



# Thinking critically about “shortages”

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# Outline

1. Measuring the undefined
2. Tight and tightening labour markets
3. Shortages in context: headwinds & benefits
4. Diagnosing the problem: labour or skills shortages
5. Outlook from here

# No clear measure of a “shortage” usually just means labour market tightness

## Competing definitions of labour shortages

### Blank-Stigler model

- Number of qualified workers willing & able to work is less than the number of workers employers want to hire *at the prevailing wage rate*.
  - Rising wages are both indicators and solutions to labour shortages

### Arrow-Capron model

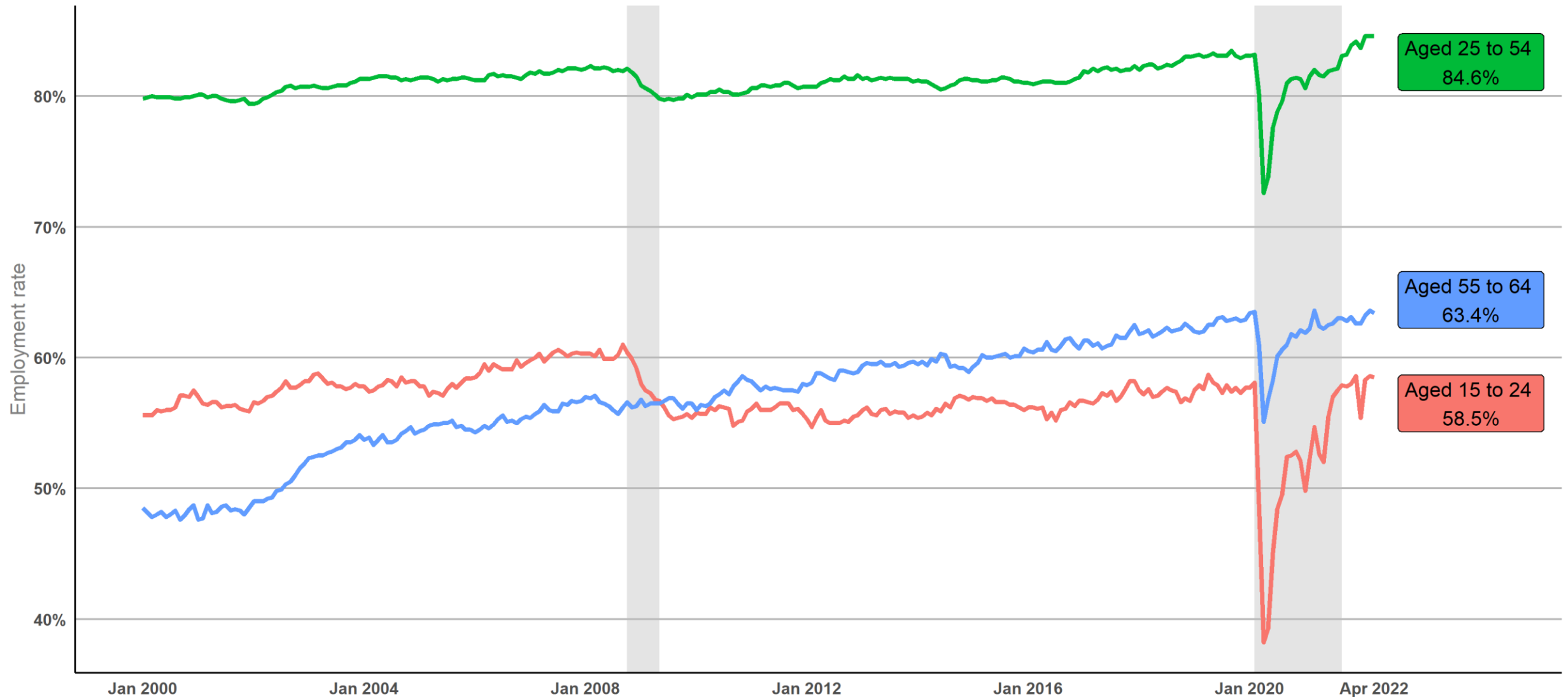
- Wages are slow to adjust (employers need to determine profitability, seek approval, etc.). Shortage is defined as unfilled opening for which salaries are the same as those currently being paid in others of the same type and quality.

