# The Treasury

## Future of Work Tripartite Forum
## Information Release Document

## April 2019



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McKinsey&Company

# Future of Work Tripartite Forum: Evidence base on the Future of Work

AUCKLAND | 26 FEBRUARY 2019

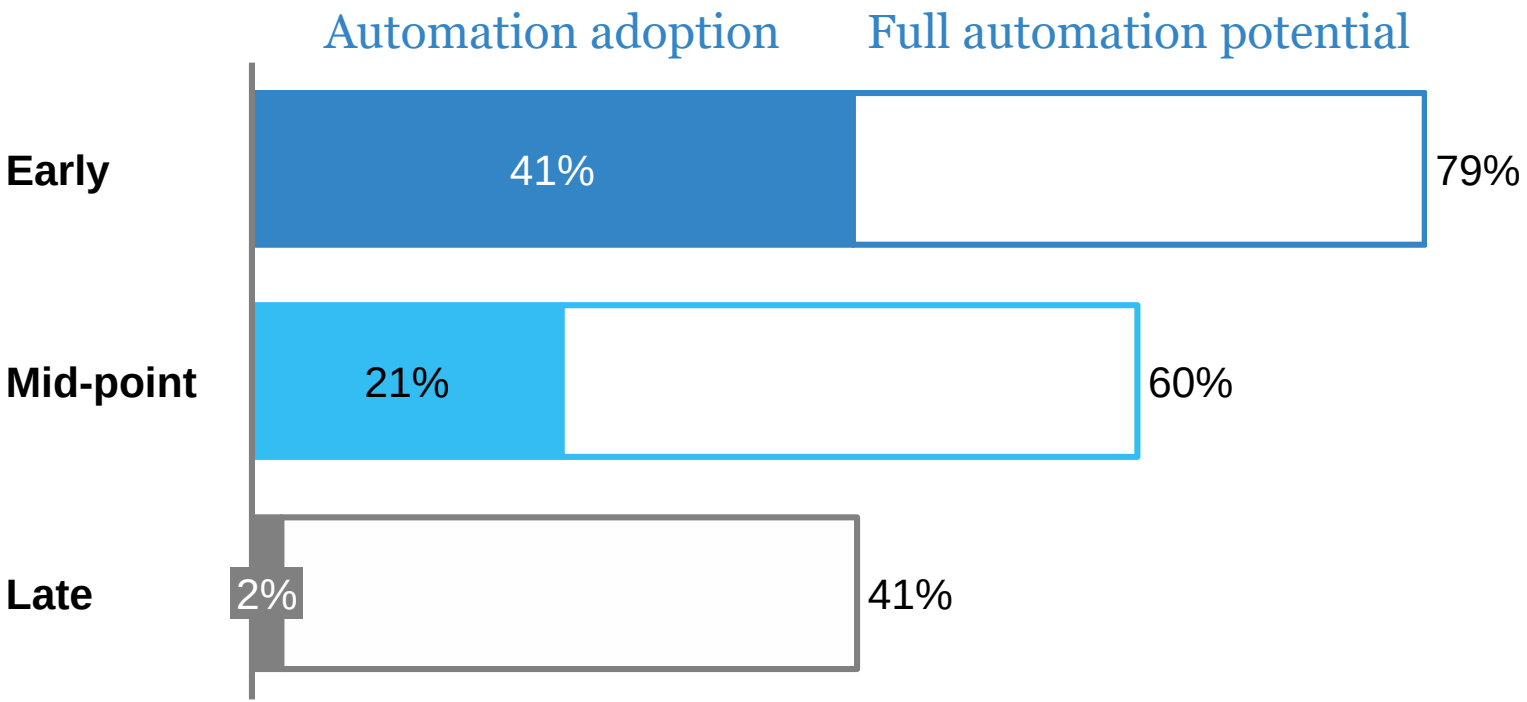
# We can share our advanced evidence base for the Future of Work in New Zealand

