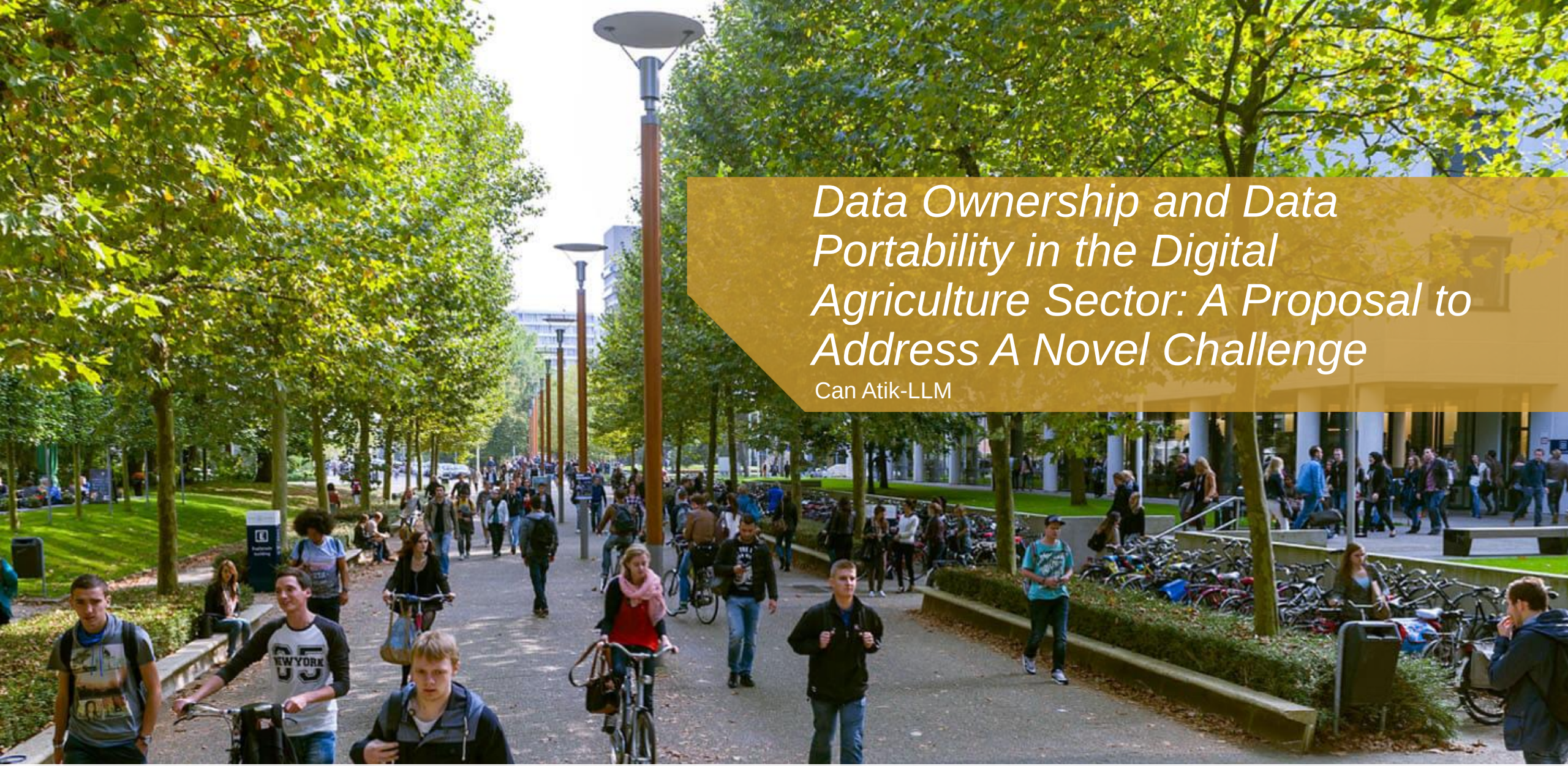