### Social Demand model

- Shortages are situations in which the number of workers in an occupation is less than that which is deemed socially desired (i.e., not the consequence of market disequilibria)

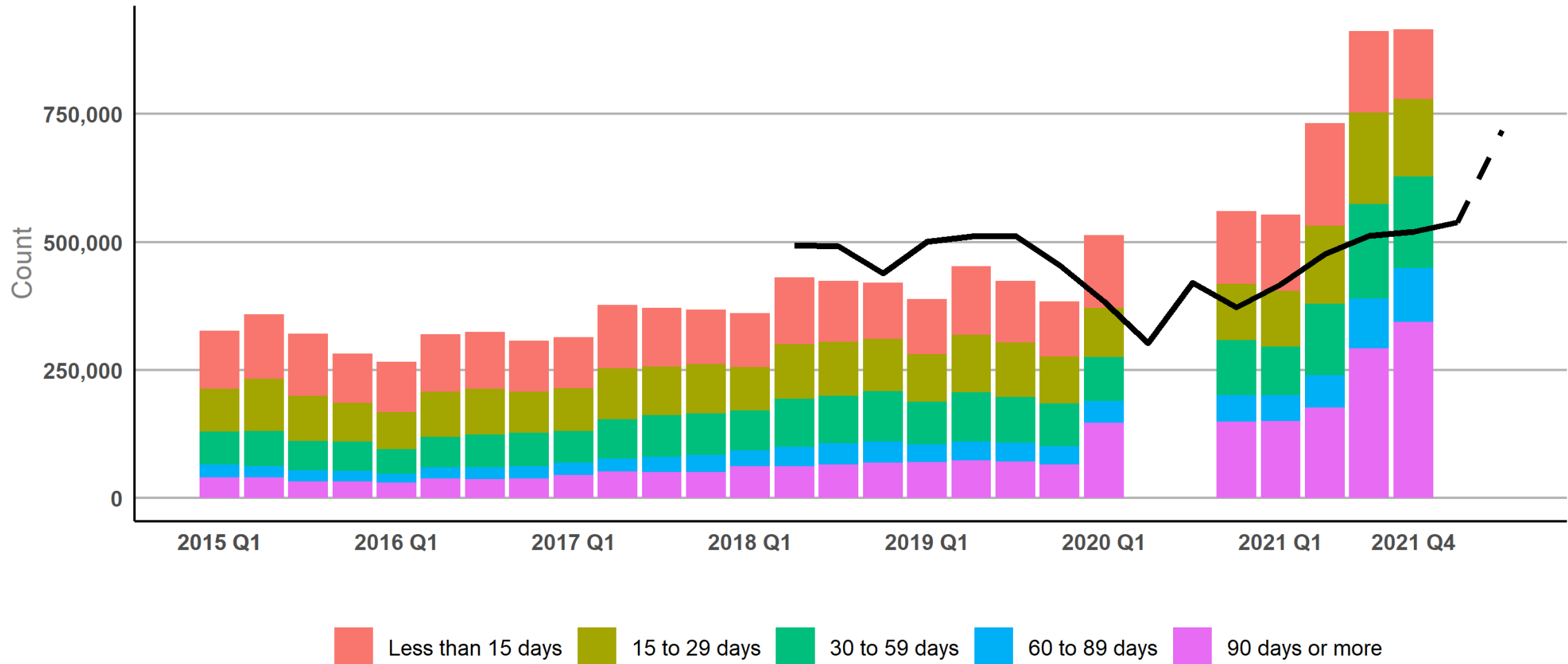
# Labour markets tight across major age groups

Employment rate up to Apr 2022, by age group



# Labour demand continues to rise quickly

Online job postings (black line) vs vacancies rate up to 2021 Q4, by duration



LMiC; Statistics Canada  
Dashed line indicates April 2022 trend carried forward to end of Q2