## At our previous meeting, we shared our preliminary analysis

## We have now conducted months of analysis for an advanced evidence base

# Our mid-point scenario estimates that 21% of work will be automated by 2030

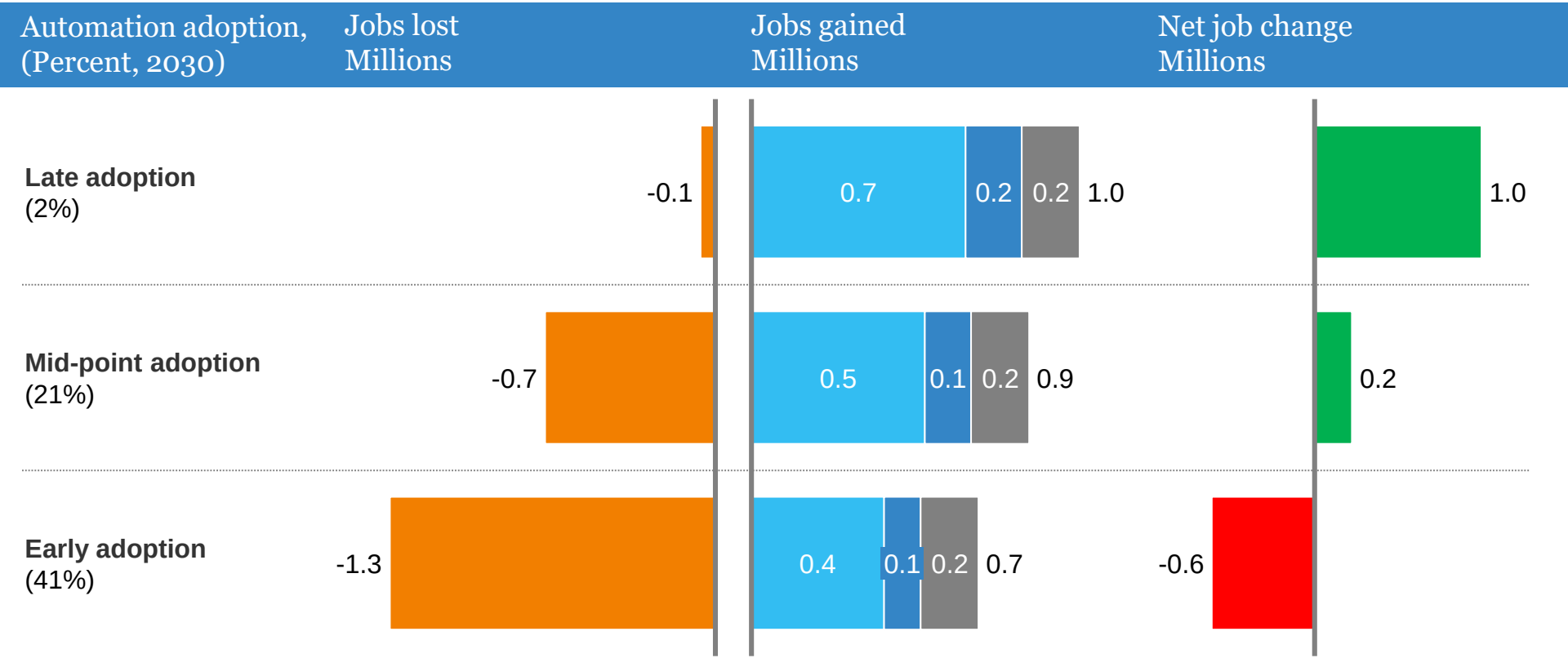
Scenarios for automation potential and adoption for New Zealand by 2030;
Percent of time spent on work activities




SOURCE: McKinsey Global Institute (MGI)

# Net 0.2M jobs are expected to be created by 2030

Jobs under various automation adoption scenarios and additional labour demand scenarios, 2016-2030



