



Educational Robotics in Estonia

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MTÜ Robootika



Euroopa Liit
Euroopa Sotsiaalfond



Eesti tuleviku heaks



Programm IKT toetuseks kõrghariduses



Tiigrihüppe
Sihtasutus



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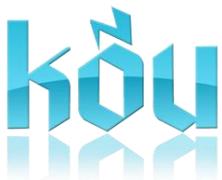
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The Estonian Information Technology College



Haridus- ja Teadusministeerium

Estonian Ministry of Education and Research



European Union
Regional Development Fund



Investing in your future



Eesti Teadusagentuur
Estonian Research Council



Hariduse Infotehnoloogia
Sihtasutus



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Timeline of Educational Robotics

2008 – first teacher training

2011 – students participate at FIRST LEGO League event

2007 – first interest

2008 – first robotics theatre

2013 – Facultative course „Mechatronics and Robotics“ is released

Concept of Educational Robotics

- * How do we gain interest?
- * Teacher training
- * Getting the robots
- * Support
- * Outputs

How Do We Gain Interest?

- * Robotic theatre
 - * Outcome
 - * Threats
- * Workshops
 - * Effect on who?
- * Fairs



Robotic theatre in Hiiumaa, 2010 december

Teacher training

- * Positive emotion vs hard work
- * Time oriented vs results
- * Typical thinking: „I did not understand exactly how this works, but I will take a look at it in school!“



Teacher training of robotics and mechatronics course in Tartu 2013

Getting the robots

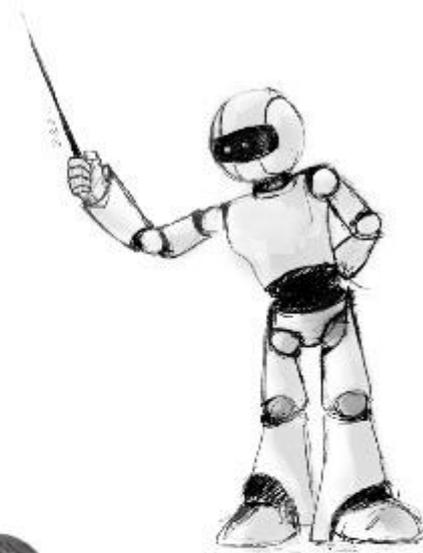
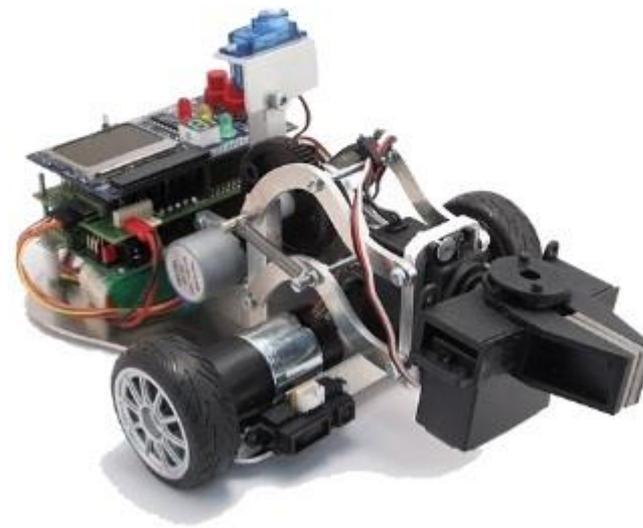
- * Suggested robotic sets
 - * LEGO MINDSTORMS
 - * Robolabor
- * Support from government
 - * Tiger Leap - RIP
 - * Smart Lab



LEGO Mindstorms NXT



LEGO Mindstorms EV3



Robolabor

Support

- *List for teachers
- *www.robotika.ee
- *Trainings
- *Robotic theatre
- *Competitions
- *Ramon's mobile phone

