

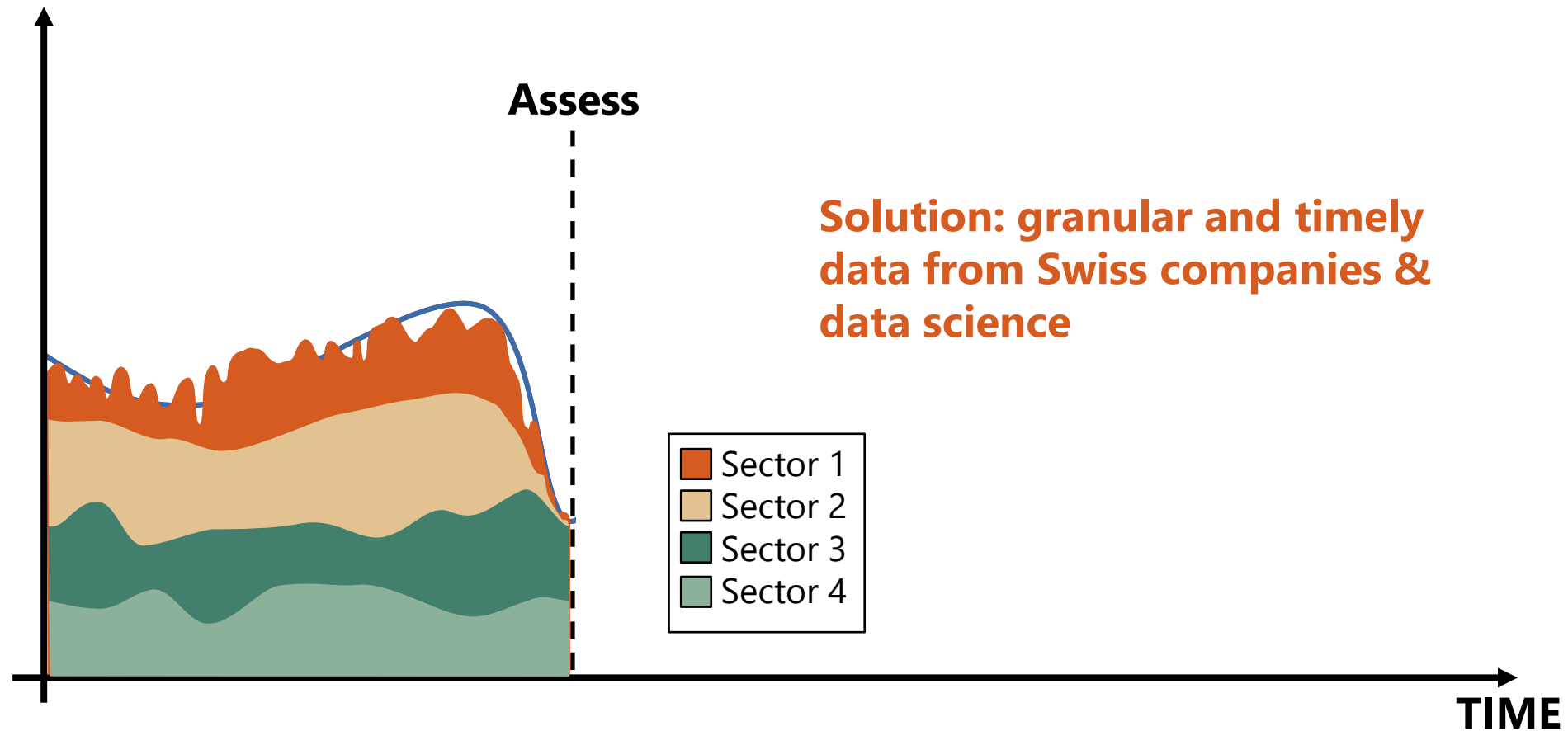
Project Neo

4th IFC-Bol workshop on "Data science in central banking", 18-20 Feb 2025

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DISCLAIMER: The views are those of the presenter and not necessarily those of the BIS nor those of the SNB.

