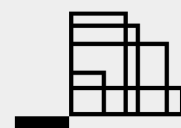




Qatar's manufacturing sector:

Bridging the skills gap to drive sector growth



pwc

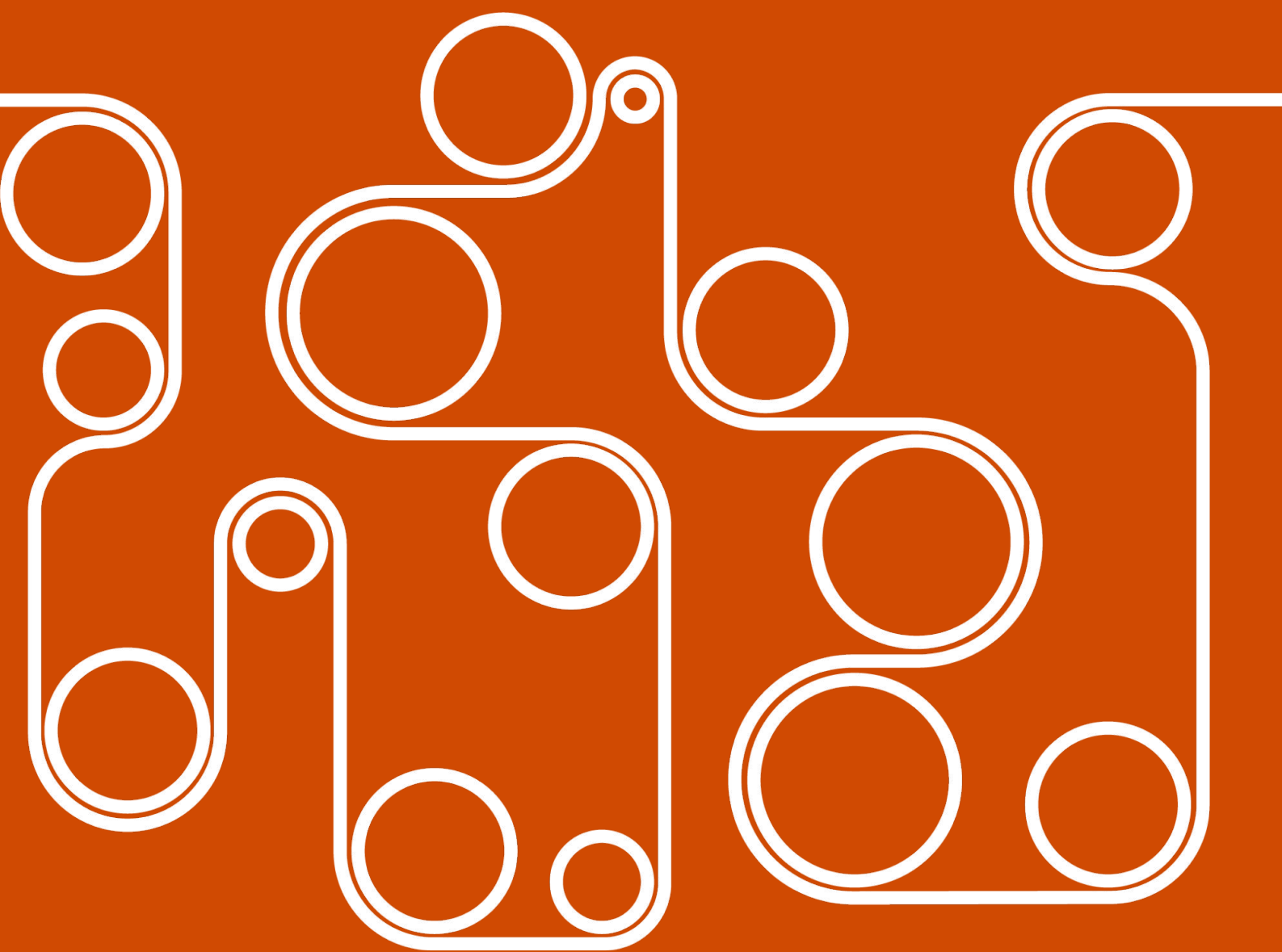


Table of Contents

01

Overview of the
manufacturing
sector in Qatar

02

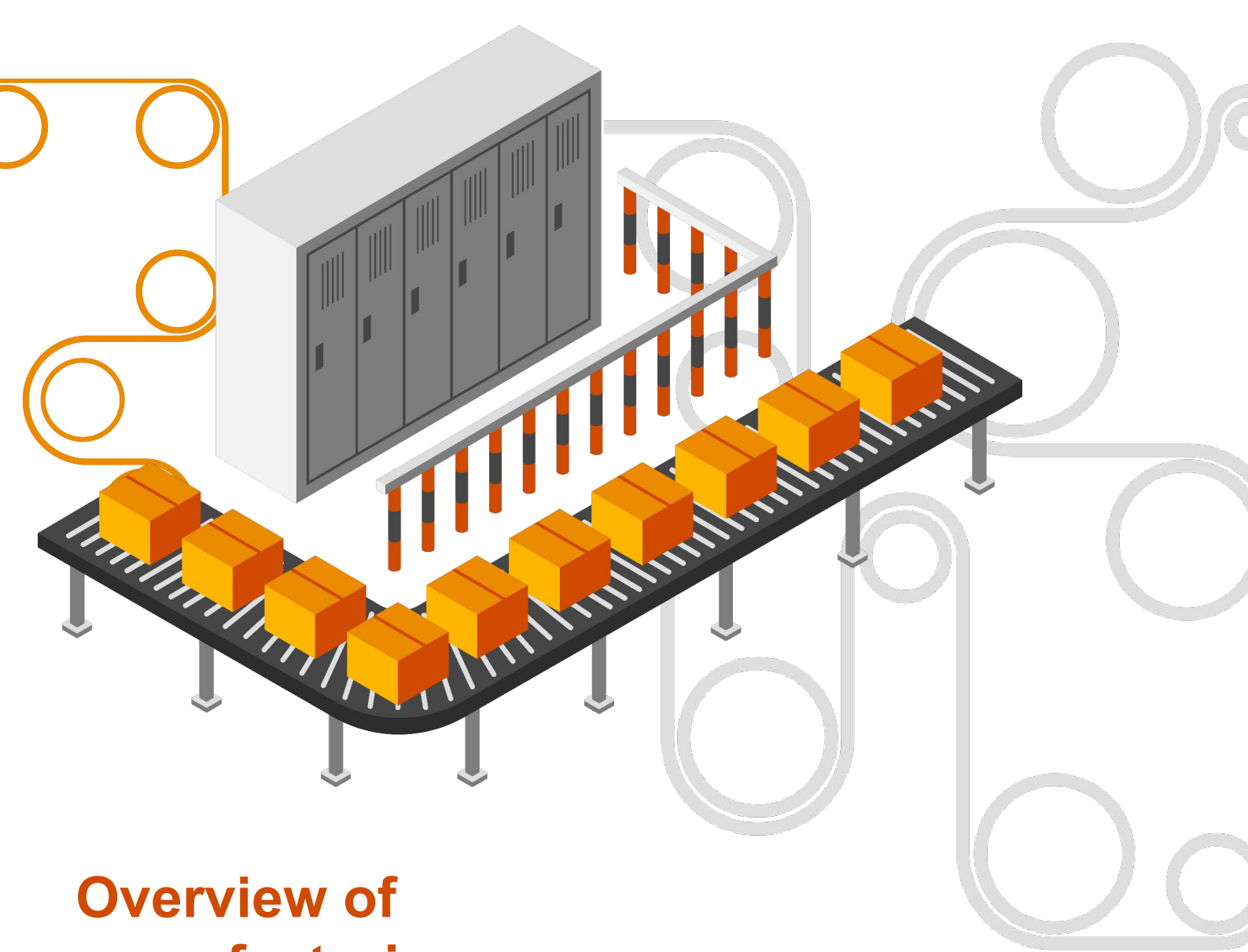
The skills gap

03

Closing the gap

04

Conclusion



Overview of manufacturing sector in Qatar

The manufacturing sector is expected to play a key role in Qatar's National Vision 2030 programme and the diversification of its economy. Although absolute manufacturing Gross Value Added (GVA) increased year after year between 2000 and 2016, it has since experienced some minor declines. As a result, Qatar's manufacturing sector, which once had the highest contribution to Gross Domestic Product (GDP) among all GCC countries, fell to the lowest contribution in 2020, accounting for just 7.2%¹ of GDP. During this time, the sector's contribution to employment fell as well.

Driving economic diversification is a top priority for Qatar, and the country's National Development Strategy has identified six priority sectors to address this:

Finance

Professional and Scientific Activities

Tourism

Logistics

Communications

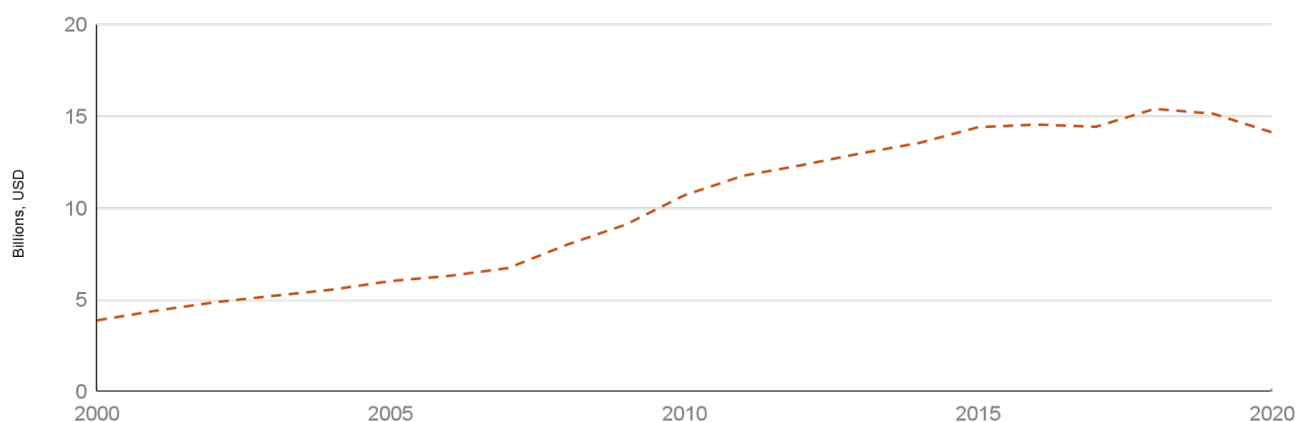
Manufacturing

¹ Source: World Bank Data

The Qatar Manufacturing Strategy was launched to support the nation in meeting its manufacturing sector growth aspirations. It identifies key pillars for enabling growth including increasing FDI, encouraging entrepreneurship and SMEs in the sector, improving access to local finance, increasing international trade, encouraging and financially supporting innovation and developing local talent. While the manufacturing sector as a whole has significant scope for growth and development, key strategic sub-sectors with readily available manufacturing inputs and reasonable local demand with potential for export have been identified. However, growth in these sectors requires localisation of key skills and occupations in Qatar.