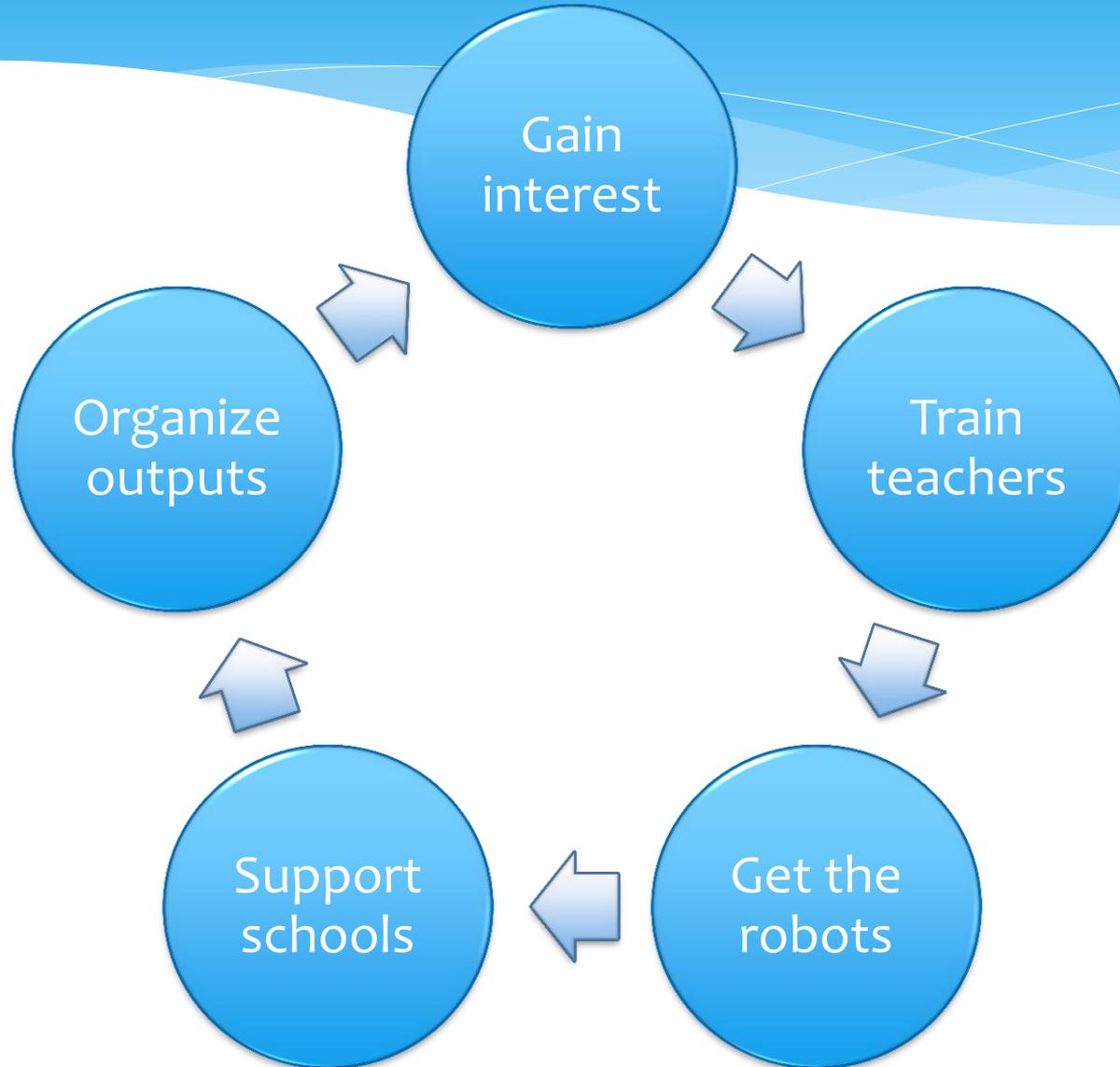
Outputs

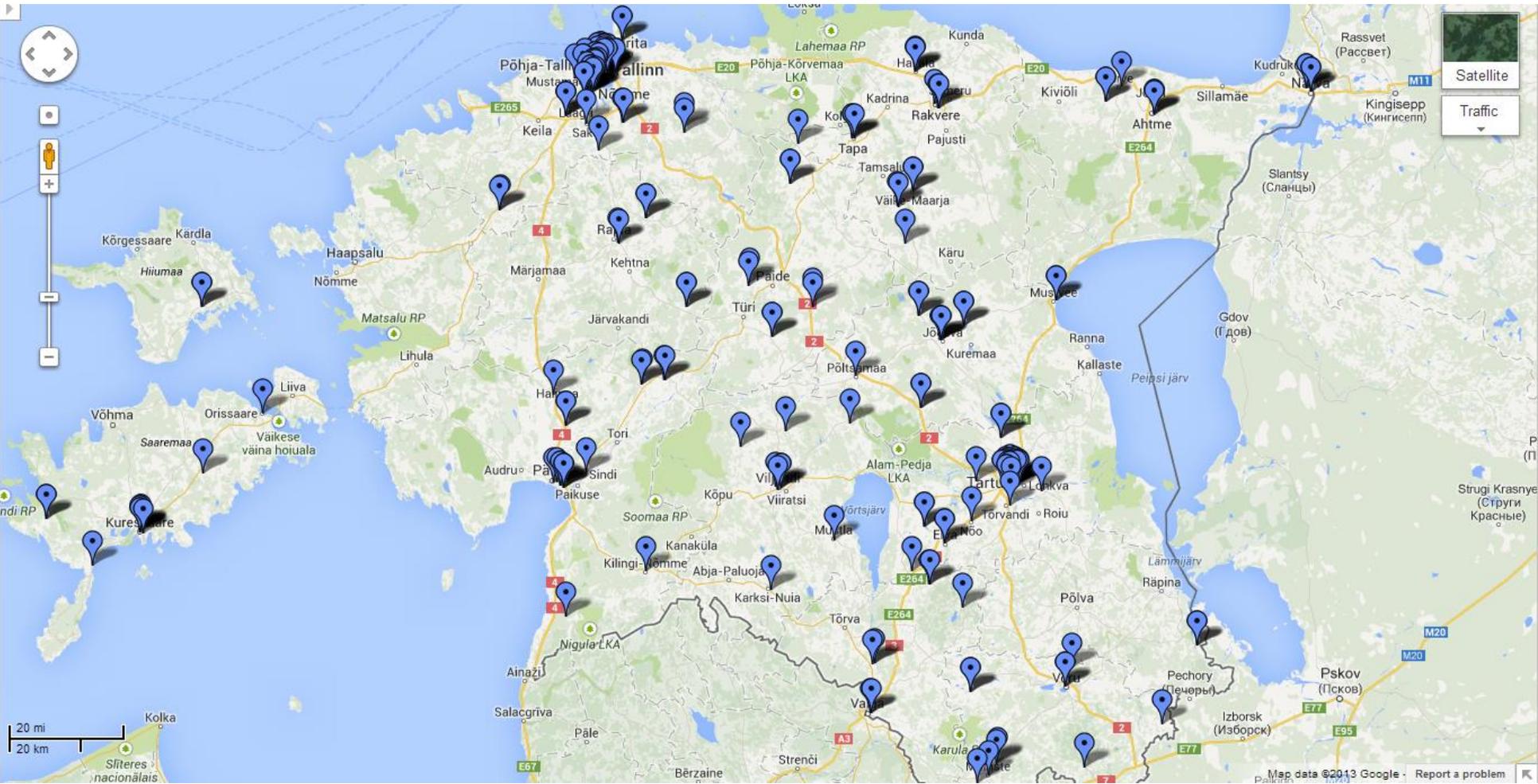
- *Competitions
 - *Technology days
- *National contest
 - *Multiple disciplines
- **FIRST*® LEGO® League



FIRST LEGO League 2012 semi final in Tartu AHHA Science center

For conclusion