# Near-term outlook shows continued labour market pressures. How worried should we be?

Online job postings and Official vacancies relative to Oct 2020  
Monthly data



# Why are shortages bad. And when might they be good

## Potential headwinds from labour market tightness

- Recruitment takes longer, diverting resources from other activities
- Slowed and/or reduced output
- Contributes to cost-push inflation cycles

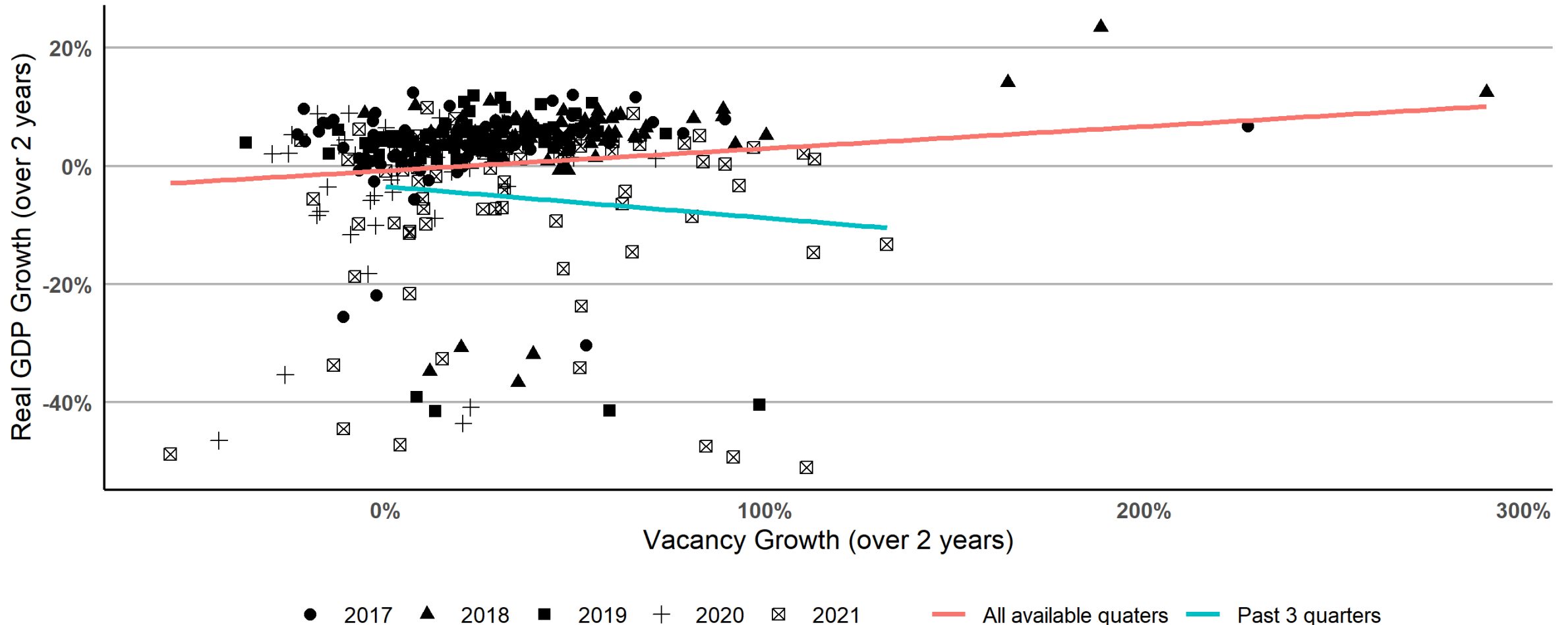
## Potential benefits from labour market tightness

- Increased productivity (long-term)
- Shorter periods of unemployment
- Reduced income inequality

The key long-term question is the how the additional costs of recruitment and retention balance against the potential for new, innovative business and operational practices

# Recent job posting surges appear to be associated with sectors still recovering from COVID-19

Real GDP growth (2-year) vs Vacancy growth (2-year) by 2-digit NAICS  
From 2015 Q1 to 2021 Q4