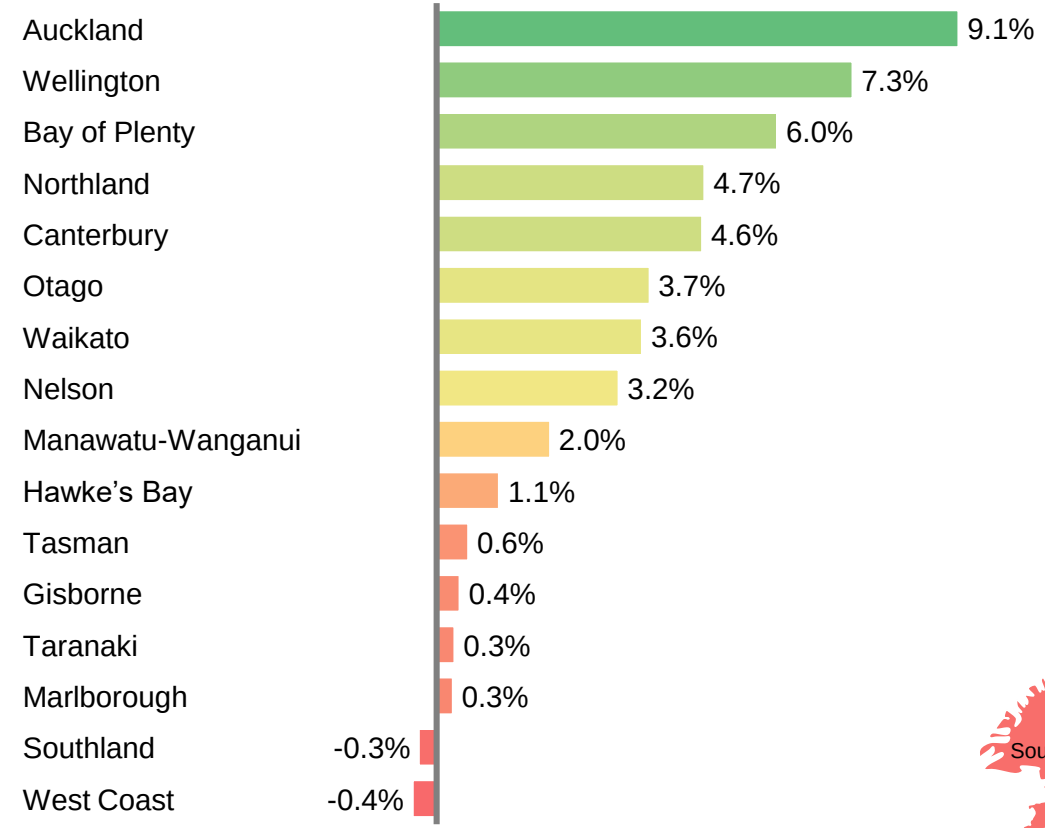

Note: Numbers may not sum due to rounding.
Base employment growth assumption includes: Employment growth rate 1.8% Population growth rate 1.1%; Labour force growth rate 1%

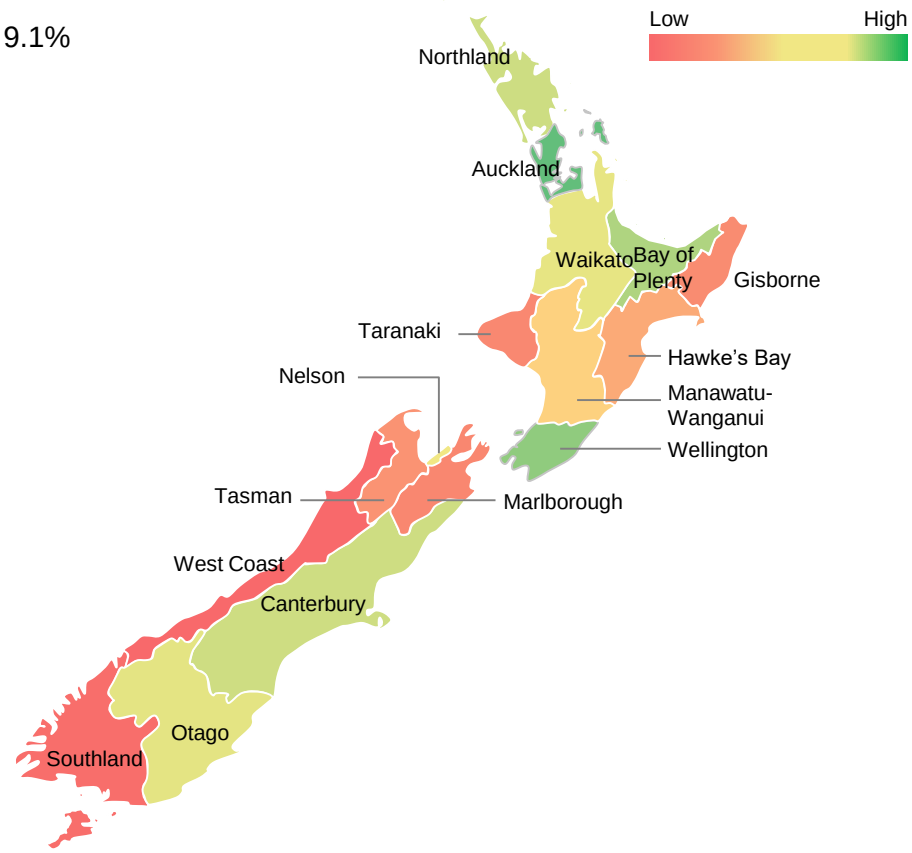
SOURCE: MBIE, Stats NZ; MGI Automation Model March 2018, Jobs Lost Jobs Gained December 2017; McKinsey Global Institute analysis

