

# TIEKE

## Policy Perspectives into Digitalization

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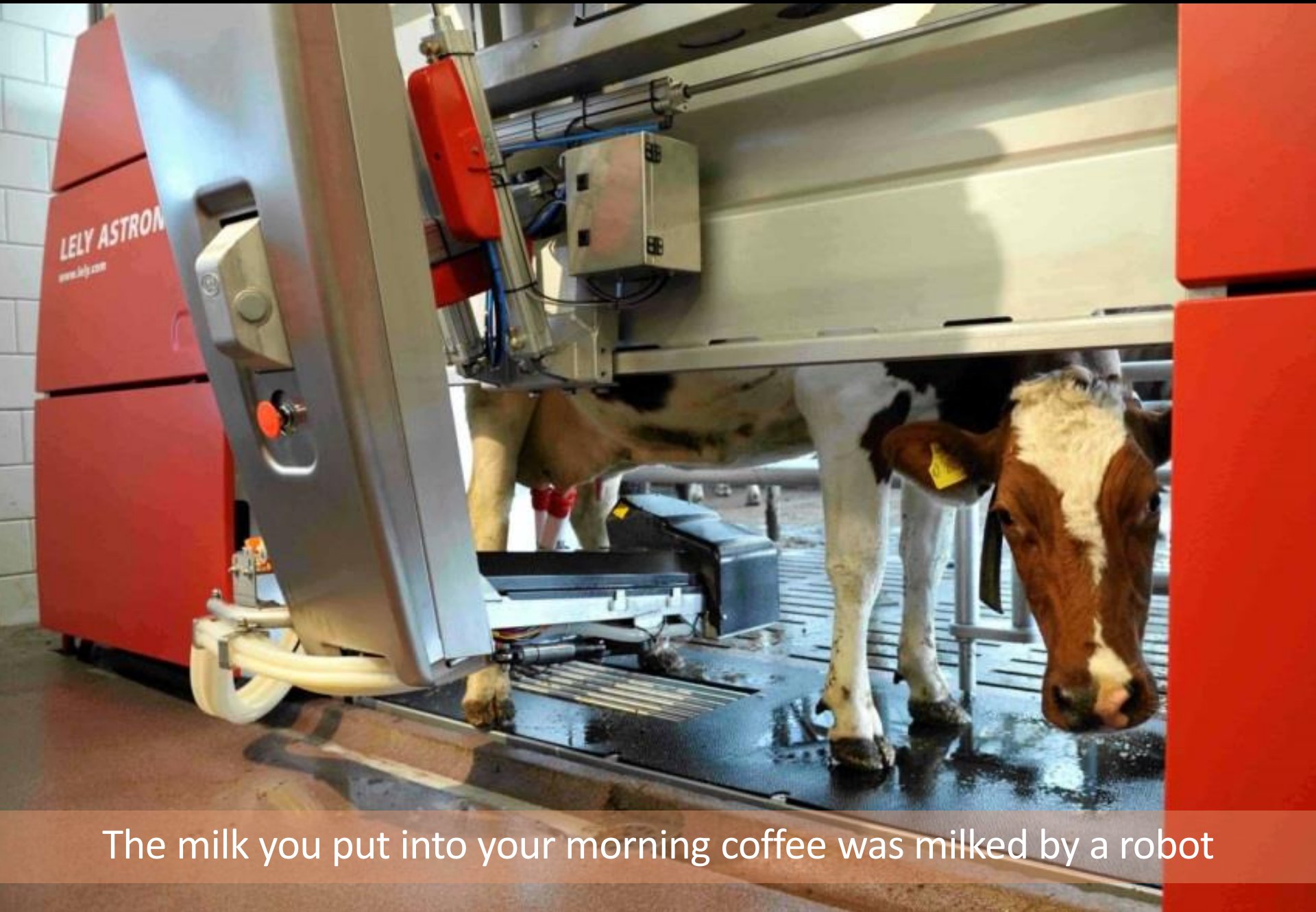
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Digitalisation changes ... everything

