



MAANTEEAMET

Analüütika võimalused ühistranspordi planeerimisel

Erkki Aarma
Maanteeamet

Oktoober 2017

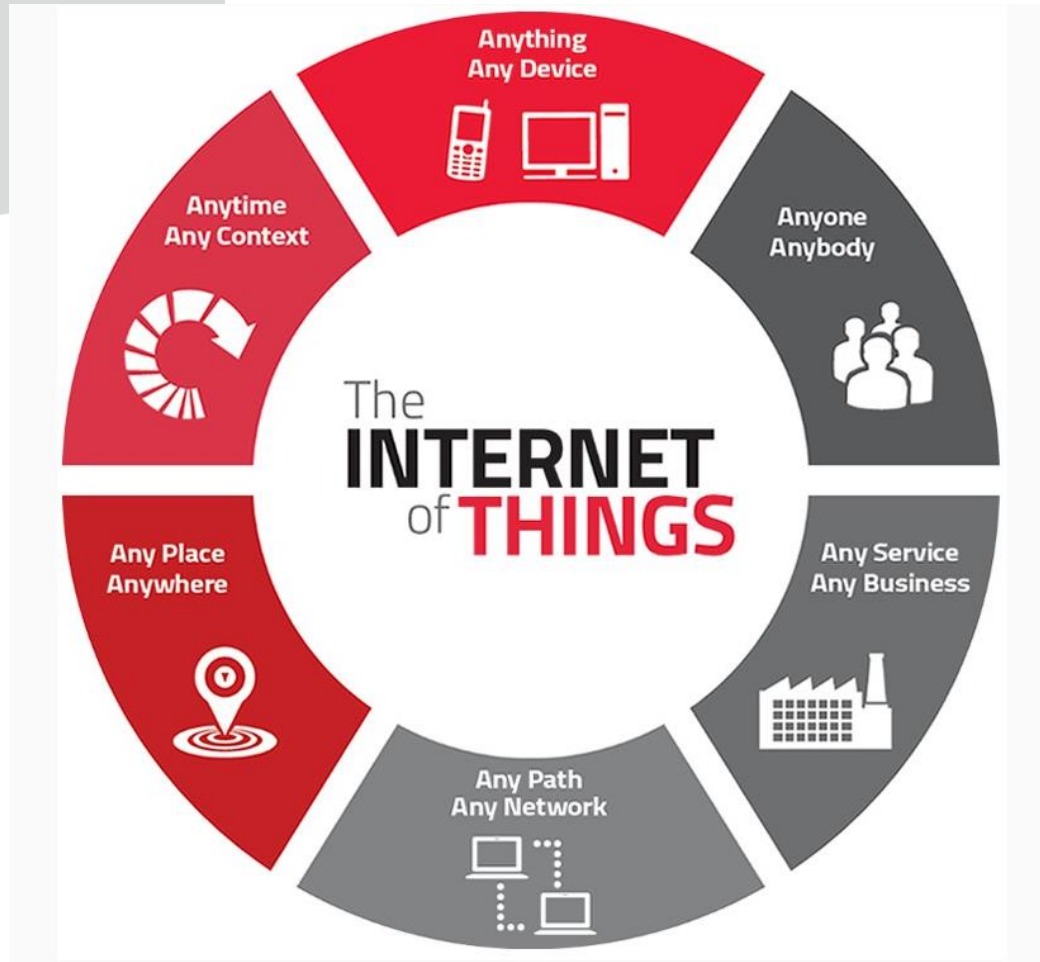


Millest räägin



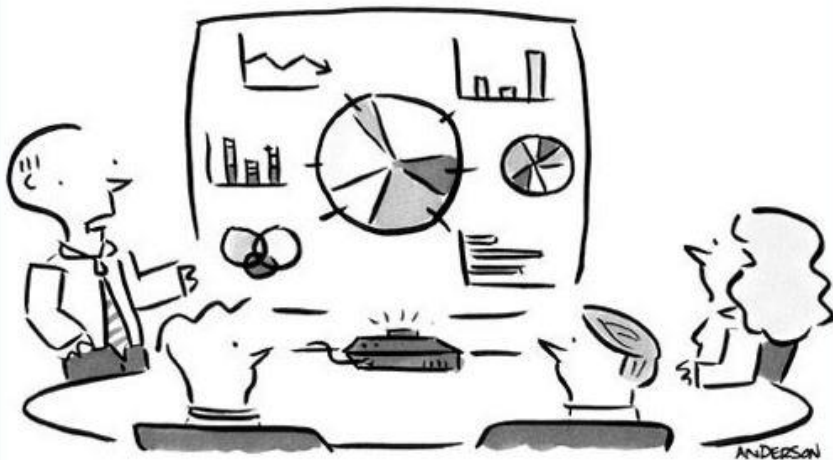
- ❖ Väike sissejuhatus andmeanalüütikast
- ❖ Milliseid andmeid toodab ühistransport
- ❖ Mõned näited – mis on tehtud mujal
- ❖ Mõned näited, mida olen ise teinud Eesti andmetega
- ❖ Võimalused ...

Elame infoajastul



• Arendusi luuakse ärilistel eesmärkidel

