

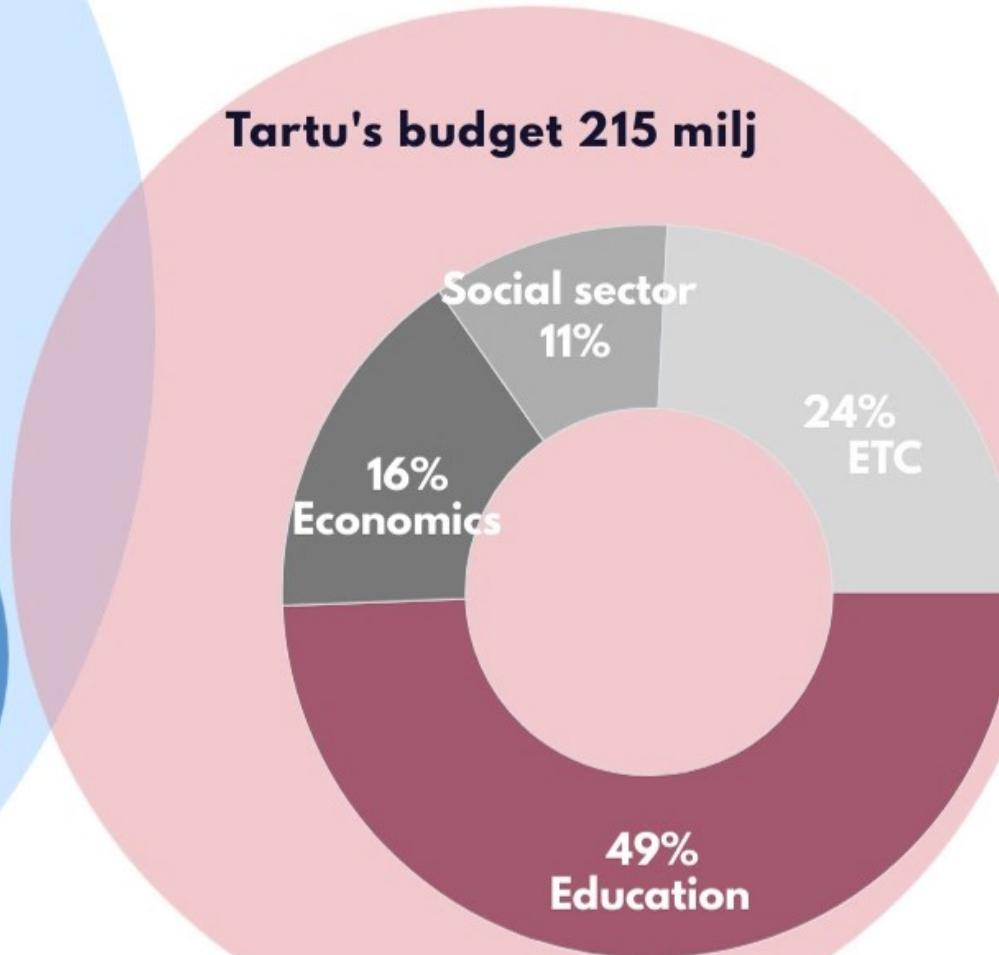
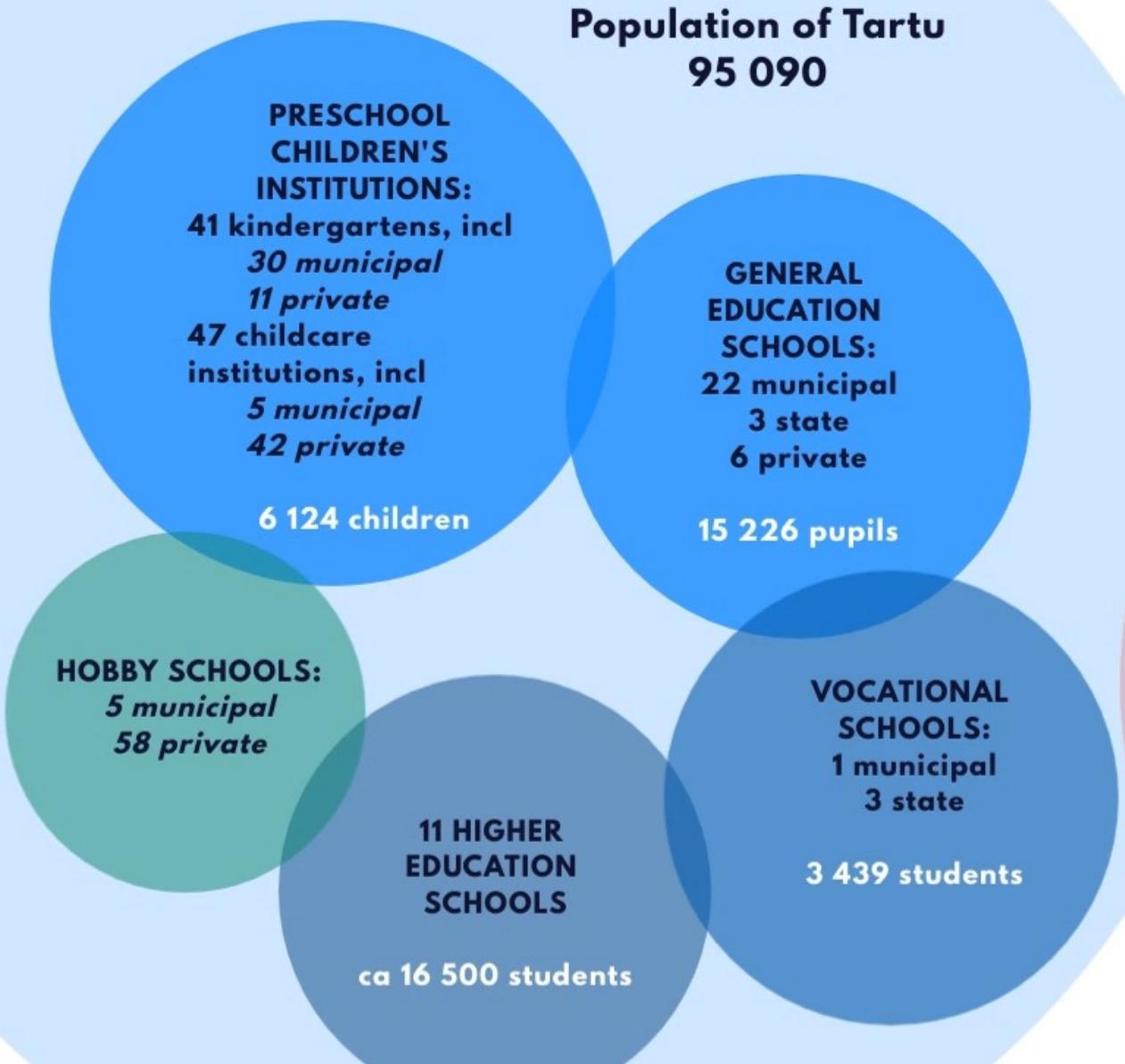
ARNO