# Nearly all regions across New Zealand are expected to benefit from net employment growth

DIRECTIONAL
FUTURE IMPRESSION

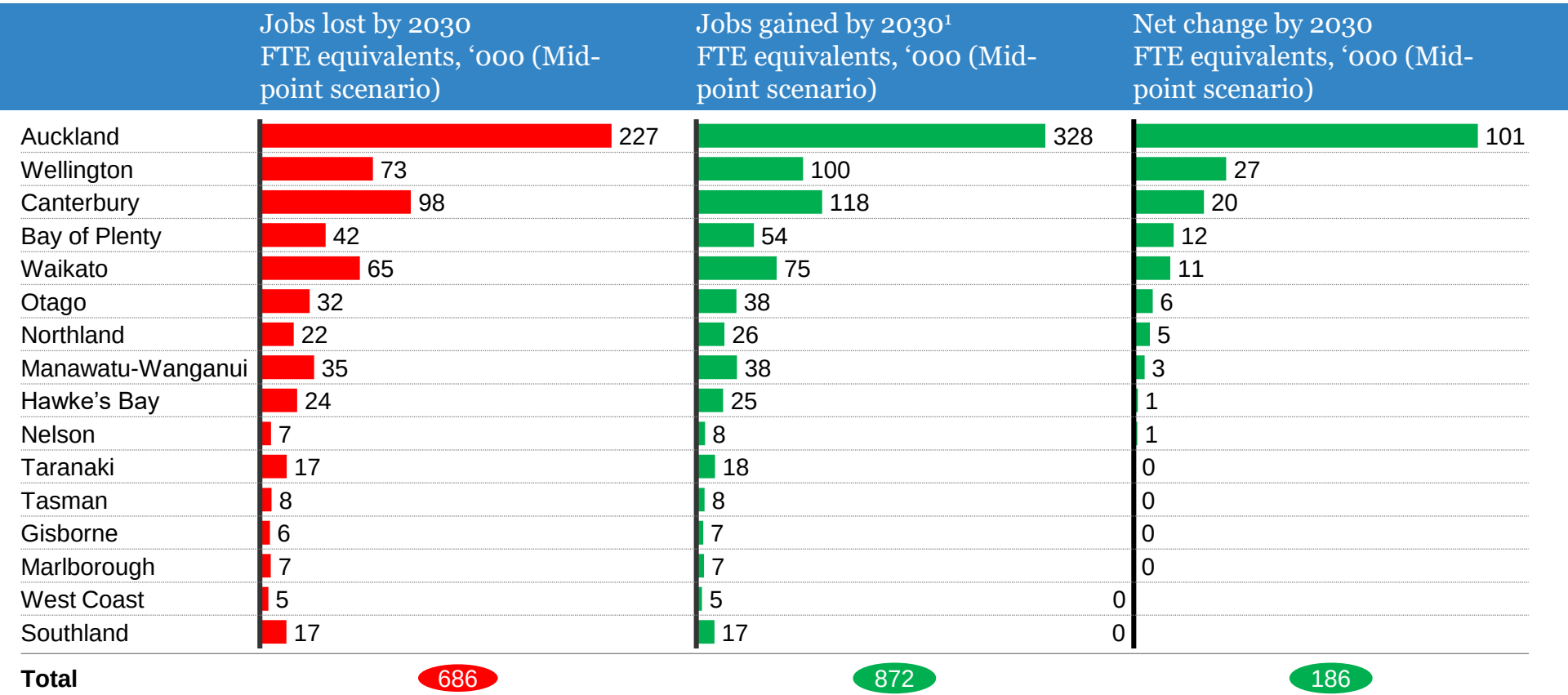
## Projected net change in jobs,[1] Midpoint adoption scenario, 2030 , %




