Analysis of the geography of competition between telecommunication infrastructures

Geospatial World Forum

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Overview

- Introduction
- Market review analysis
- Developments
- Some history and future

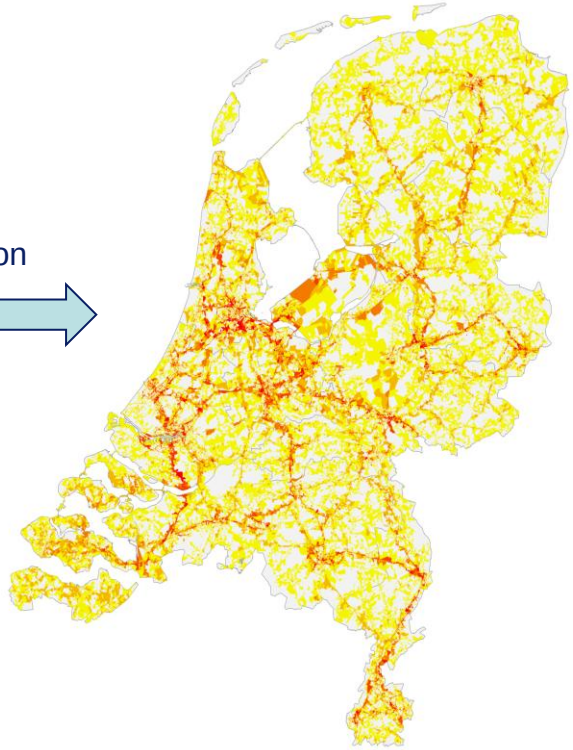
Introduction

- OPTA: Independent Post and Telecommunications Authority
- International counterparts: FCC (USA), Ofcom (UK)

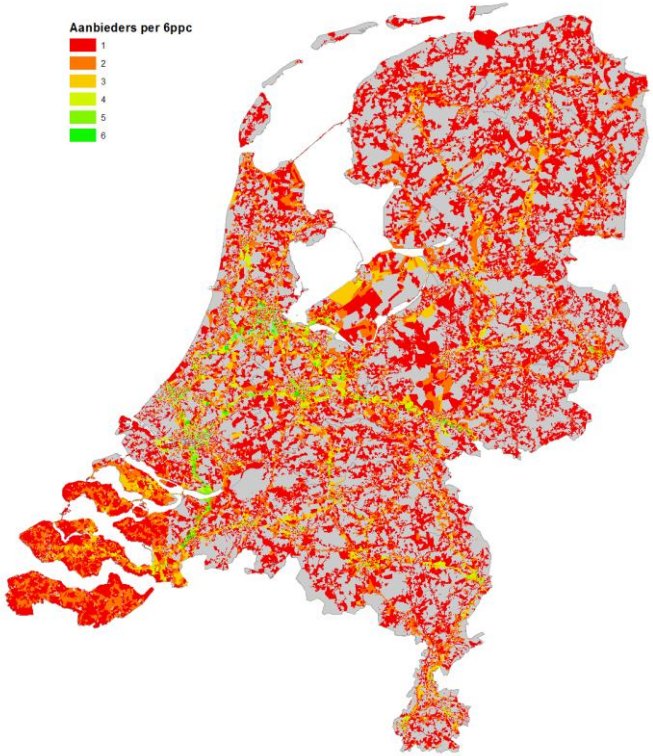
- Assessment of the level of competition in telecommunications markets
- Assess geographical differences
- If /where required regulate markets, on basis of European and national law.

