
The producers of KOSKI



The roles and responsibilities of the producers

- Schools and legal entities for education
 - Transfer/save student data (either automatically through transfer API or manually through user interface) and function as controllers of data of their own organization (i.e. are responsible that all the information stored in the system is correct)
 - Can view the transferred/saved data through the KOSKI user interface
- Service providers of student management systems
 - Are responsible of the integration between their student management system and KOSKI
 - Provide requisite instructions for schools/educational institutions on how the integration works
- Finnish National Agency for Education / KOSKI-team
 - Develops and maintains the system and transfer schema
 - Provides requisite instructions for schools/educational institutions

Producing KOSKI requires that all the producers work closely together!

The background features a decorative graphic consisting of two thick, wavy lines. One line is blue and the other is green, both curving across the bottom and right sides of the slide. The text is positioned in the upper left quadrant.

**CASE: How does KOSKI
contribute to the process of
compiling education statistics
in Finland?**

New way of compiling education statistics

	Currently	In the future
Data collection	Statistics Finland collects data separately from all the educational organizations and officials (including Finnish National Agency for Education)	Little to no need for separate data acquisition because (almost) everything can be found from KOSKI
Data collection frequency	Two times per year	Continuous (with versioning of changes)
Format of data	Various	JSON-document in one PostgreSQL database with some data stored in separate tables/fields
Type of data	Snapshot of the collection date	Real-time data with versioning (= one can always take a snapshot of a certain date)
Presentation of statistics	Static data sets published for each year	The possibilities of KOSKI not yet fully explored. KOSKI would enable more dynamic use of data but official statistics still work within the framework of static "official" data sets.

CASE: KOSKI and MyData

A decorative graphic consisting of thick, wavy lines in green and blue. The lines flow from the bottom left towards the top right, creating a sense of movement and depth. The green line is more prominent in the foreground, while the blue line is visible behind it.

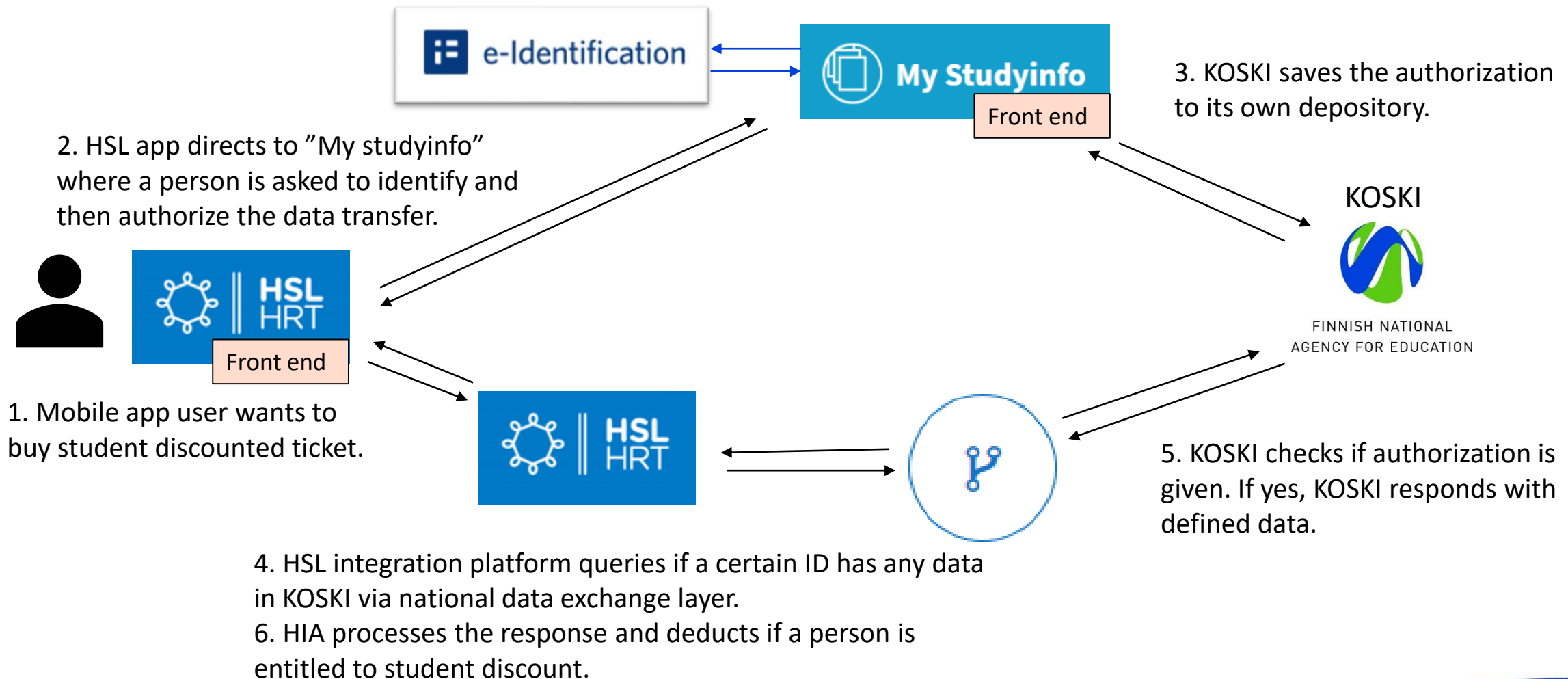
MyData – sharing study right information