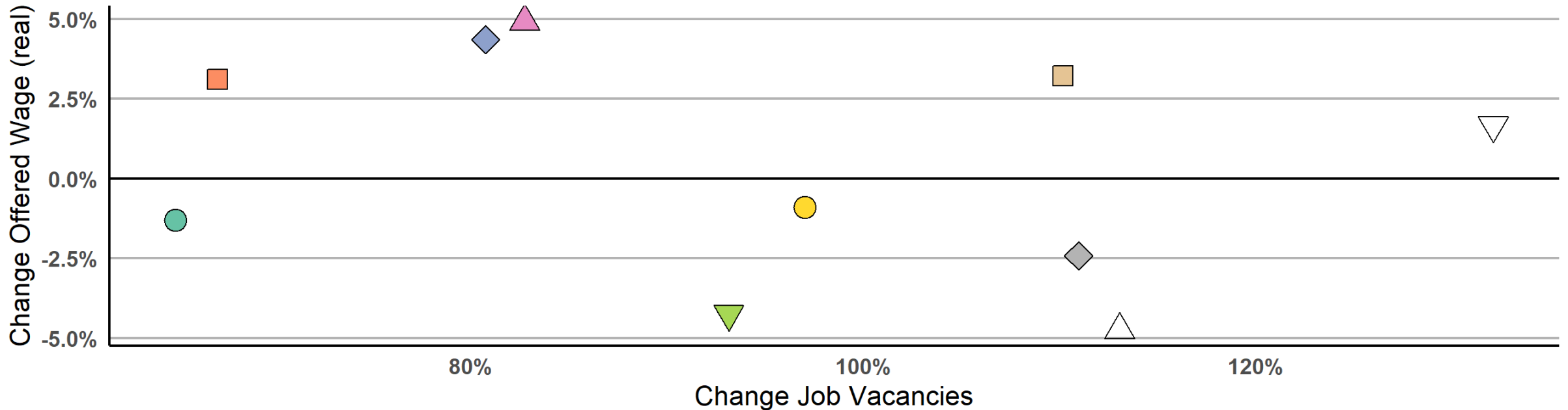
LMiC; Statistics Canada.

Note: Data missing for 2020 Q2 and Q3 due to halt in JVWS collection.



# Wage pressures in key sectors but no clear pattern

Real offered wage growth vs vacancy growth by 2-digit NAICS  
2-year growth: 2021 Q4 over 2019 Q4



● Transportation and warehousing [48-49]

■ Retail trade [44-45]

◆ Administrative and support, waste management and remediation services [56]

▲ Professional, scientific and technical services [54]

▼ Manufacturing [31-33]

● Health care and social assistance [62]

■ Construction [23]

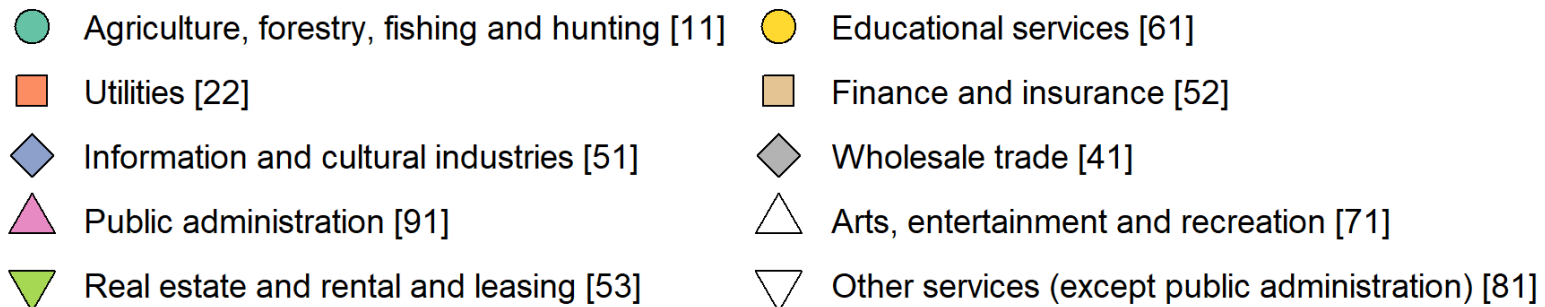
◆ Management of companies and enterprises [55]

△ Mining, quarrying, and oil and gas extraction [21]