Sign #7 you need better BI: each day your employees spend 2 hours working on work and 6 hours working on Excel



"I know the data is right, I typed it all in myself."

www.everyonemakesdecisions.com

Sign #2 you need better BI: your data warehouse has more terabytes than users

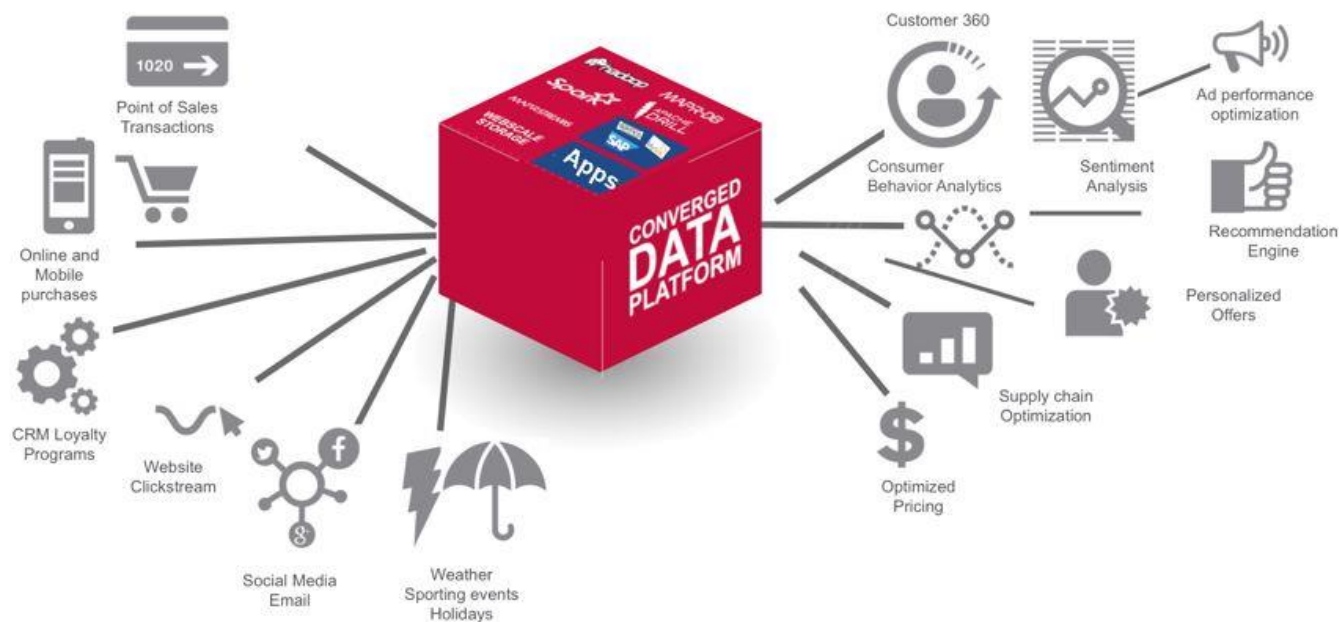


"I'm telling you boss, this multi-million dollar investment will pay off huge once someone starts using it."