**Online banking and music streaming were just starters ...**



The milk you put into your morning coffee was milked by a robot

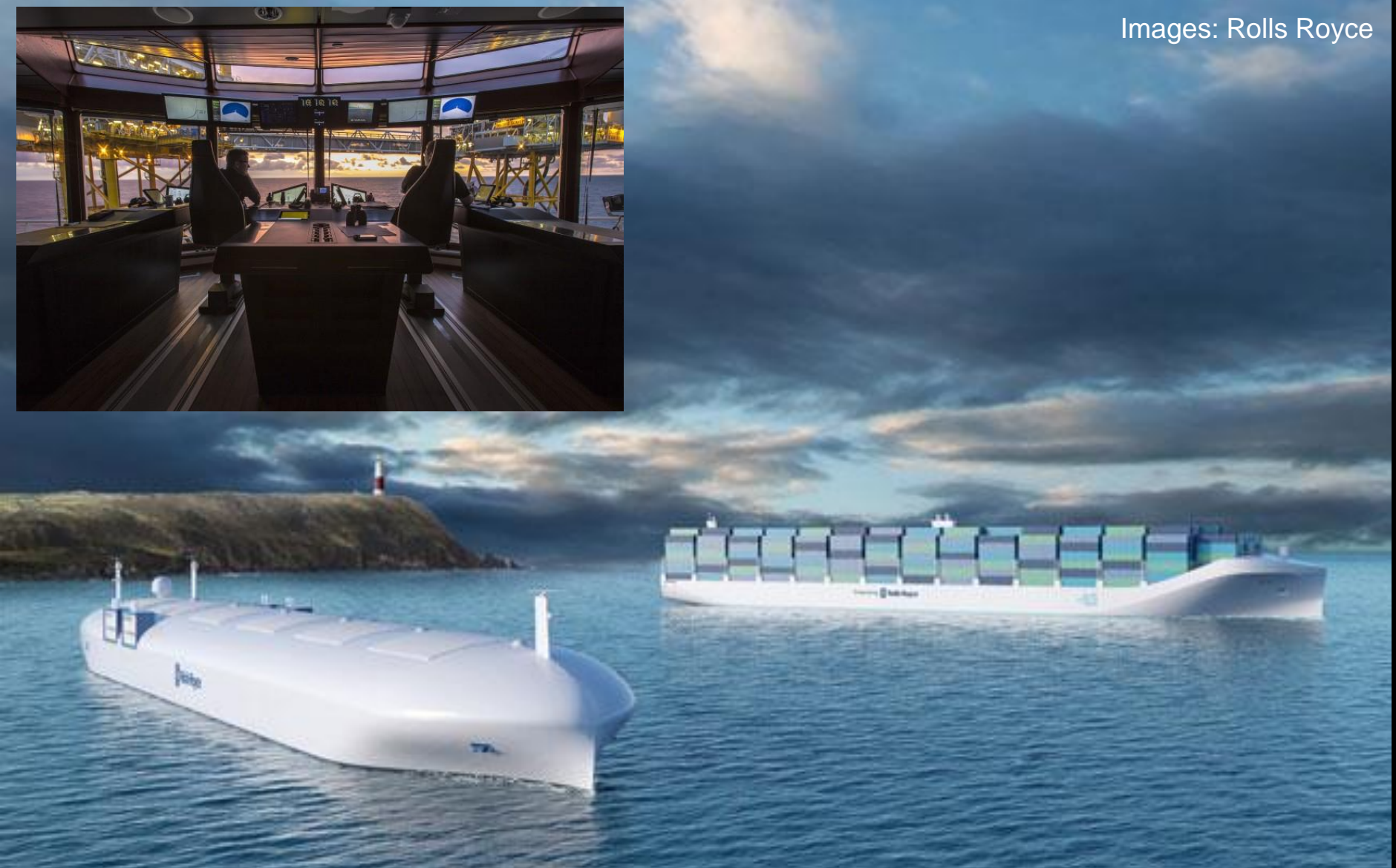


Soon you will be eating food produced by robots



Image: Autonomous Solutions Inc.





The helm of a robot ship is in the office of the shipping company



# Algorithms and AI's are already running the world economy.







Heavy trucks are going to be automated before personal vehicles

Image: Otto





There are only 3,500 lumberjacks left of the 100,000 in the 1970s



When Hitachi replaced logistics foremen with an AI trained with big data, the efficiency of warehouse workers increased by 8 %.






Sorting of construction waste is economically viable only by robots.





Japan develops robot taxis for old people living in rural areas.