Problem statement



Objectives

Extract value from
granular data



Comparable to
official statistics



To monitor
individually and
use in models

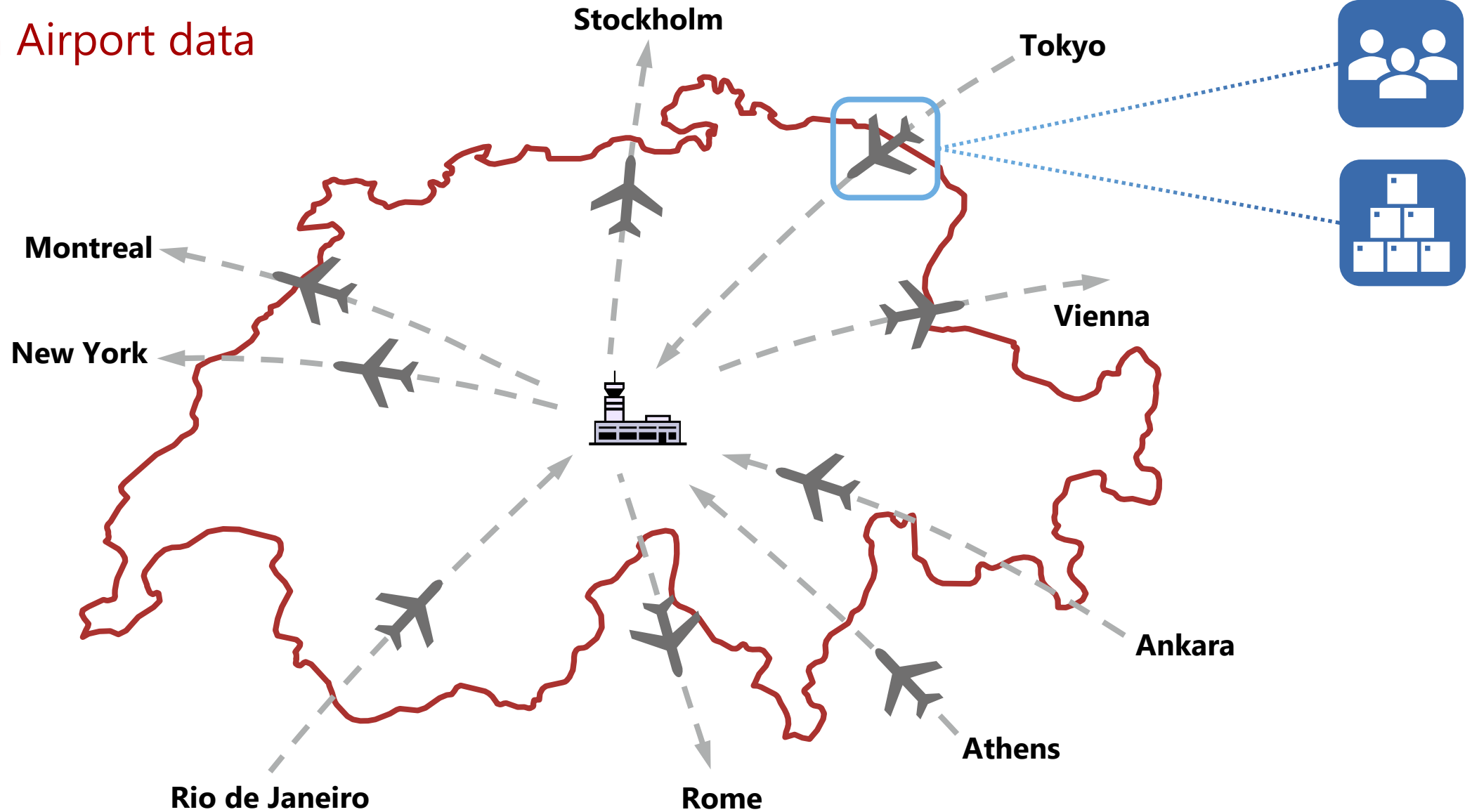


Economic monitoring

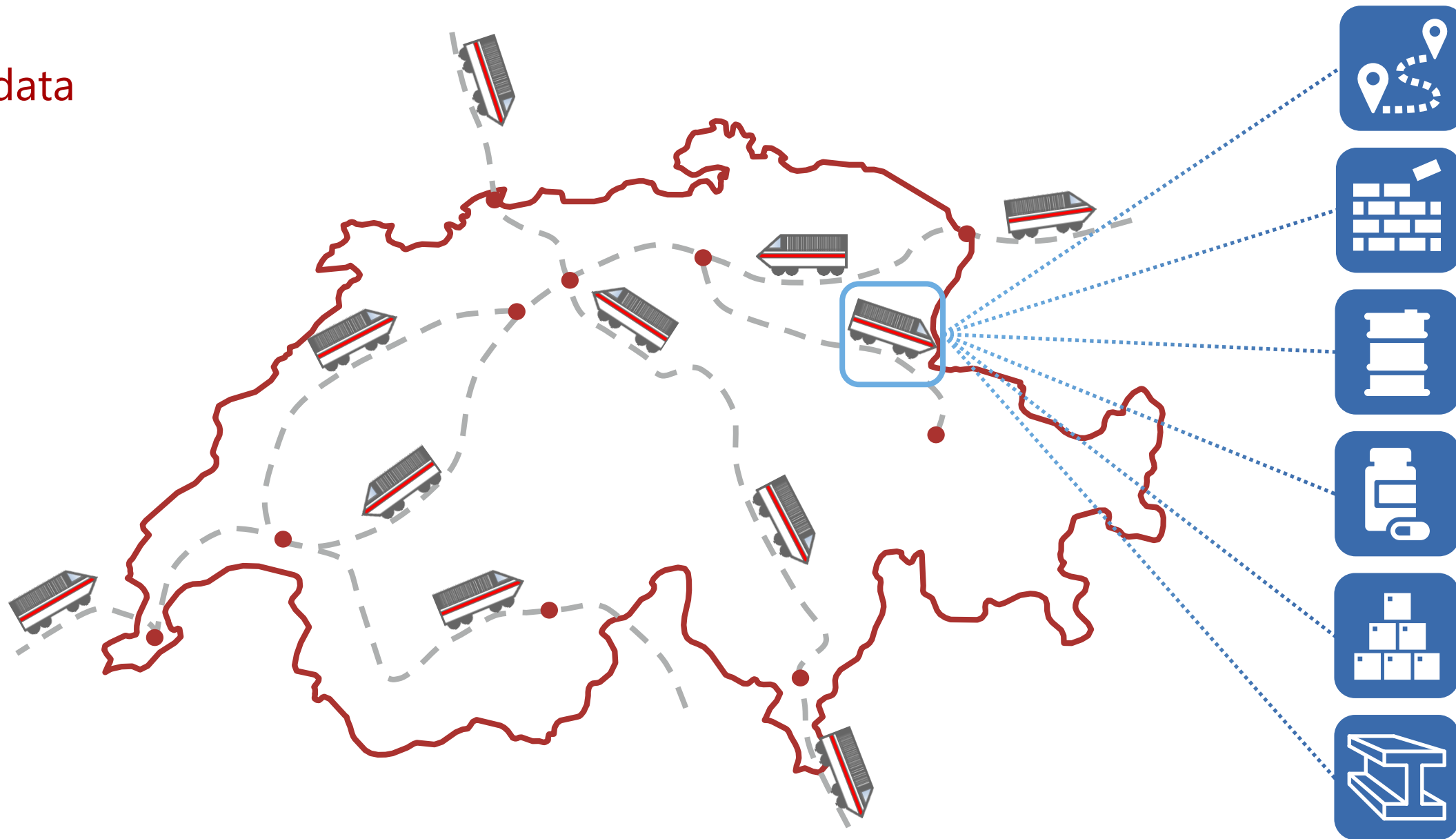
Can we create
indicators directly
interpretable?