- Part of **Joint metadata and information management (YTI)** government's key project 2015-2019.
- Joint pilot project between Ministry of Finance, Population Register Centre, Ministry of Education and Culture, and Finnish National agency for Education.
- A person can authorize KOSKI to transfer study right data to a specified third party.
- Launched in 2018 with selected partners HSL (public transport operator in Helsinki area) and Oy Frank Students ab (student card operator).
- Aim to develop replicable operations model for public institutions.

Pilot project – first phase

- Contract with HSL was signed November 12th 2018.
- The possibility to buy tickets with student discount determined by KOSKI data was launched first in March 2019 and on large scale when HSL executed their zone reform in May 2019.
- The first step only included higher education students and only 30 day tickets. Starting from autumn 2019 also secondary level students could buy a student discount ticket through the HSL app.

MyData – simplified process picture (case HSL)



Transferring personal data and privacy protection

- All data in KOSKI is considered personal data in authority register. Data transfers are therefore regulated by several different legislations.
- This is the first project where governmental operator transfers personal data on grounds of person's consent. No existing guidelines or interpretation of the law.
- Finnish National Agency for Education ordered a privacy protection audit for MyData-project in June 2019.
- Audit gave recommendations for both KOSKI and HSL to better inform a person during each authorization step, and for KOSKI for the authorization management logs. KOSKI took action regarding all recommendations.

Next steps / further questions

- Second phase of pilot with Frank never materialized.
- Changing the KOSKI authorization to give more authority to user.
- The requirement to minimize transferred data means individual API for each partner – no means to create one solution or a couple of solutions for all.
- Complications due restrictions to forward transferred data: further chains of authorization.
- MyData for underaged persons?

Conclusions

- The concept works and we managed to create something new.
- Collaboration between public authorities was fluent.
- Technical implementation was fast, despite multiple dependencies between organizations, services and projects.
- Challenges with data transfer legislation. Plenty of time was used to interpretation of law.
- National data exchange layer is a functional solution for certifying partners.
- More advantages if national authorization/consent management service would be implemented
- Plenty of interested parties – but who pays?



OPETUSHALLITUS
UTBILDNINGSTYRELSEN

Thank You!

KOSKI source code in GitHub:

<https://github.com/Opetushallitus/koski>

Documentation of KOSKI transfer schema (in Finnish):

<https://koski.opintopolku.fi/koski/dokumentaatio>

KOSKI's Wiki site (in Finnish):

<https://eduuni.wiki.fi/display/OPHPALV/Koski>