SOURCE: Figure.NZ, Stats NZ, Oxford Economics

# Auckland and Wellington are expected to have the largest net job gain; West Coast and Southland a small net loss

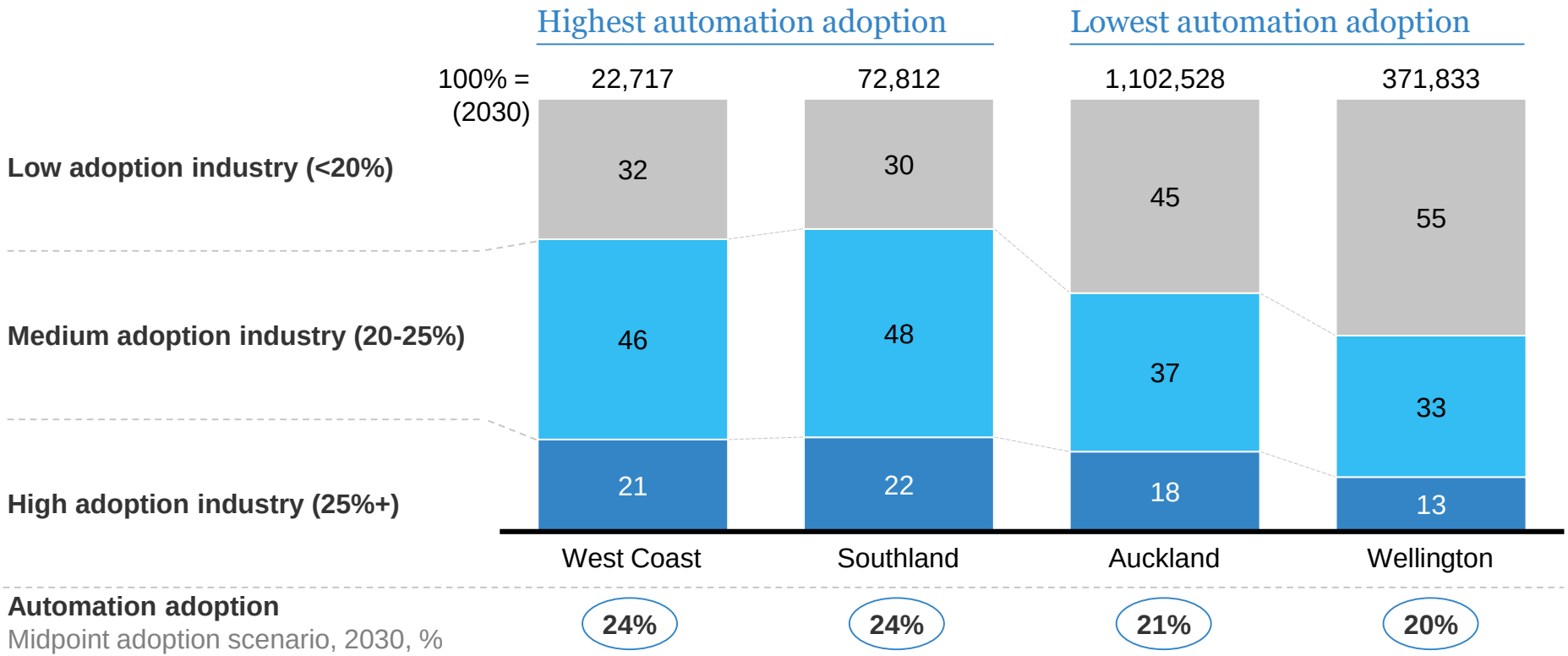



1 Includes 182k new jobs (unknown occupations) apportioned across regions based on their share of other (known) jobs created.

SOURCE: Figure.NZ, ONED, Stats NZ, Oxford Economics

# Regional job displacement differences are driven by industries and their level of automation adoption

## Regional Employment Mix by Industry,[1] %



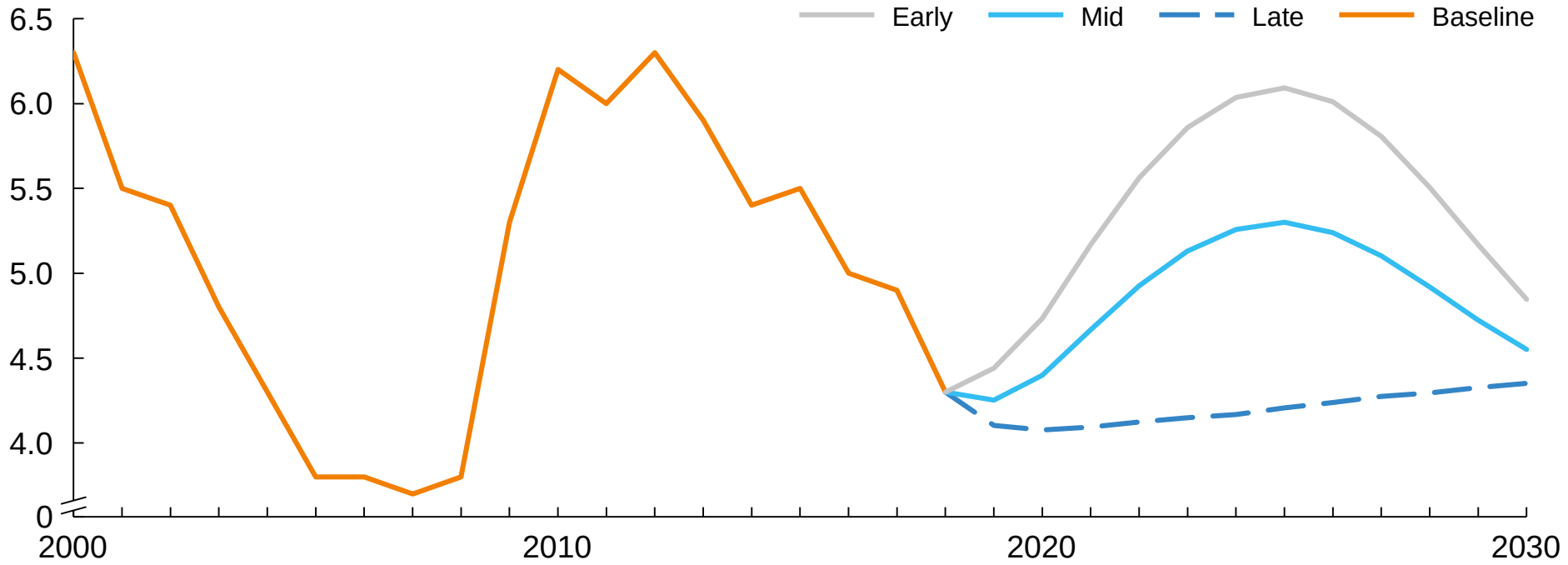

1 Based on 2013 census data

SOURCE: Figure.NZ, Stats NZ, Oxford Economics; MGI Jobs Gained Jobs Lost Model; McKinsey Global Institute analysis

During the transition period, unemployment is expected to rise to ~5.3% in the mid-point adoption scenario, but could rise up to ~6.1% under early adoption

