WIRELESSINFO

ICT-skill-demands of the agricultural labour market – summary and conclusion

Agriteach 4.0

2nd Meeting

Prague, 14.-15. May 2018

Erasmus+

O1-A2 ICT-skill-demands of the agricultural labour market / I

- The partners will undertake a state-of-art report including an overview of European strategies for ICT skills in the agricultural sector, look for particular European and national trends
  - EU and CZ
    - WirelessInfo
  - HU + report in detail about the current situation
    - GJMSZI,
    - GAK
  - MK + report in detail about the current situation
    - FACE
    - AG Futura Technologies

O1-A2 ICT-skill-demands of the agricultural labour market / II

- Summary and questionairy
  - WirelessInfo
- Surway – questioning and undertaking a statistical analysis of the results
  - HU (64 companies)
  - MK (11 companies)

O1-A2 ICT-skill-demands of the agricultural labour market / IV

- Comparative analysis and summary
  - WirelessInfo
- Newsletter
  - WirelessInfo

Situation in Macedonia

- 170 885 agricultural holdings utilizing 315 863 ha of agricultural area, with an average farm size of 1.85 ha
- Telecommunication services have developed very fast over the past two decades.
- Farmers have shown significant knowledge in using ICT tools such as smartphones (55%), computers (70%), and internet (60%).
- The digital revolution does not live up to its promises.
  - a lacking broadband internet in many rural areas
  - high purchase costs of technologies such as variable-rate systems
  - low generational renewal in farming.
- Farmers in Macedonia have very little awareness and knowledge about more advanced technologies based on ICT such as automated systems, GPS or GIS systems and devices for precision agriculture.

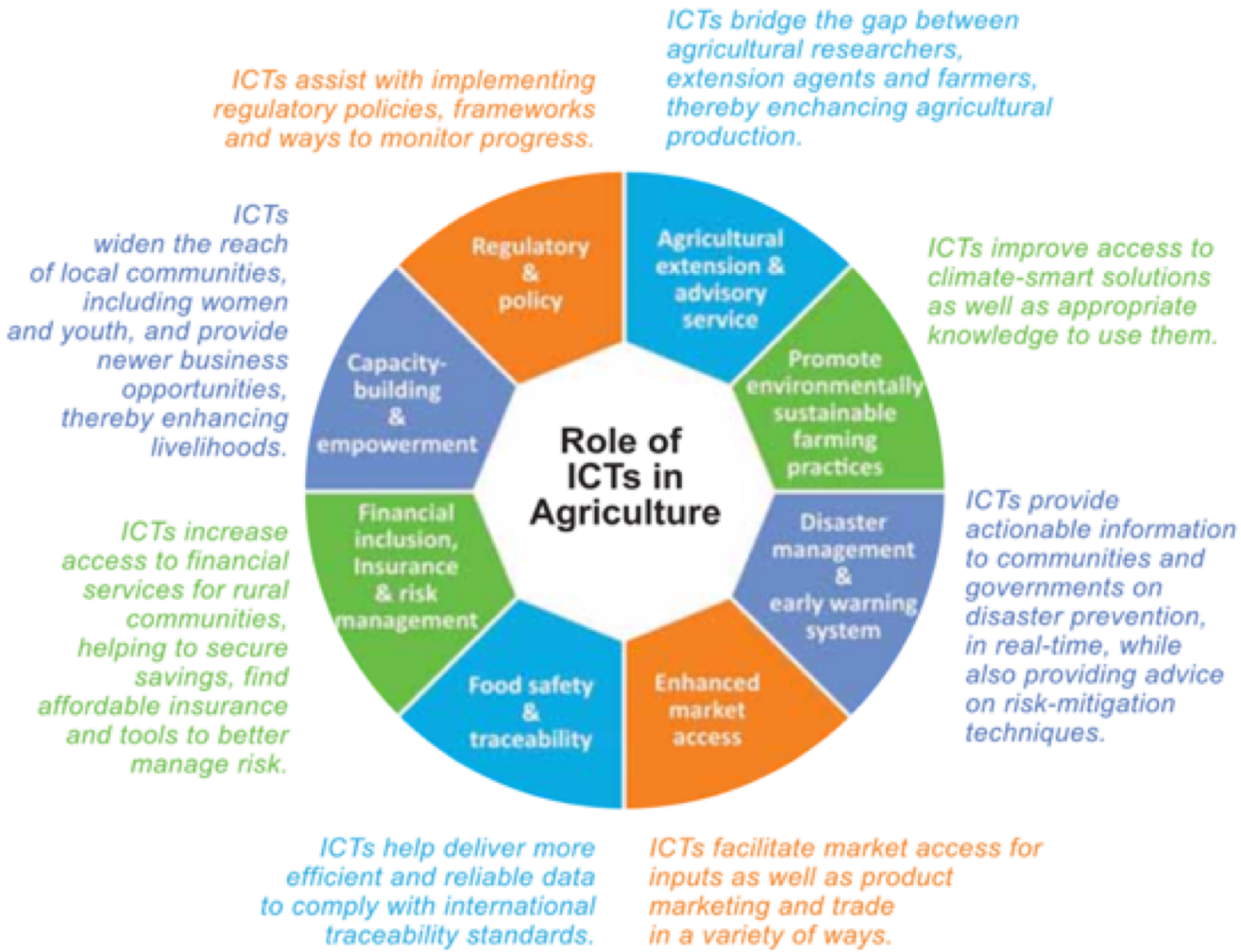
Situation in Hungary

- The average farm size
  - (9000) corporate farms: 253 ha
  - (416000) individual farmers: 7.6 ha
- Internet usage is high among the population
  - The country is lagging behind in terms of mobile broadband subscription
- The economic benefits of ICT tools in the national agricultural sector are currently sparsely used in Hungary.