1

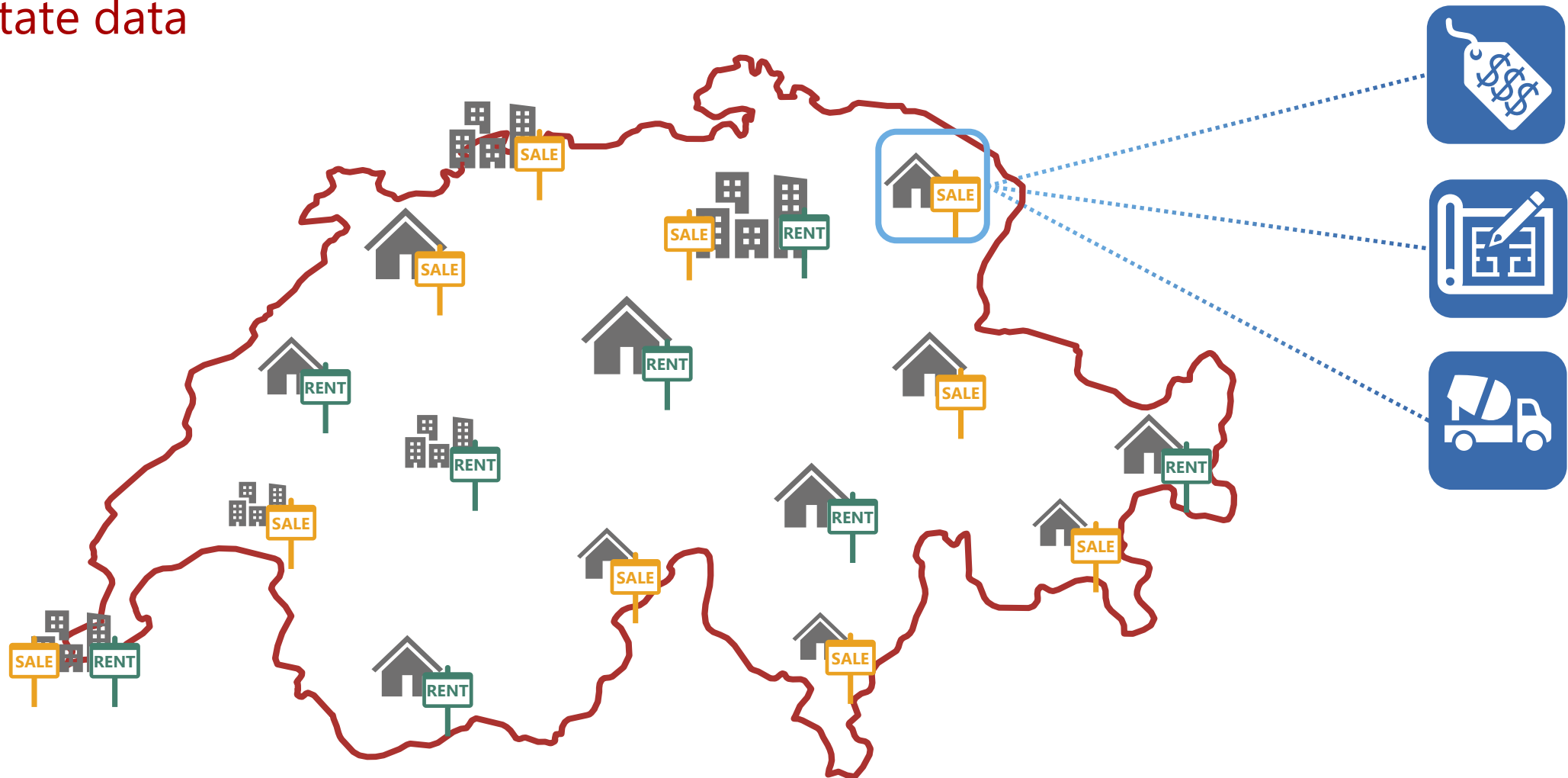
Zürich Airport data



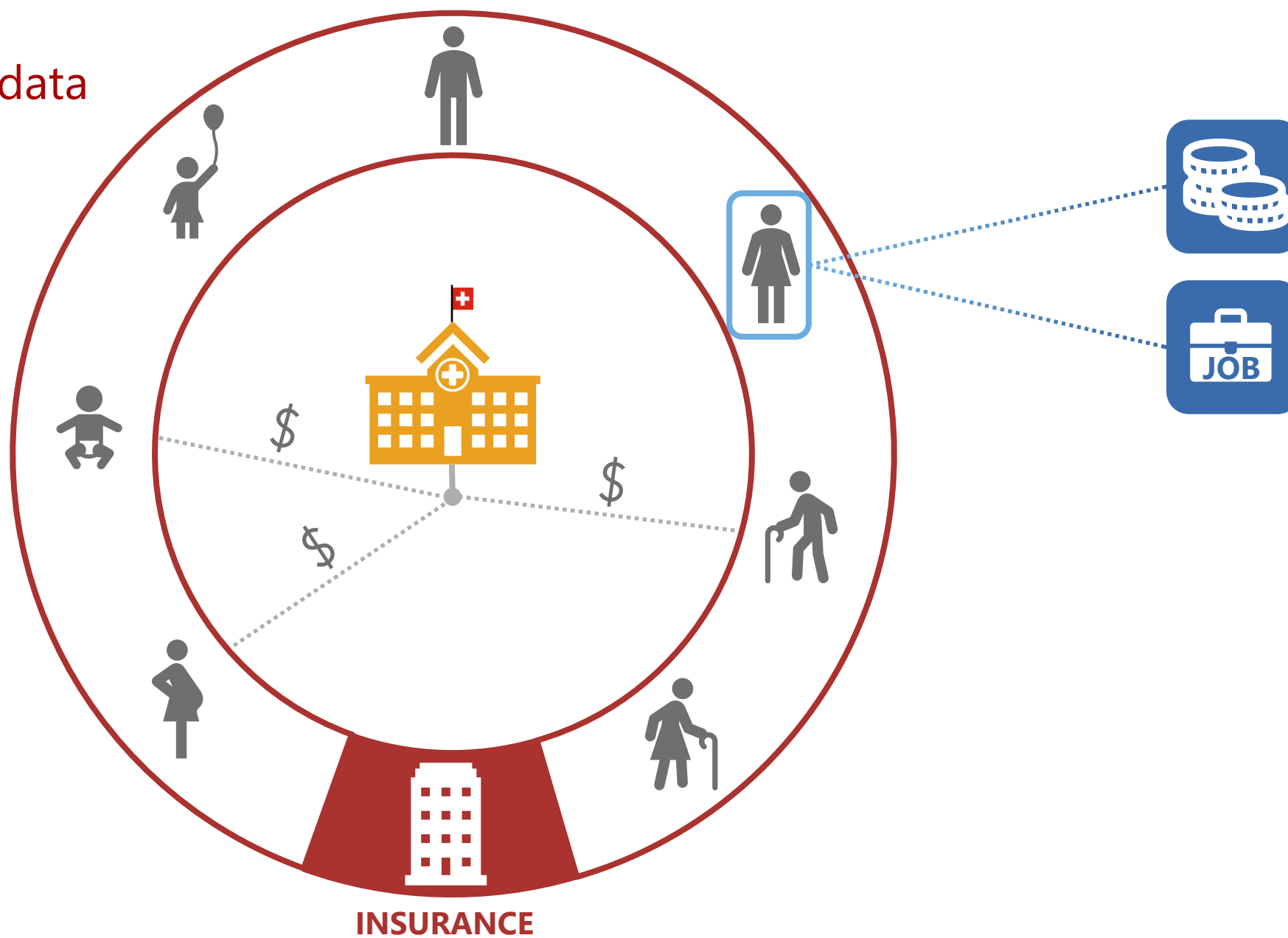