* Thank you!

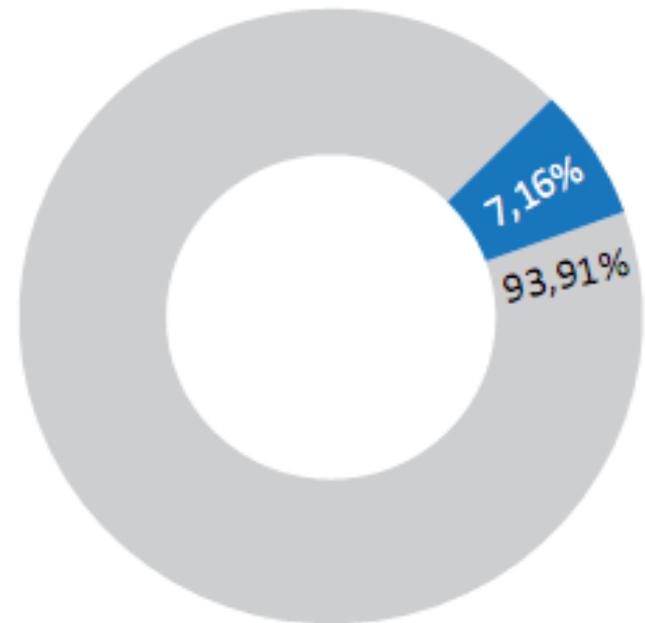
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After school activities in general schools 2013

Source: Estonian Education Information System database 2013, spring



- Science and technology
- Everything else