A MANAGEMENT SYSTEM
OF EDUCATIONAL
SERVICES IN TARTU
MUNICIPALITY



SIGRID KARELSON

Statistics



What and when?

TIMELINE of ARNO

2013

Creating a solution for
allocating school places for
children going to the 1st
grade

2014

ARNO was first used to
allocate school places;
requesting education
allowance

2015

Information about
kindergarten places,
applying for kindergarten
place, processing
applications

TIMELINE OF ARNO



2016

Information about pupils and school places; submitting and processing school applications; allocating school places; student ticket database



2017

Financing of private kindergartens and schools, ordering and paying for school meals



2018

Minor changes, bug fixes etc

TIMELINE OF ARNO



2019

Hobby education
and hobby schools



2021 ...

Minor changes, user
experience, etc

ARNO user statistics

**50 781 users,
*incl 2020/2021 academic year 15 903***

50 163 regular users
**531 representatives of
educational institutions**
40 administrators or officials
28 caterers
19 accountants

Problem

We used simple and straightforward street based system for allocating school places for children going to the 1st grade. It used to work very well for some time

4	Jrl	Elukohajärgne kool	Elukoha tänav
200	3.16	Tartu Veeriku Kool	Karikakra
201	3.17	Tartu Veeriku Kool	Kibuvitsa
202	3.18	Tartu Veeriku Kool	Klaasi
203	3.19	Tartu Veeriku Kool	Koidula (L.Koidula)
204	3.20	Tartu Veeriku Kool	Kressi
205	3.21	Tartu Veeriku Kool	Kreutzwaldi (Fr.R.Kreuzwaldi)



