

**ITU Workshop on
“ICT Innovations in Emerging Economies”**

(Geneva, Switzerland, September 18 2013)

***ICT Innovation
in intelligent agriculture
A first step towards standardization
and spread of good practices***

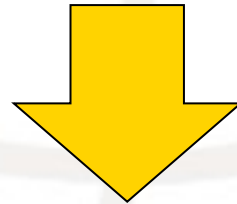
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Intelligent agriculture

- E-agriculture → Electronic
- I-agriculture → Intelligent
- P-agriculture → Precision
- E-agriculture → Enhanced



1st thing to standardize? The name!!!

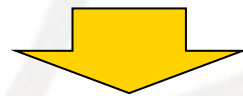
What is E-agriculture?

- technical hardware and technological tools



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- information dissemination, access and exchange, communication and participation processes improvements around rural development



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Developed vs Developing

- Information is Remote Monitoring, Permanent Control, Extended Security
- Information is Access to Knowledge, Emancipation, Vicinity to Markets, Improved Competitiveness

Tools are different?

- Scopes might be **COMPLEMENTARY**
- Overall scope is **COMMON**:
 - ➔ extend competitiveness
 - ➔ improve quality
 - ➔ enhance (at least, maintain) sustainability
 - ➔ avoid emigration

Data collection and monitoring and evaluation (M&E)



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Factors

- Technology itself is not sufficient, a well trained team is also required
- Complex ICT or complex platforms are not necessarily essential
- Contextual factors
- Data integrity and security

Tech-transfer



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High speed Internet

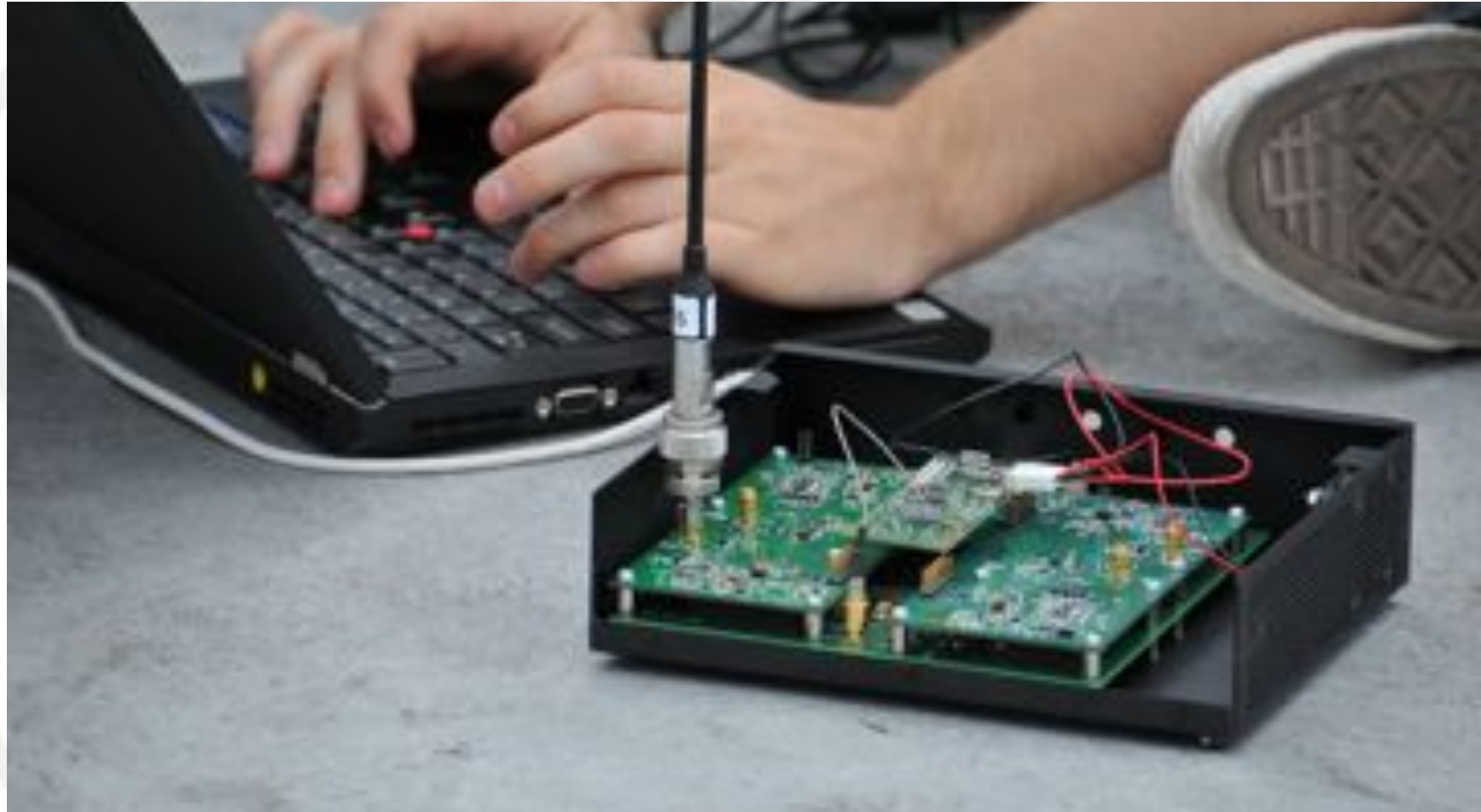
- More opportunities
- Minimization of distance
- Easy farming
- Better marketing
- Frequent Weather Forecast updates
- State of the art knowledge
- Technical consultancy

Sprinkler Systems



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ICTs and small farmers



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Do it Yourself?