# Robot Taxi

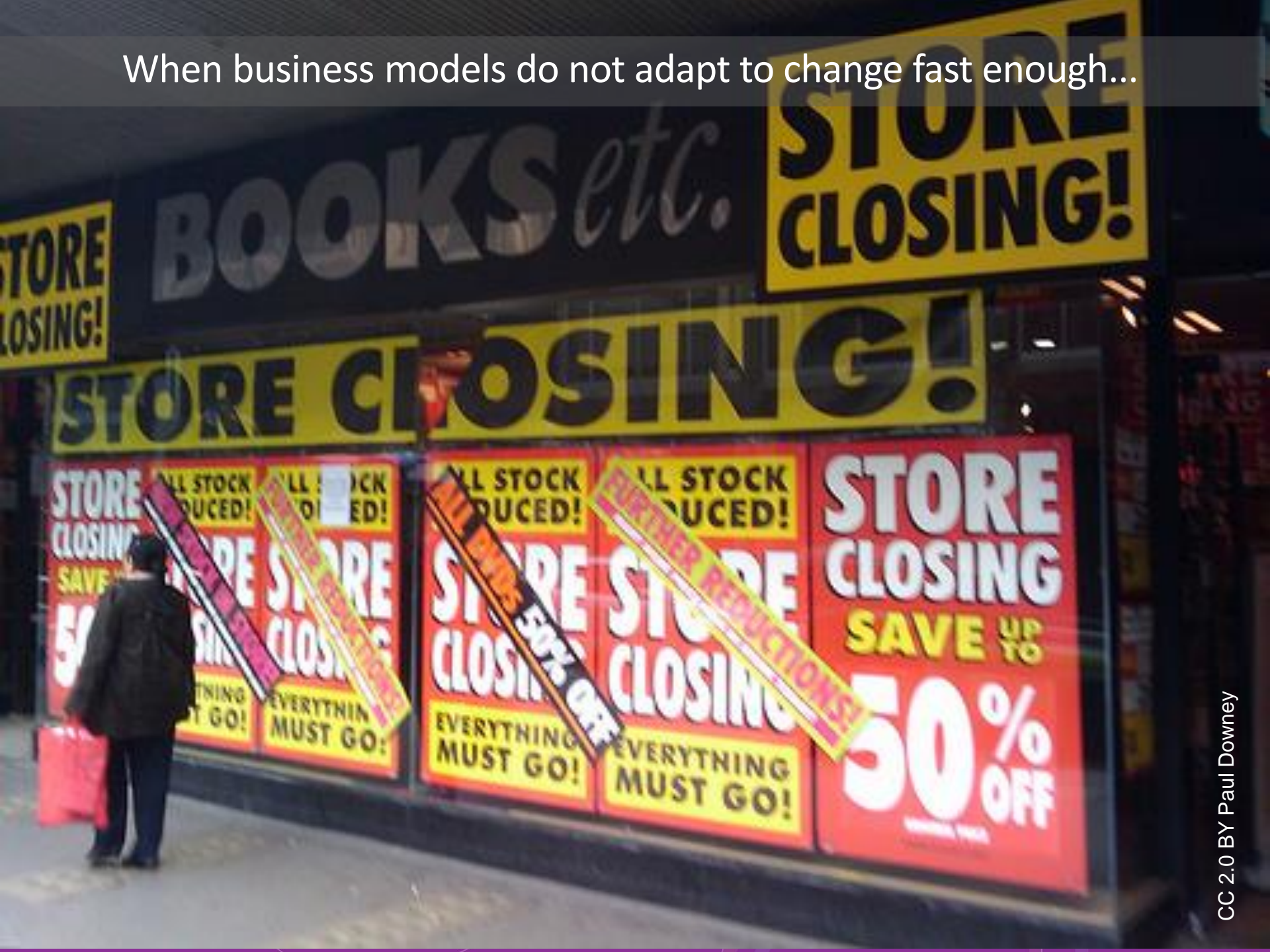
Image: Dena & ZMP



The important changes are not technological...

...but new processes, business models and value chains enabled by technology

When business models do not adapt to change fast enough...





# Moore's Law is still accelerating the change

Year 2035 is as close as 1815





William Sander II: Waterloo taistelu (1815)



## Real-time-policy needs up-to-date data

- Technology may evolve really fast
  - But policy making requires longer term perspective
- Quarter year economy
  - Business interests focus on quarter goals instead of long term developments
- Election term politics
  - Political interests focus on four year goals instead of long term challenges
- **Real time policy**
  - Decision making requires real time collection and analysis in order to make informed policy decisions
  - Our latest completed economical statistics are from year **2014**

Julkaistu: 31.1.2017

The next analysis will be published around Midsummer

## Bruttokansantuote kasvoi 0,3 prosenttia vuonna 2015

Bruttokansantuotteen volyymi kasvoi 0,3 prosenttia vuonna 2015 Tilastokeskuksen tarkentuneiden ennakkotietojen mukaan, aiemmin kasvuksi arvioitiin 0,2 prosenttia. Myös vuoden 2014 kansantalouden tilinpitoa tarkistettiin: bruttokansantuote pieneni 0,6 prosenttia aiemmin arvioidun 0,7 prosentin sijasta kansantalouden tarjonnan ja kysynnän tasapainottamisen seurauksena.

### Bruttokansantuotteen volyymien vuosimuutos, prosenttia



Yes, 2014!

\* Means forecast



## Digitalisation is redefining our social structures

- **Work life**, when whole professions disappear and appear
  - As work life has not yielded, it has resulted as unemployment
- **Education**, when skills are becoming outdated
  - A degree is only a permission to come back for updating education
- **Taxation**, when robots and AI's run world economy
  - A transfer from taxing of salaries to taxing of added value regardless of how it has been created
- **Basic livelihood**, when every month is different
  - Social support needs to be automated and simplified (basic income)

# Finland won't be saved by wrecking ATMs and milking robots ...

... and distributing milking stools



# Finnish challenge, why did our digitalisation stop? E.g. mobile payments? Overwhelming for Finns?



Timo Slmell

# Discussion