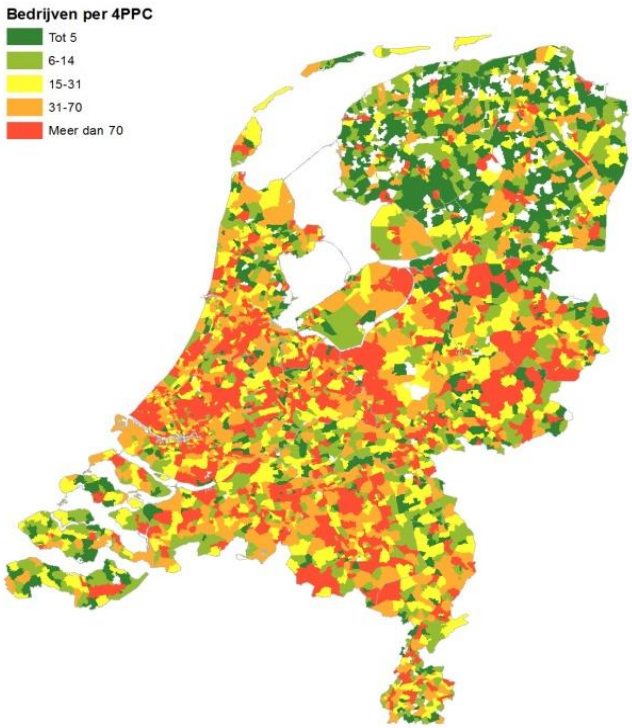
Regional differences: networks

aggregation



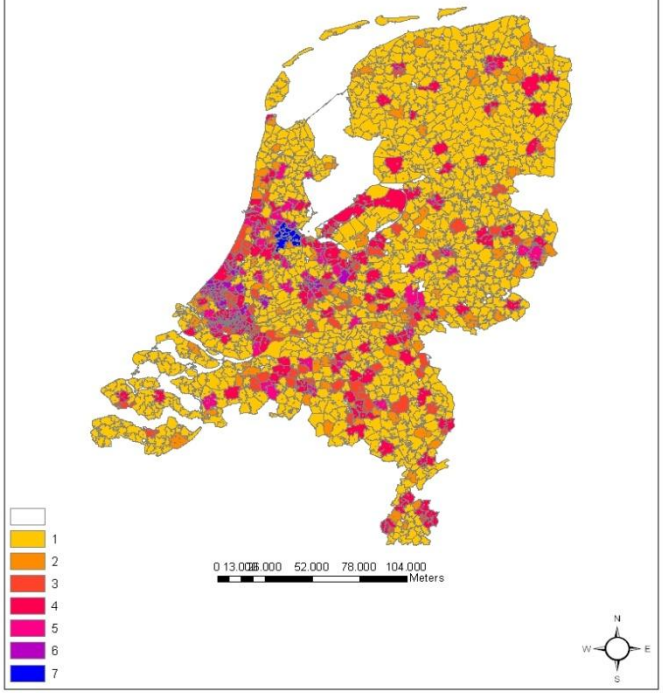
Networkcoverage vs business activity



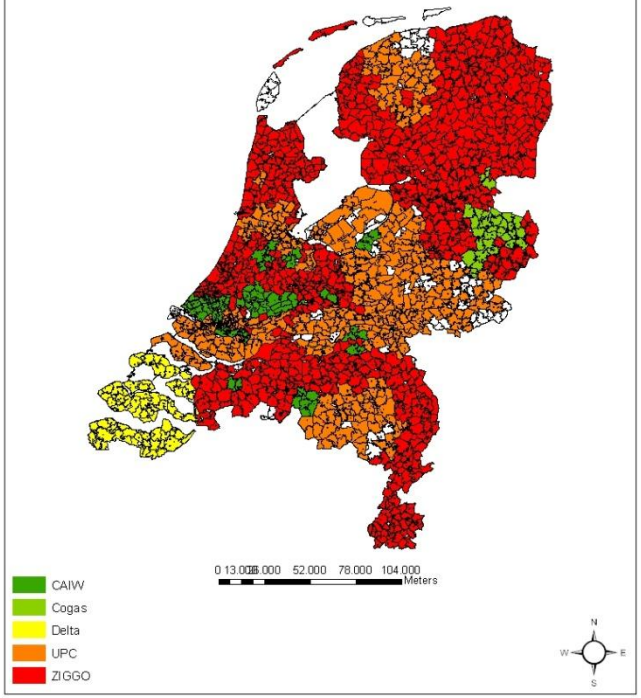


Regional differences: networks

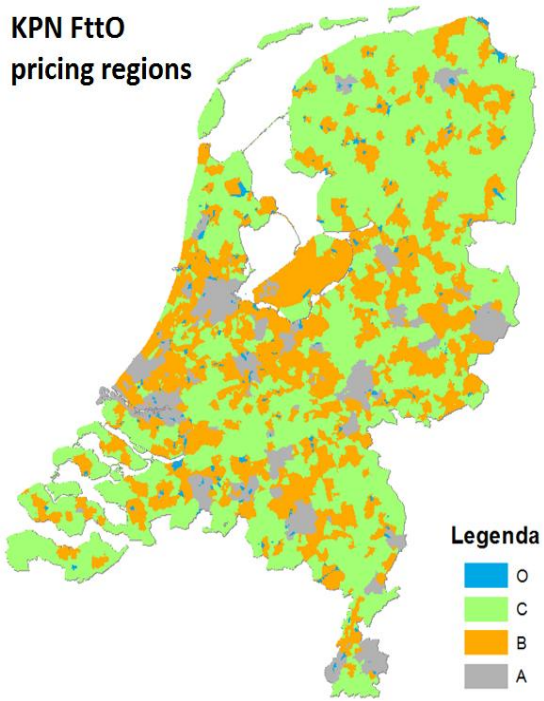
Number of operators through copper per postal area

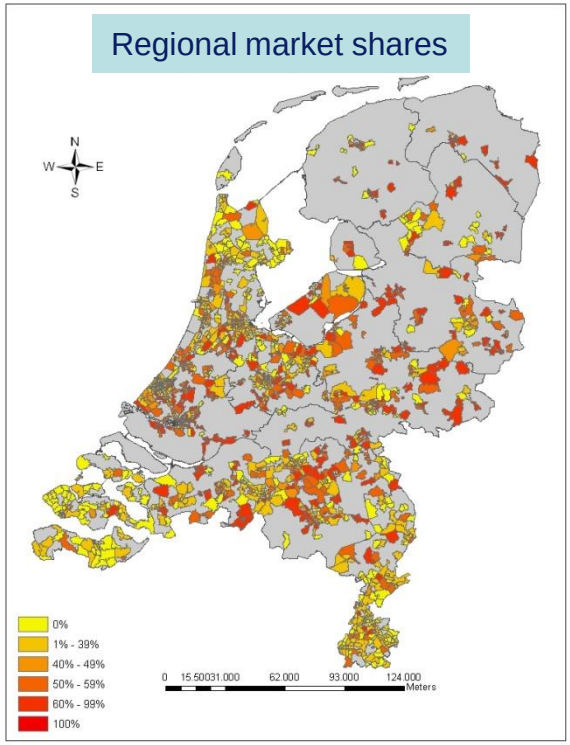


Catchment area's of cable operators