- *Ex: Heimerl and Brewer*
- *Essentially an outdoor PC with a software-defined radio that implements a low-power low-capacity GSM base station.*
- *Long-distance WiFi provides 'backhaul' into the carrier*

Vehicle automation



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Vehicle automation



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Vehicle automation

- Security
- Safety
- Quantity
- Efficiency
- Punctuality
- Quality

Our solution for vehicle monitoring



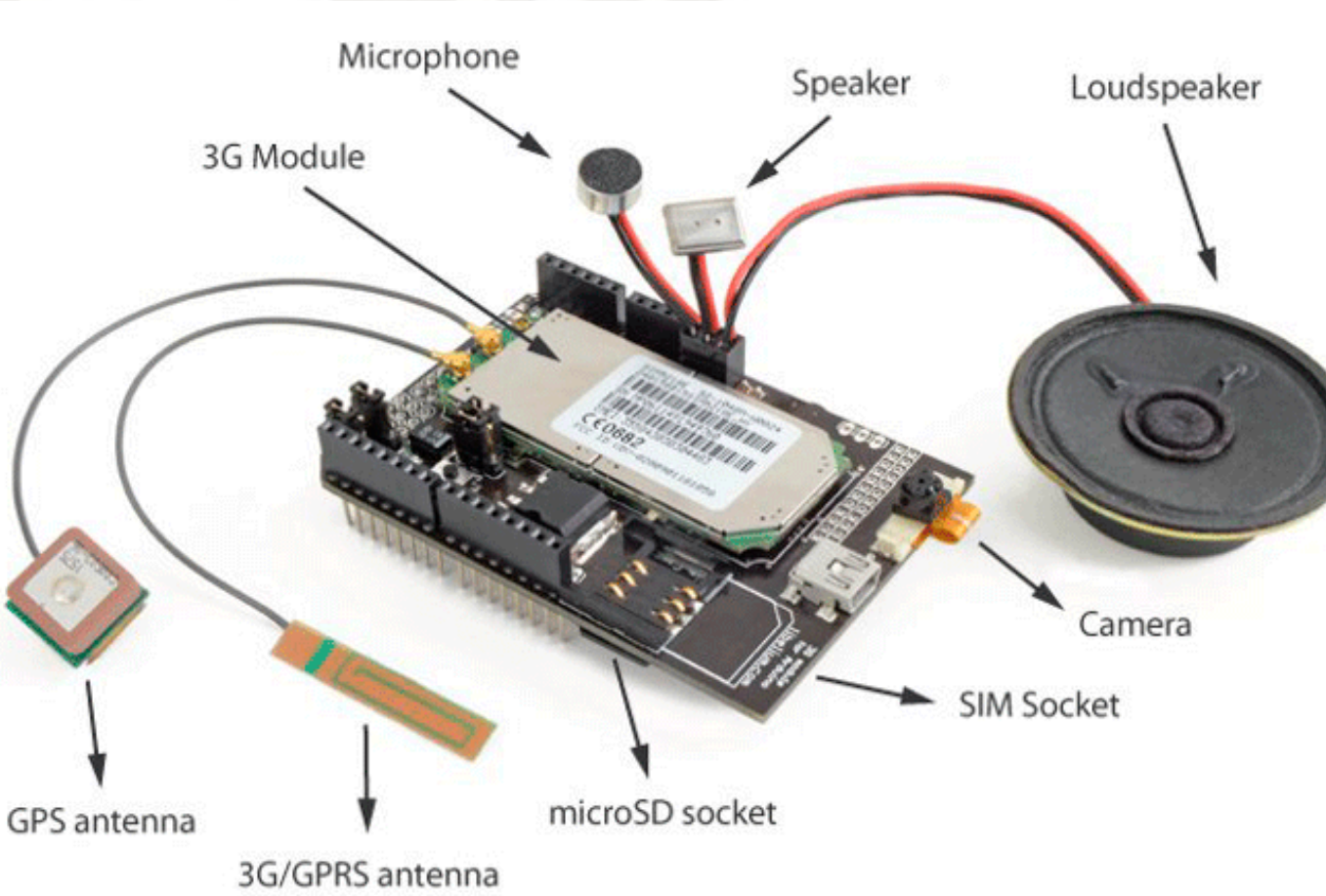
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Our solution for vehicle monitoring



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Our solution for vehicle monitoring



Monitoring → Sensing



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Monitoring → Sensing



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Monitoring → Sensing



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Monitoring → Sensing



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Monitoring → Sensing

- Quality
- Consultancy
- Efficiency
- Tech-Transfer
- Networking
- Visibility

Improvements



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Conclusions and Recommendations

- Precision farming is needed both in Developed and Developing Countries
- Research is needed to lower costs and complexity
- Standardize Methods
- Standardize Approaches
- Dedicate bandwidth
- Standardize Devices