## Unemployment rate by adoption scenario, Percent of labour force

Assumes re-employed per year of 60%[1] = share of disrupted workers re-employed within one year

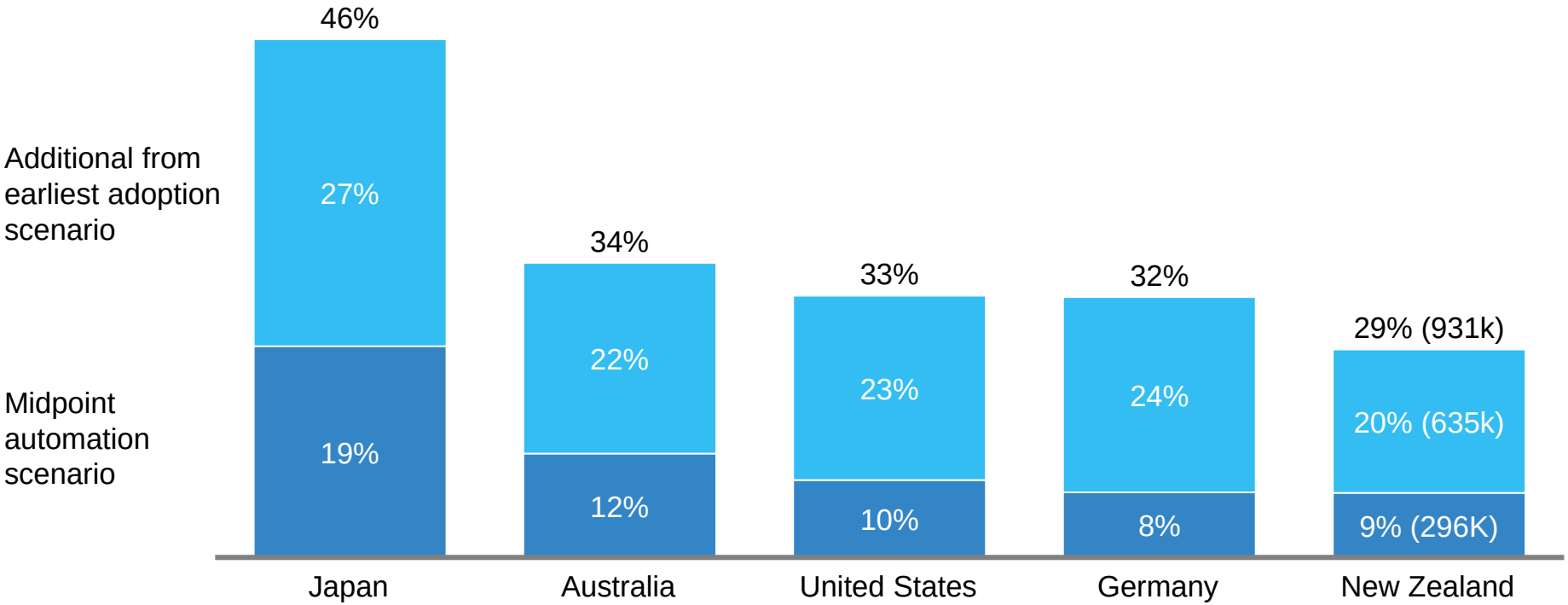



1 Academic estimates from the USA indicate that 49% and 66% of workers were re-employed within a year after getting unemployed in the 2008-9 and 2001 recessions in particular. As these were difficult times for workers to get re-employed, they provide a indication of the potential future reskilling challenges. These numbers are relatively high because the U.S. labour market is much more flexible that other markets. For many other countries, the low end was closer to 33% re-employment within a year.

SOURCE: MGI Global Growth Model, Stats NZ

# Almost one in three employees will need to switch occupations in an early adoption scenario

## Number of workers needing to move out of current occupational categories to find work, 2016–30 (trendline scenario)[1]