Rail data



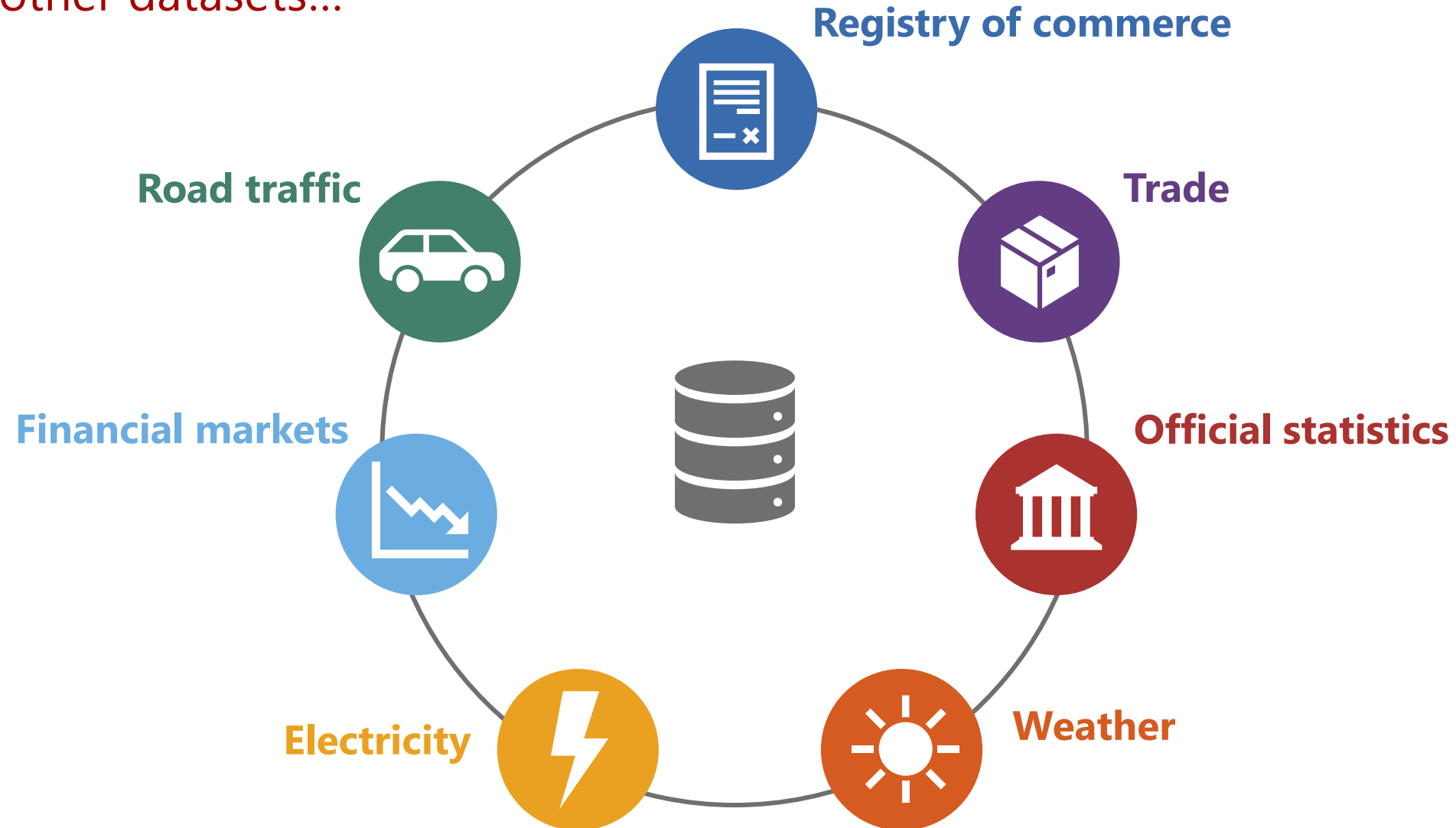
Real estate data