Regional differences: pricing and market shares





Developments

- 2008/10: incumbent used GIS analysis in their appeal against OPTA's decision
- 2011: alternative operators used GIS analysis in lobby with OPTA
- European Commission (implicitly) expects more detailed research

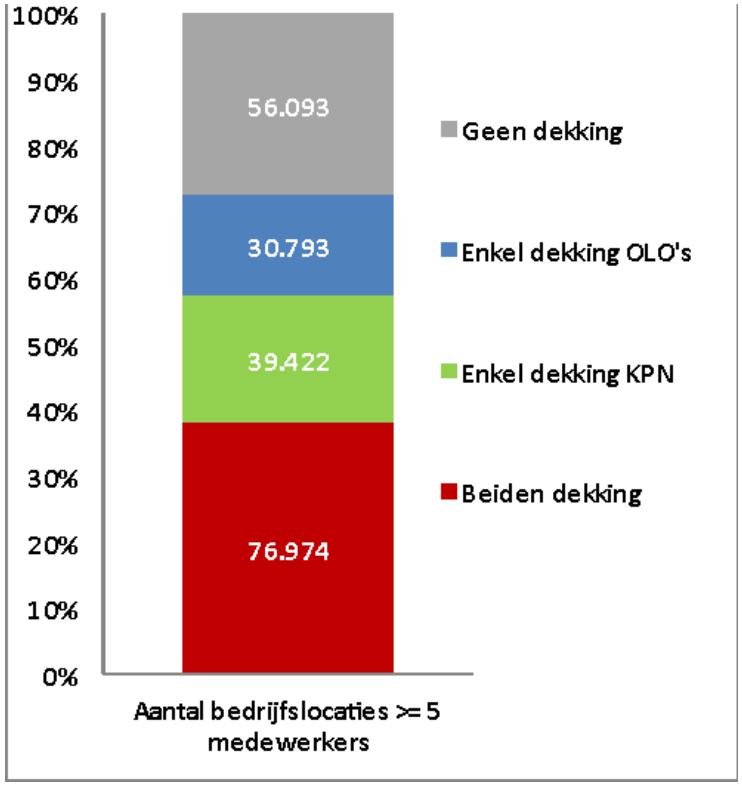
- More detailed data required (lines instead of polygons)
- Data requested from operators