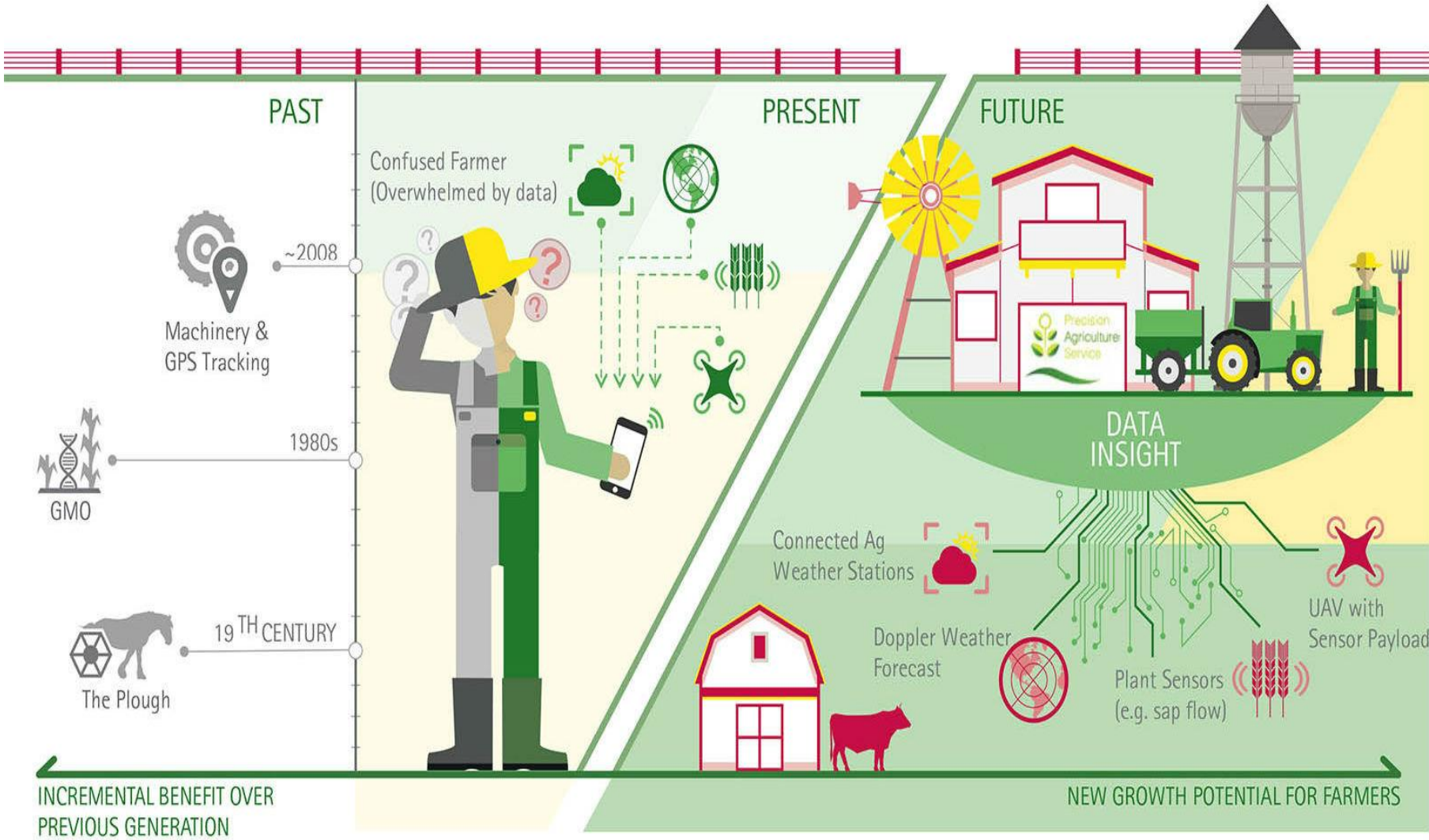