Health insurance data



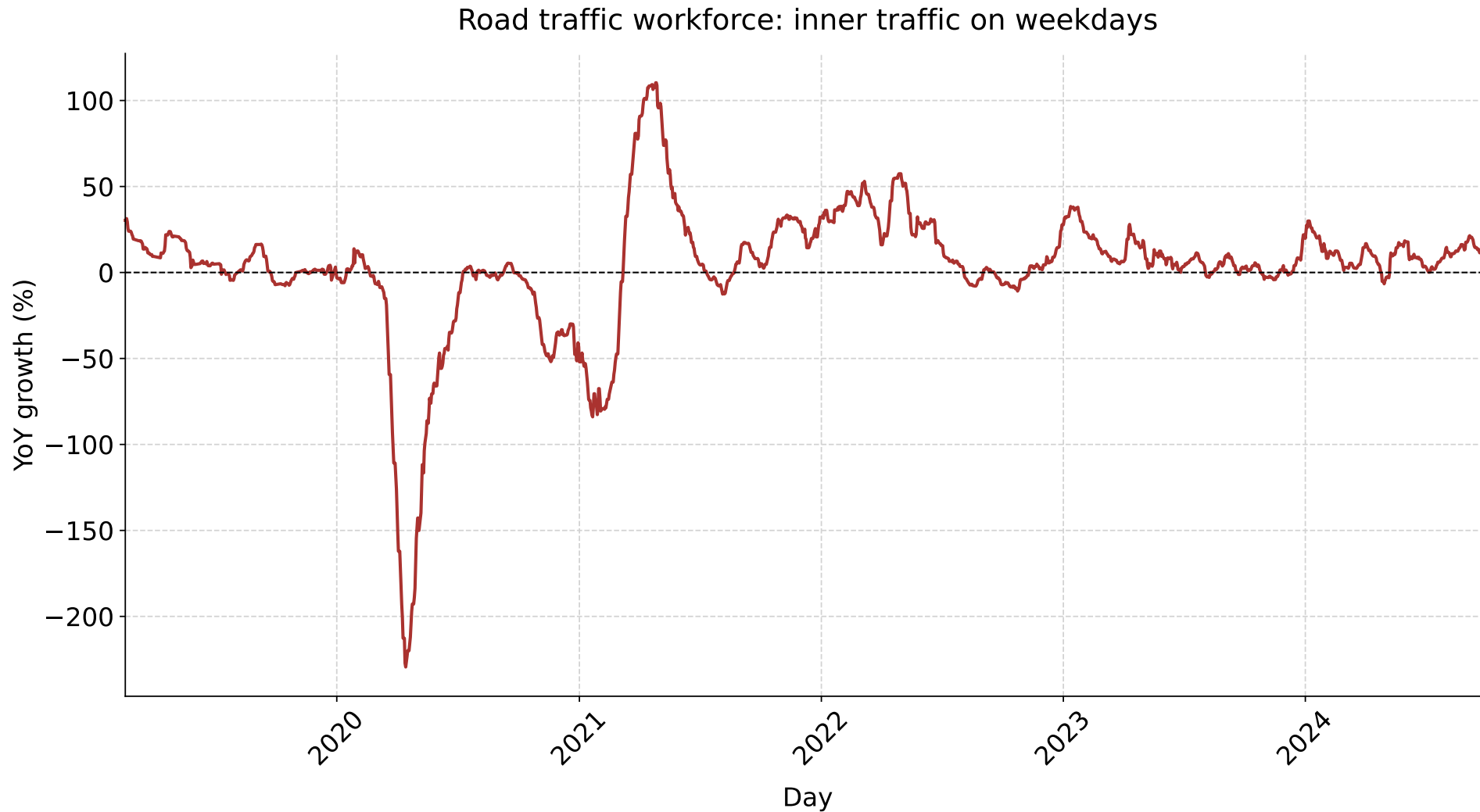
And other datasets...