Old system did not take into account changes in new residential areas



Popular schools were overcrowded



It was easy for the parents to manipulate the system



No flexibility

... we needed a solution that takes into account different aspects



We can take into account the changing number of children entering school each year



We can take into account the changing city plan (new residential areas etc)



Parents have a simple way how to tell their preferences without manipulating the system



The system must be transparent and easily controllable

Solution

Children's data is imported into ARNO, incl information about siblings



Data about school places is entered into ARNO



Distance to each school is calculated for each child



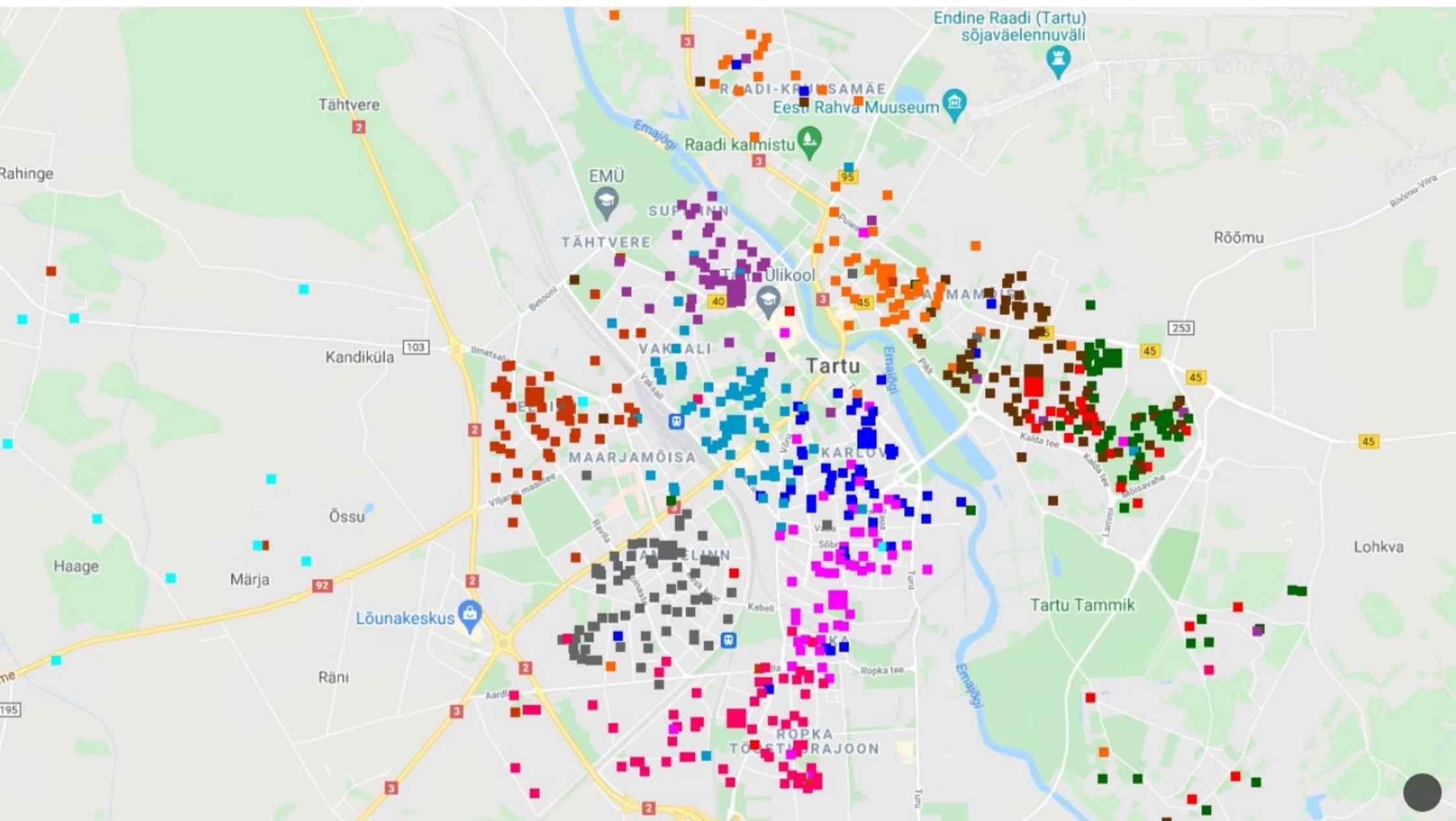
Each child is assigned a school



Parents are shown in ARNO into which school their child has been assigned to



Jrk	Kooli nimi	Automaatselt jagatav õppekohtade arv	Kinnitatud õppekohtade arv	Kauguse koefitsient	Läve alguse protsent	Läve lõpp protsent	Õde-vend eelpaigutus
1	Tartu Descartes'i Kool	96		0.68	100 %	0 %	<input checked="" type="checkbox"/>
2	Tartu Forseliuse Kool	72		1	100 %	0 %	<input checked="" type="checkbox"/>
3	Tartu Karlova Kool	72		1	100 %	0 %	<input checked="" type="checkbox"/>
4	Tartu Keskkonna Kool	50		1	100 %	0 %	<input checked="" type="checkbox"/>
5	Tartu Kivilinna Kool	96		0.65	100 %	0 %	<input checked="" type="checkbox"/>
6	Tartu Hansa Kool	96	1	0.65	100 %	0 %	<input checked="" type="checkbox"/>
7	Tartu Variku Kool	96		1	100 %	0 %	<input checked="" type="checkbox"/>
8	Tartu Mart Reiniku Kool	96		1	100 %	0 %	<input checked="" type="checkbox"/>