Data Ownership and Data Portability in the Digital Agriculture Sector: A Proposal to Address A Novel Challenge

Can Atik-LLM

Big Data and Agriculture: Emergence of Smart Farming

- Wrong perception: *"Agriculture is a totally rural activity that is far from technology."*
- Sure?
- Actually, Big Data is a key concept in modern agriculture.
- It is getting more and more data-dependent day by day.



TILBURG UNIVERSITY

Big Data and Agriculture

- **Smart Farming**

Agricultural Technology Providers (ATPs) compete in the Digital Agriculture sector for better data-driven agronomic solutions for production (crop yield, harvesting or preventing plant diseases), and even transportation and marketing stages of agricultural practices. Data collection via;

- Global Satellite Systems: image and navigation
- Advanced (remote) sensors
- Robots - Unmanned Aerial Vehicles (UAVs)
- Agricultural Machinery
- Weather forecasting

TILBURG UNIVERSITY

Problem: Farmers' Lock-in Situation

1. Legal Ambiguity – Data Ownerhip: One of the most prominent discussions in the literature is whether data belongs to farmers, data collectors (if not farmers), ATPs, landowners or even financial lenders.

2. Unbalanced Terms and Conditions:

- a- Data blocking provisions - (ATPs' side)
- b- end-user license agreements (EULA) – (Machine Producers' side)

3. Farmers' Weaker Bargaining Position: farmers do not have power to negotiate with ATPs to change terms and conditions and access to data

4. Special Importance of Historical Fam Data Sets: Unlike the private data in online platforms, data does not necessarily lose value in time.

5. Lack of Interoperability: There is no standard

Competition enforcement might have limited effects as it has ex-post characteristic and it is only enforceable for the particular case. So there is a need for sector wide ex-ante solution.

Main focus in the DAs literature: Ownership of data except (Wiseman and others 2018)

(Wolfert and others, 2017):data ownership problems should be regulated. but how?

TILBURG UNIVERSITY

How has the broader literature discussed the Data Ownership Right?

Discussion: "Data Producers' Right" as a Right In Rem

- The EC: *"A right to use and authorise the use of non-personal data could be granted to the "data producer", i.e. the owner or long-term user (i.e. the lessee) of the device"* (in its Communication of 10 January 2017)
- *Drexl (2017)* – critisised this approach:
  - ✓the intended function of such a right would fail
  - ✓problems for third party access
  - ✓ownership is open to violations.
  - ❖Proposed another approach: *'Data Access Rights'* design, but with sector-specific focus due to various particularities of different sectors.

Property Rigts, Data and the Digital Agriculture Sector

- **What is ownership of a property?**

i) the right to use the good (*usus*), ii) the right to encumber or transfer the good (*abusus*), and iii) the right to the fruits (*fructus*).

- **Possible Effects of Data Ownership in Digital Agriculture Sector:**

1-Farmers do not have power to change ATPs terms and conditions.

2- ATPs are tend to keep data themselves.

3- ATPs terms and conditions are sometimes highly one-sided.

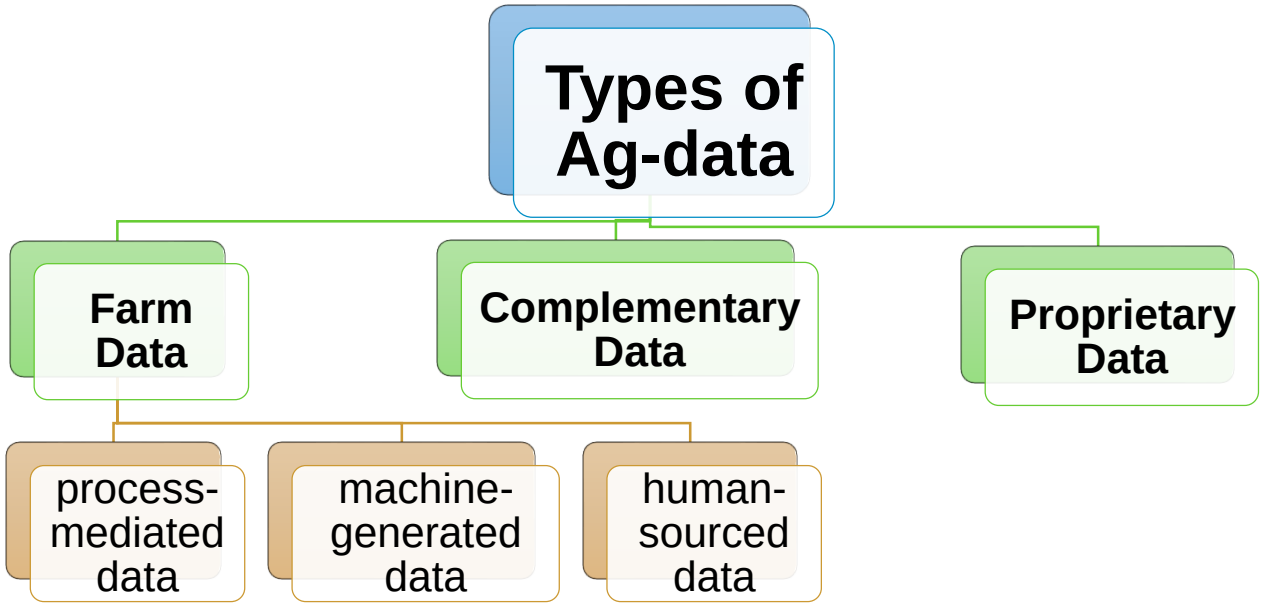
4- *abusus* element of full ownership right can be transferred to ATPs which a) is not able to change the *status quo* and b) could even make farmers more dependent on ATPs .