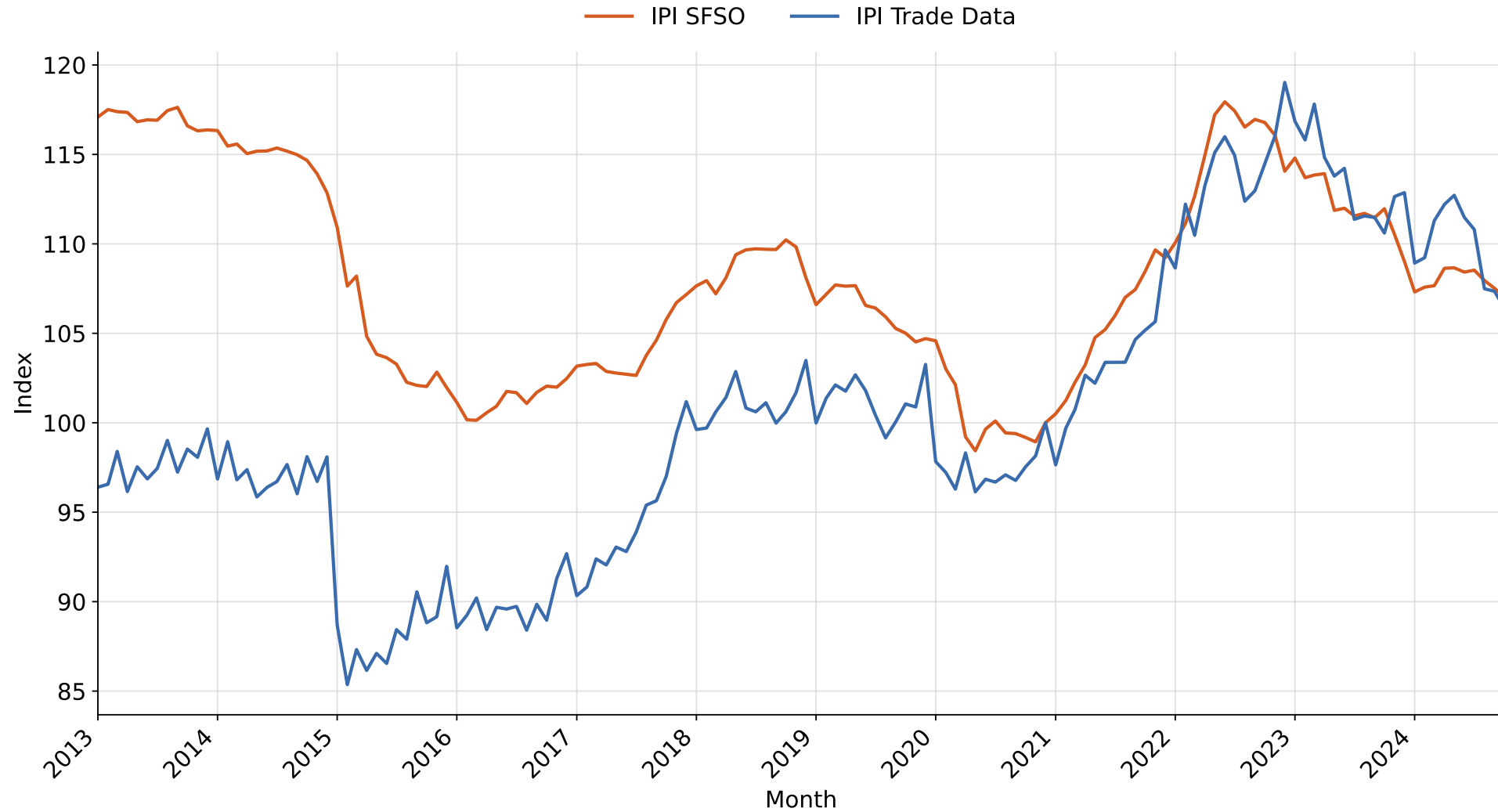
Demo

Appendix





Example of features engineering not suitable for economic indicators