▽ Accommodation and food services [72]

# And wage increases high in some sectors with lower labour demand

Real offered wage growth vs vacancy growth by 2-digit NAICS  
2-year growth: 2021 Q4 over 2019 Q4



# To “solve” it, need to diagnose the type of labour market tightness Labour or Skills Shortage?

**Labour shortages:** not enough bodies

- Employer-/job-specific
- Directly hampering output

**Potential solutions:**

- Increase available pool of labour
- Increase the utility of the position
- Change outreach/recruitment techniques
- Reduce labour intensity of production

**Skills shortages:** not enough qualified applicants

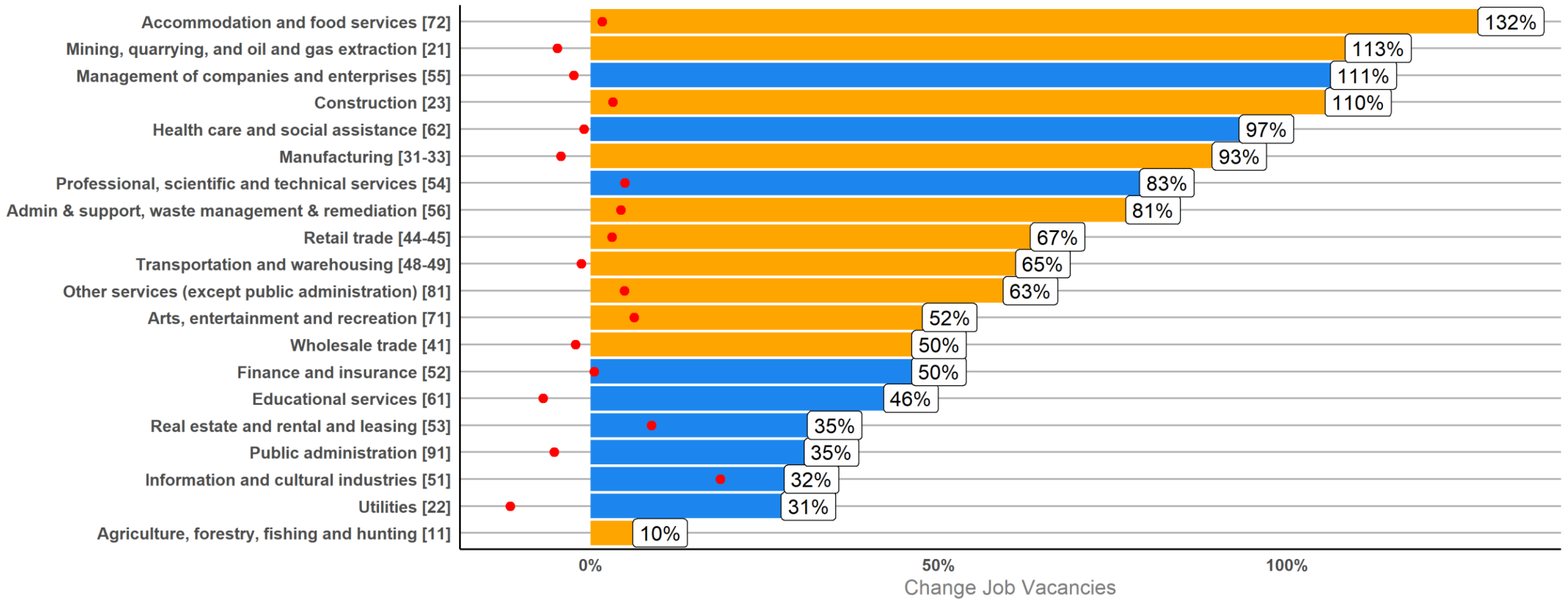
- Industry-/profession-specific
- Tradeoff between waiting and training

**Potential solutions:**

- Incentivize/reorient training and education programs
- Prioritize immigration of those with identified skills
- Expand on-the-job training opportunities