- Therefore, the regulatory intervention should be more sophisticated than just providing ownership right for farmers

Can Right to Data Portability under GDPR be a Way Out? - No

Types of Ag-Data:

- **i) farm data** (from particular farms via sensors, machines or directly farmers), **ii) complementary data** (such as weather, satellite and other environmental data, including precipitation events, evapotranspiration, and heat unit accumulation), and **iii) proprietary data –** data about agronomic inputs such as seeds or pesticides and c)other exclusive information (for example, data about fertility of soil in a particular region) (Bayer/Monsanto decision, para 2453)
- **Ag-Data in regulations:**
- The paragraph 9 of the Regulation on a framework for the free flow of non-personal data also count farm data as 'non-personal'
- Only beneficiaries of the GDPR framework are natural persons (Article 1 of the GDPR)



The overwhelming proportion of data in the sector consists of non-personal machine-generated data. (Wolfert and others, 2017)

TILBURG UNIVERSITY

Alternative ways to mitigate farmers' lock-in problem

Ownership

- EU Code of Conduct (on agricultural data sharing) by a coalition of EU agri-food associations in Brussels 2018
- Data Originator: Farmers (but not binding)
- Considers contracts ower farmers
  Focusing on ownership right for farmers

Data Pooling

- Agri-Business Collaboration and Data Exchange Facility (ABCDEF) suggestion by Poppe and Others
- FIspace (www.fispace.eu)
- However, it is used voluntarily.
- Mandatory Data Sharing might be a complementary solution

Data Portability

- The GDPR is not applicable
- A sector-specific inalienable data portability right might be a way-out

A Proposal to Uncover the Potential of the Open Data Pool Suggestion

TILBURG UNIVERSITY

Preliminary findings

- Providing a regulatory framework with full ownership, including the *abusus* (the right to transfer the good) element might serve the exact opposite of the initial intention.
- The applicability of the right to data portability under the GDPR framework is highly questionable.
- The Code of Conduct initiative is not adequate.

The lock-in concern could be eased to a large extent via

i) bringing clear data portability regime which is applicable to the DAs, and/or

ii) implementing open data pool suggestion in combination with the well-designed mandatory data sharing rule according to the distinctive conditions of the sector with specific incentives

An additional study might be needed to determine the principles and nuances to reach a cost-efficient regulatory design for the DAs.

TILBURG UNIVERSITY

Suggestions for further research

- Further studies might be needed to formulate some criteria and exceptions for a possible regulatory framework.
- Need for complementary empirical studies to explore evidences to ensure social welfare maximization → Might be an interdisciplinary (law and economics) study.
- There might be other challenges in the sector, for instance, from the perspective of the other legal fields or the CAP objectives that are worth to be investigated separately.


thank you
рахмат
danke
謝謝
ngiyabonga
teşekkür ederim
Баярлалаа
mersi
kia ora
barka
welalin
spas
tack
mahalo
tapadh leat
спасибо
faafetai lava
vinaka
спасибі
blagodaram
dank je
misaotra
matondo
paldies
grazzi
gracias
хвала
kiitos
dankie
nanni
nandri
dhanyavad
mauruuru
köszönöm
asante
manana
bedankt
bayarlalaa
gràçie
hvala
dankon
aciu
akun
obrigada
murakoze
tenki
enkosi
mochchakkeram
djiere dieuf
tau
дякую
mamnun
dziękuję
chnorakaloutioun
gratias ago
gràcies
sulpáy
go raibh maith agat
chokrane
sobodi
dėkuji
sagolun
sukriya
kop khun krap
taiku
arigatô
takk
dakujem
trugarez
obrigado
mèsi
didi madloba
ありがとう
tanemirt
grazie
najis tuke
terima kasih
rahmet
εὐχαριστώ
diolch
dhanyavadagalu
shukriya
mercé
мерси
kam sah hamnida
rahmat
তোমাকে ধন্যবাদ
xièxie
감사합니다
merci