9	Tartu Raatuse Kool	96		0.8	100 %	0 %	<input checked="" type="checkbox"/>
10	Tartu Tamme Kool	96		1	100 %	0 %	<input checked="" type="checkbox"/>
11	Tartu Veeriku Kool	96		1	100 %	0 %	<input checked="" type="checkbox"/>
12	Ilmatsalu Põhikool	24		1	100 %	0 %	<input checked="" type="checkbox"/>



Solution

Parents are shown in ARNO into which school their child has been assigned to

05

The parent agrees with the proposed school and submits an application

06

The parent has the opportunity to reject this school and apply for another school

06

Vacant school places will be redistributed among those who wished for another school

07

Learning experience

We Started With One Branch And Later Added The Tree



We did not foresee how wide-ranging ARNO will be. Because of that some aspects, incl userface, are inconvenient

WHAT HAVE WE LEARNED ?



The More You Do Manually, The More Mistakes You Make



Most of the data comes automatically and most of the applications are pre-filled

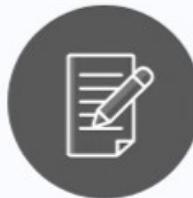
WHAT HAVE WE LEARNED ?



If data about the child has already been submitted to the city (at birth, with kindergarten etc.), this data will be displayed



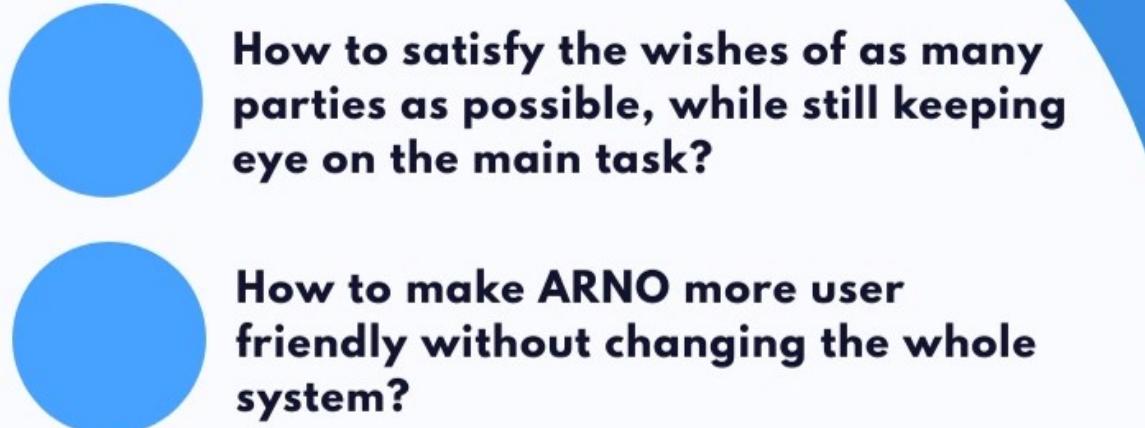
Data moves from and into different information systems (population register, Estonian Education Information System etc.)



Prefilled applications



W H A T C A N W E L E A R N ?



How to satisfy the wishes of as many parties as possible, while still keeping eye on the main task?

How to make ARNO more user friendly without changing the whole system?

Thank You!



Discussion