IT applications supporting agricultural production

- production-support applications that assist automated or semi-automated interventions directly to certain activities in agricultural production;
- farm level production management systems to assist decision-making and to integrate individual processes at producer level;
- supply chain integration systems that support the process of integration from both the producers and the integrators, are linked to producer-level systems as needed;
- professional back-end systems that provide background data for systems run by producers and integrators and collect and analyze data generated at producer level;
- e-government back-end systems that support processes between administration and producers (e.g. request and claims for grants and subsidies, supply chain controls).

Role of ICTs in Agriculture



Source: FAO, 2016

Digital Agenda for Europe

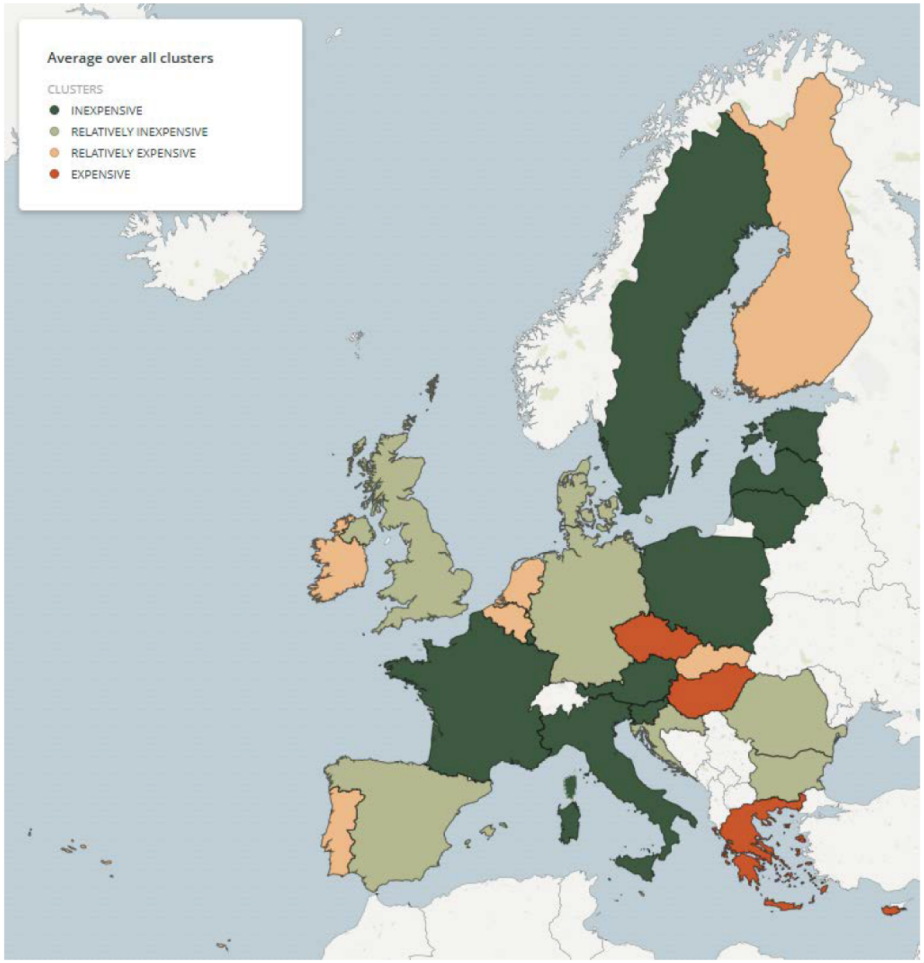
- Achieving the digital single market
- Enhancing interoperability and standards
- Strengthening online trust and security
- Promoting fast and ultra fast Internet access for all
- nvesting in research and innovation
- Promoting digital literacy, skills and inclusion
- ICT-enabled benefits for EU society

Mobile cellular, mobile-broadband, fixed broadband

Country	Mobile-cellular subscriptions per 100 inhabitants	Mobile-broadband subscriptions per 100 inhabitants	Fixed (wired)-broadband subscriptions per 100 inhabitants
Czech Republic	115.5	76	27.9
Hungary	119.1	44.5	27.4
Macedonia	100.7	59	16.8
United Kingdom	122.3	91.4	37.4

Source: ITU, 2017

Mobile Broadband Prices in Europe 2017



Source: EC, 2017

ICT in agriculture

- ICT and Information Systems in agriculture (generally)
  - Enterprise information systems, farm management
  - eGovernment (subsidies, reports, taxes, etc.)
  - Forecast and DSS
  - Web sites, e-shop, e-payments
- Precision agriculture (generally)
  - Navigation and automatic steering
  - Sowing, fertilizing, spraying, harvesting
  - Monitoring
  - GIS
  - Remote sensing
    - Copernicus, LandSat, aerial photography
  - Sensor, IoT and smart farming and robotics
- Traceability systems
- System and data integration

Mobile applications

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