# Labour demand growth spread across a wide variety of sectors suggesting a broad mix of labour and skills shortages

Growth in job vacancies by 2-digit NAICS  
2019 Q4 to 2021 Q4

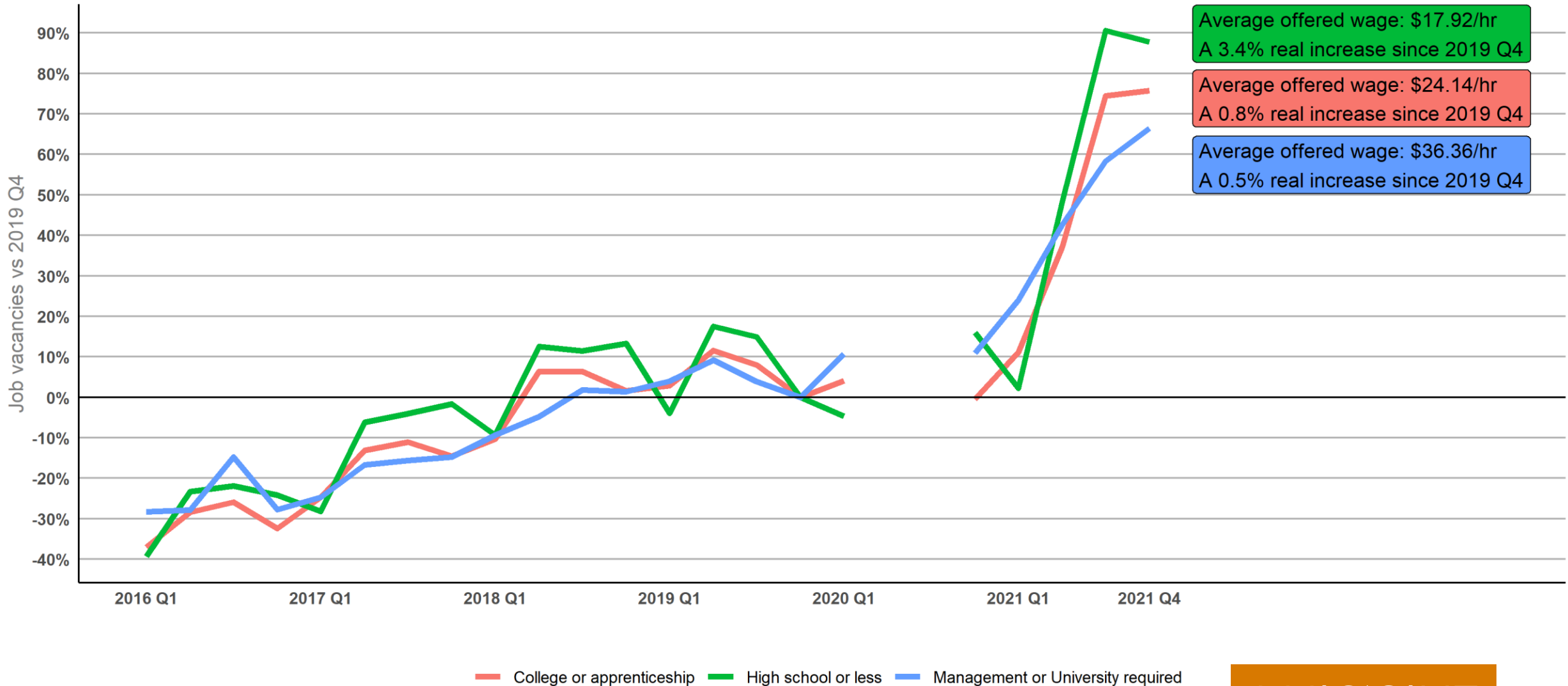


Higher educational requirements  
Lower educational requirements

Change in offered real wages since 2019 Q4

# Markets are starting to adjust labour shortages in lower education requiring occupations

Growth in job vacancies relative to 2019 Q4 by education level typically required  
Education level is the 2-digit "skill" level of an occupation



# Where do we go from here

- Without clear metrics for "shortages" we need to be clear about the problems we are trying to solve – and why
- Differentiating between labour and skills shortages is critical to this task
- Thinking long-term about new strategies and approaches for employers to tackle the foreseeable future of tight labour markets
- Avoid sudden shifts or changes in response to long-term, structural changes

# Questions?

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