www.everyonemakesdecisions.com

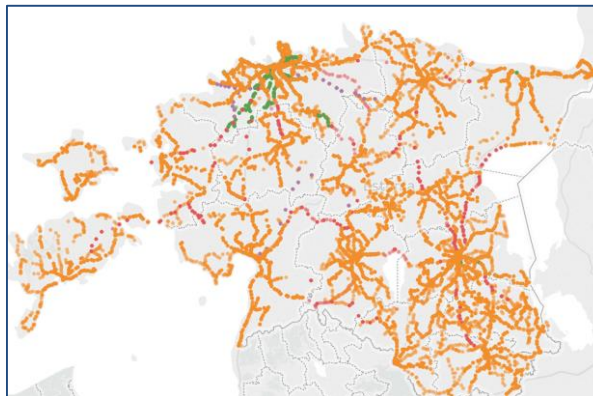
Väärtuse loomise näide

Retail Data Sources and Use Cases



Andmed ühistranspordis

- Marsuutide info



- Reisijate info



- Transpordi kohta



But Wait!!!---That's NOT All

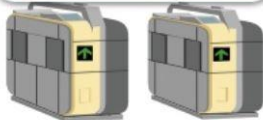


- 
- Ilmastiku info
 - Liiklusinfo
 - Tarbija käitumisinfo
 - Elanikkonna info
 - Tõmbepunktide info (kool, tööstuslinnak, ostukeskused jne)
 - jms
- 

Mõned näited mujalt

Public Transportation Big Data Vision

AFC Tap-in & tap-out



Event ticketing



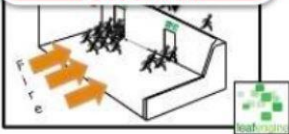
Crowd Counting



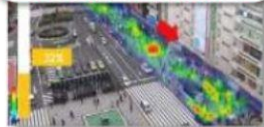
Transport App



Sensor-based Crowd Detection



Video-based Crowd Behavior Analysis



- Combine conventional and new sources
- Public safety and transport
- Value co-creation through data stores / IoT platforms
- Personalized guidance and incentive
- Customer feedback
- Events as a benchmark



Mõned näited mujalt

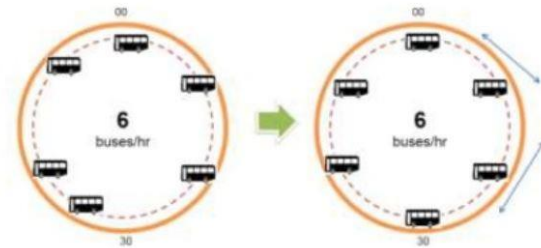
Public Transit – Quality Incentive Contracts

Background

- Large cities adopting QICs based on KPIs like Excess Waiting Time (EWT)
- London introduced 3:2 incentive/penalty schemes, Singapore has followed
- **Regularity** is the goal, rather than absolute punctuality