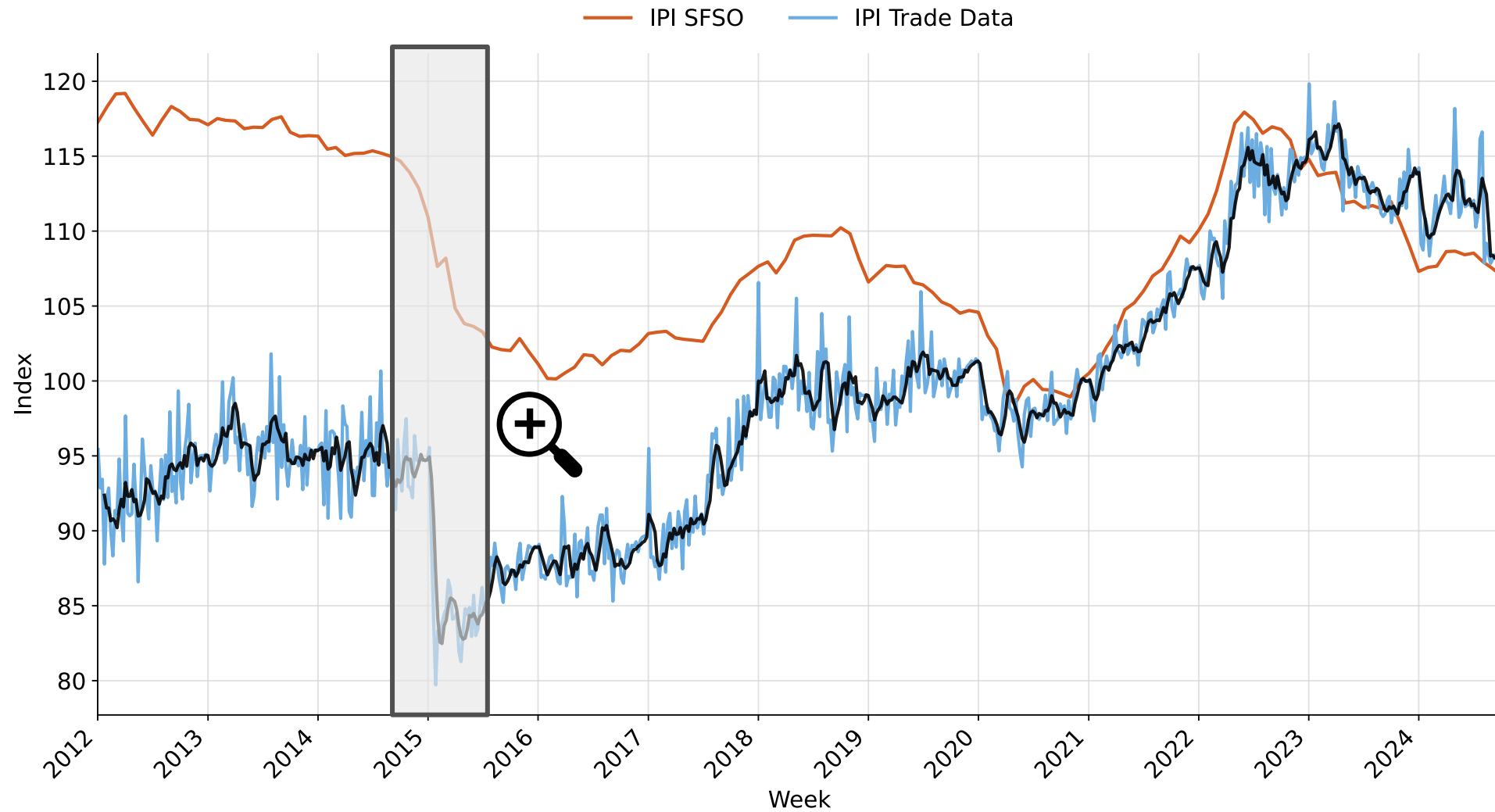
Economic indicator: Import Price Index (IPI) using trade data



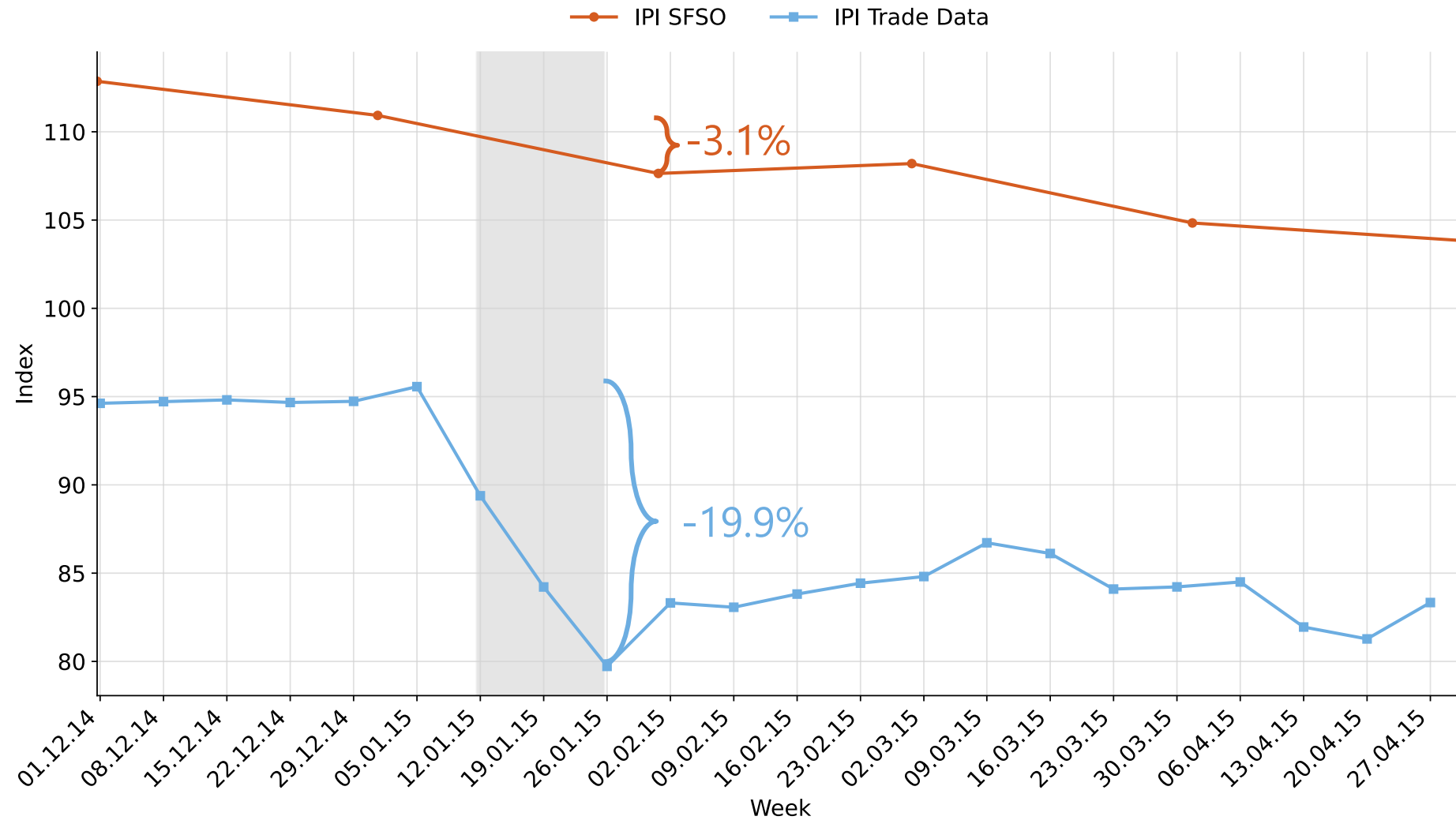
Why is trade IPI useful?