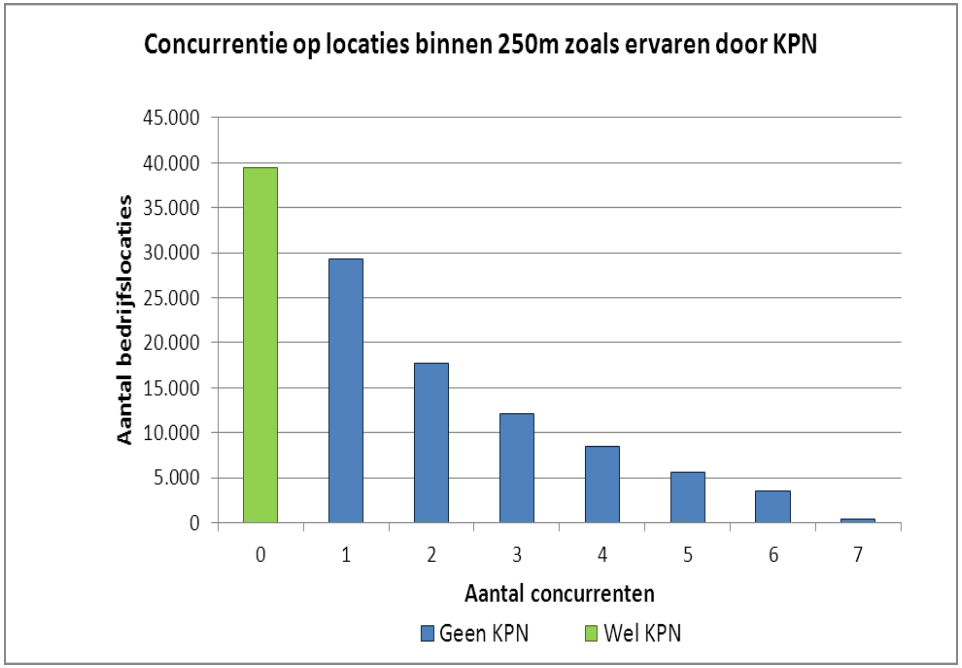
Dominance: calculation of network coverage

	OPTA	Stratix / Speer IT
KPN	80-85%	57%
Eurofiber	40-45%	
Tele2	30-35%	15-20%
British Telecom	30-35%	
…	…	…
All (excl. KPN)	70-75%	53%

% of all business locations (> 5 empl.) within 250m from fiber network

GIS used by operators:

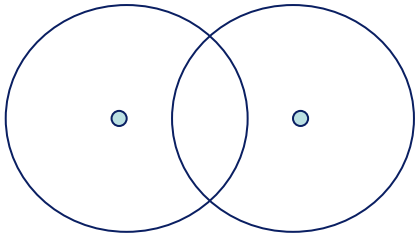




From: Stratix / Speer-IT: Marktanalyse FttO, Beschikbaarheid en bruikbaarheid van het FttO aanbod in Nederland. 16 november 2011.

Where I came from:

- 2001: Merger case in concrete sector, catchment area's roughly presented as circles.



- With pretence of accuracy by calculating competitive pressure from overlap of catchment area's:

$$\pi R^2 - \sum_{i=1}^{n} a_1 \sqrt{R^2 - \frac{{a_1}^2}{4}} - \arcsin\left(\frac{a_1}{2R}\right)$$

Going to?

- More GIS analyses used in work
- Based on more detailed information (from operators)
- Use of enriched data
- Dynamic analysis by using historical data

- Delivery times come down
- Investments in GIS – staff
- Merger: ESRI or Geodan

Questions?

- Thank you.

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