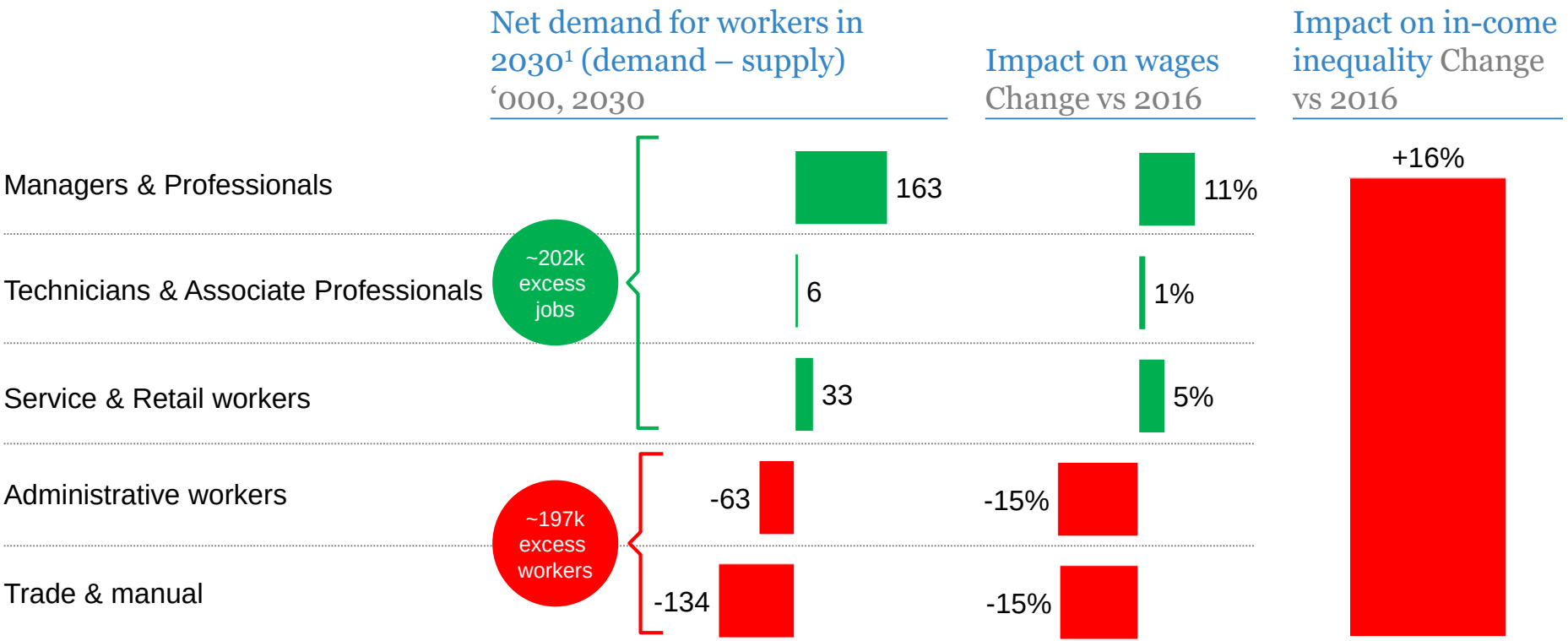



Note: Doesn't include new occupations created. NZ data is from Dec 2018 model version, other countries' information remains same as Jobs Lost Jobs Gained December 2017
1 An occupational category comprises similar occupations with similar skills. Moving out of an occupational category means moving out of both the occupational and skill level

SOURCE: MGI Automation Model March 2018, Jobs Lost Jobs Gained December 2017; McKinsey Global Institute analysis