Official IPI	Trade IPI
Measure the prices of carefully chosen imported items, constant over time	 Official IPI is the “truth” → Noisy signal of official IPI
Monthly frequency and published on the 3 rd week of following month	 Weekly frequency with 2-week lag → Available up to 5 weeks earlier
Use surveys and other estimations to measure prices that takes time	 Use directly the full population of paid imported prices → Leading official IPI by ~3 months
Some sub-indices are published and no particular link to CPI	 Any granularity sub-indices or export indices can be built → related to and leading CPI

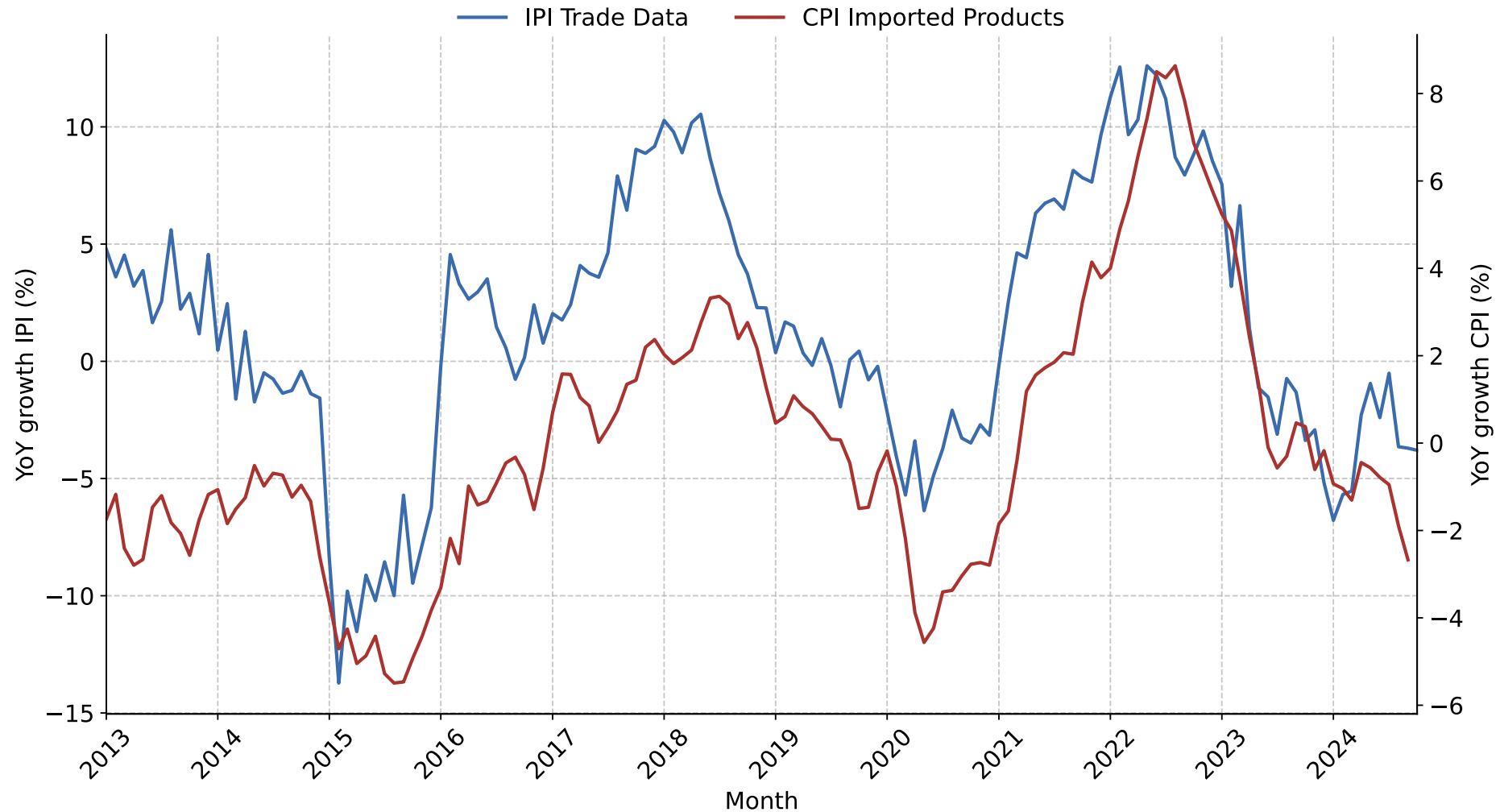
Trade IPI: early weekly noisy signal leading official IPI



Zooming in on the discontinuation of the minimum CHF/EUR exchange rate



Leading imported goods CPI by 2 months & 0.8 correlation



Pipeline