Data analytics reveal

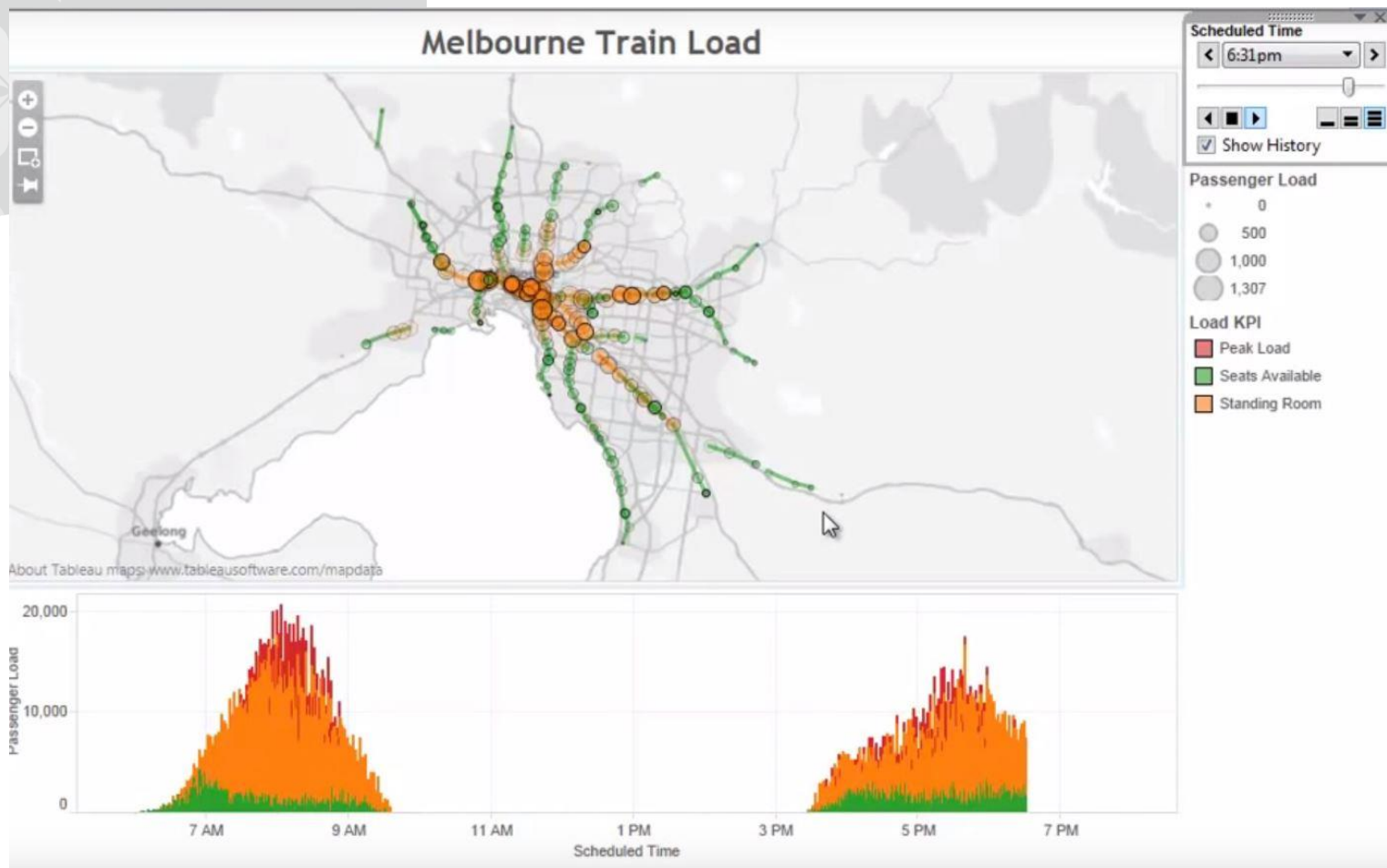
- 1) Current EWT performance
- 2) Worst performing routes
- 3) Key bottlenecks on the route
- 4) Causes for dwell time at bottlenecks
- 5) Time table improvement margin



	EWT	Incentive/penalty (\$ per month)
Incentives	1.5	\$30,000
	1.6	\$24,000
	1.7	\$18,000
	1.8	\$12,000
	1.9	\$6,000
	2.0	\$0 (Neutral zone)
	2.1	\$0 (Baseline)
	2.2	\$0 (Neutral zone)
Penalties	2.3	-\$4,000
	2.4	-\$8,000
	2.5	-\$12,000
	2.6	-\$16,000
	2.7	-\$20,000

Source:
Singapore LTA

Mõned näited mujalt



Mõned näited Eesti andmete baasil



Võimalused...

- Kaasav planeerimine (planeerija, täideviija, kasutaja)
- Vajaduspõhine planeerimine (kes kasutab, millal, miks, mida ...)
- Efektiivsem kulujuhtimine
- Avatud suhtlus
- ...





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Aitäh!