# Automation could increase income inequality because of a divergence in labour demand and wages

## Impact of automation by 2030 (mid-point scenario)

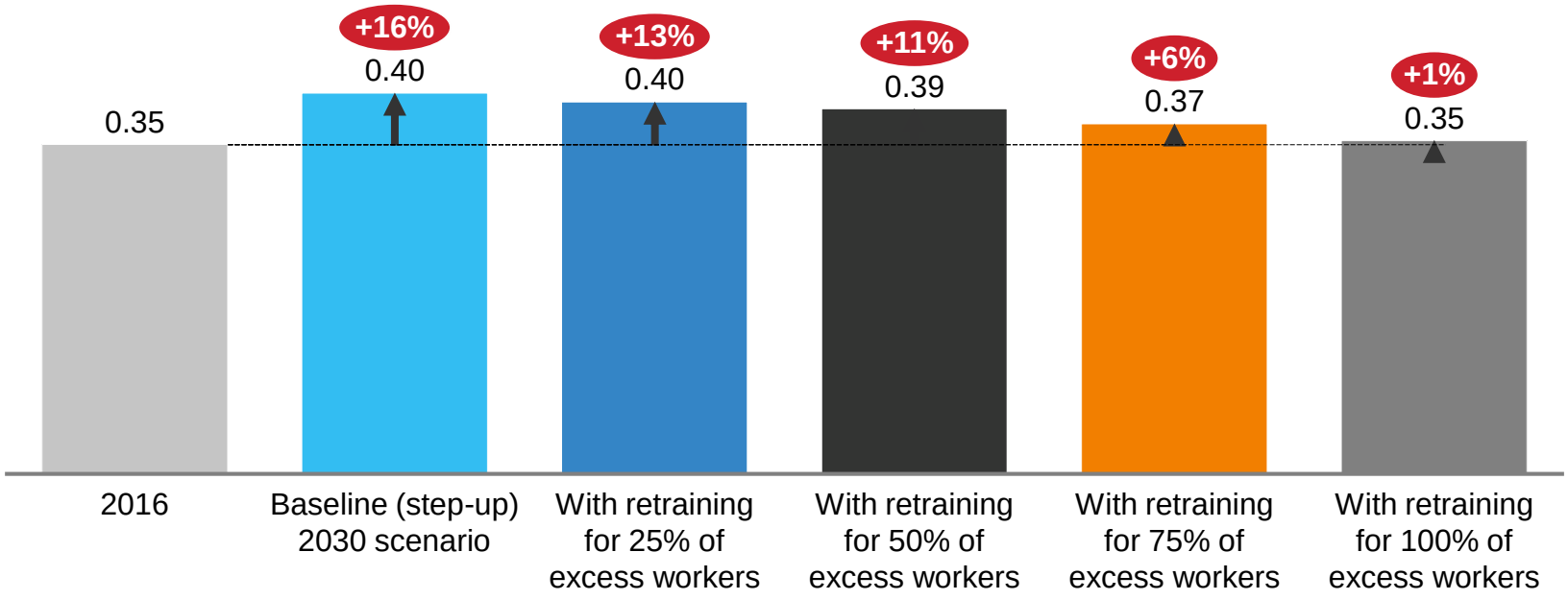



1 Step-up scenario for labour demand, with midpoint automation

SOURCE: McKinsey Analysis, McKinsey GTAP model

# Effective policies to retrain and upskill excess workers and redeploy them to unfilled high-skill jobs could reduce the impact on income inequality

## Impact on income inequality by 2030, Gini coefficient




**Number of excess workers retrained:**

| With retraining for 25% of excess workers | With retraining for 50% of excess workers | With retraining for 75% of excess workers | With retraining for 100% of excess workers |
|---|---|---|---|
| ~50,000 | ~100,000 | ~150,000 | ~200,000 |

SOURCE: McKinsey Analysis, McKinsey GTAP model

# Education reform can bridge the skills gap of the future and help create a skills-based labour market

### Life-long learning
Dynamism requires a life-long learning approach based on modular learning pathways

### Outcomes-driven skills training & credentialing
Drive positive employment outcomes through quality training programs

### Employer-informed curricula
Align education and training (incl. VET) to employer needs through collaboration between educators and employers

### Skills-based hiring
Equip and incentivise skills-based hiring practises and enable job seekers to identify and promote their relevant skills

Reforming education to bridge the skills gap of the future

### Integration
Convene stakeholders to facilitate collaboration and innovation among players

### Data and analytics
Provide transparency and insights on in-demand skills and educational outcomes

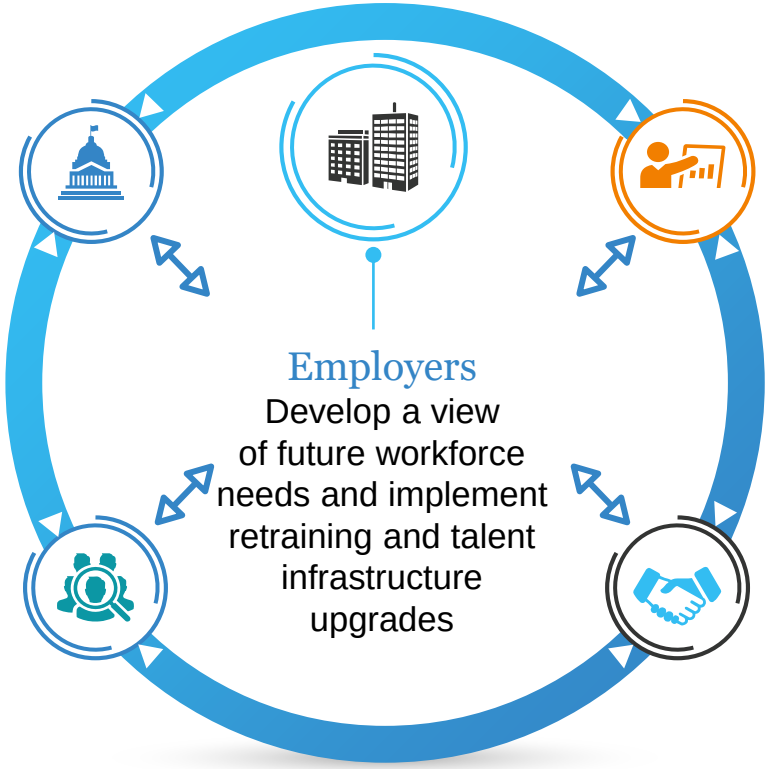
### Policy
Help shape workforce and education policy to create a skills-based labour market

### Career search / matching
Drive awareness and facilitate matching between job seekers and in-demand careers

# Reminder: A coordinated response across all stakeholders is required

## Government
Set incentives for others to act (e.g., regulations, taxes), create standards, and fund reskilling programs

## Employees
Be a proactive driver of own career path and retraining journey




## Educational institutions & industry associations
Adapt curriculums and certifications for future skills and life-long learning

## Nonprofits and philanthropy
Develop innovative approaches for more affordable and effective reskilling

**In a recent McKinsey survey of 1500 top executives, >50% saw corporate employers as the primary leaders in addressing the skills gap from automation/digitisation, followed by federal government at ~15%**