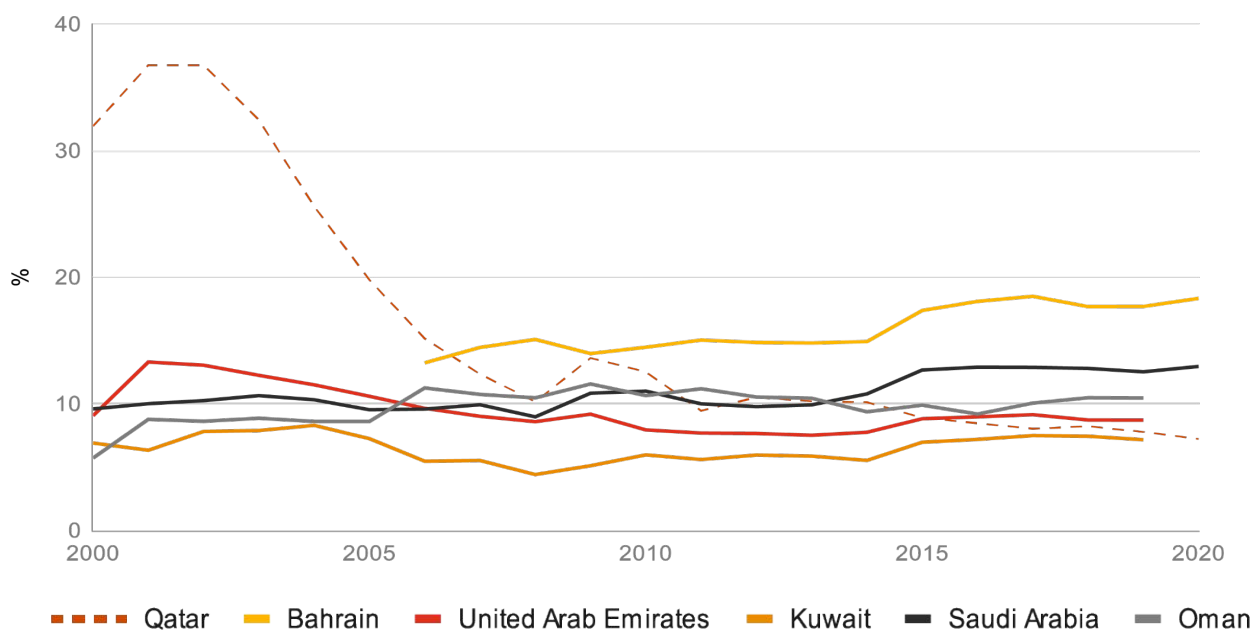


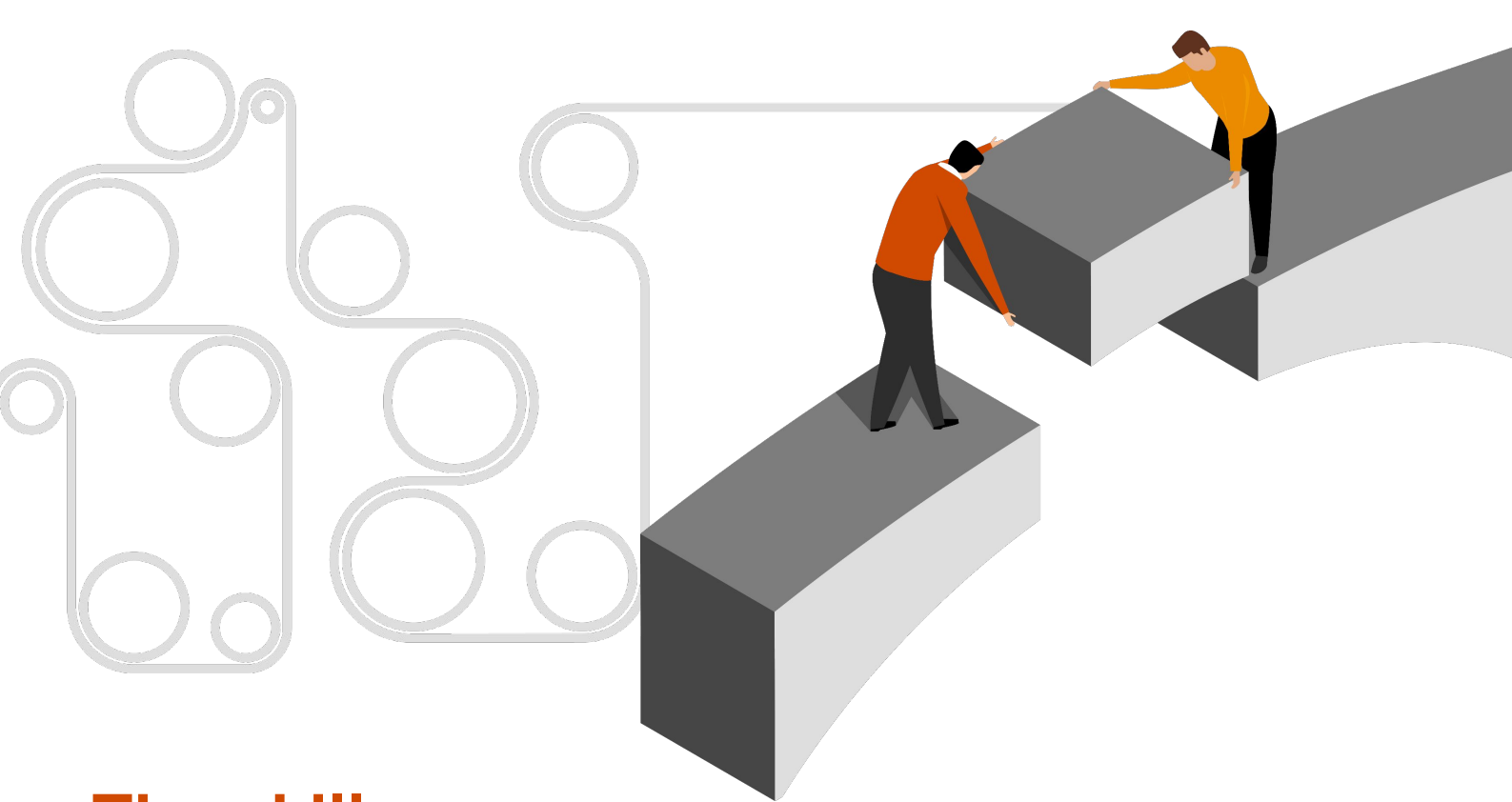
Qatar's Manufacturing Value Added (constant 2015 prices)



Note: While the overall Manufacturing Value Added has been growing at a compounded annual growth rate (CAGR) of 6.69% over the past 20 years, its contribution to Qatar's GDP has been dropping.

Manufacturing Value Added (% of GDP)





The skills gap

Two of the nine strategic enablers identified in the Qatar Manufacturing Strategy are focused on developing Qatar's local and international talent pools. Qatar has recognised that notions of In-Country Value (ICV) apply equally to value-add through human intervention in the manufacturing value chain as they do to other inputs such as raw materials. As a result, Qatar's manufacturing sector will continue to grow organically through the localisation of key skills and competencies.

Current skills gaps are not unique to the country's manufacturing sector, but have posed a challenge to economic diversification across the region. This skills mismatch can be attributed to several factors that have impeded the sector's access to skilled labour to meet expected demand. While there may be an adequate supply of highly skilled individuals willing to work, skills gaps often arise when the skills of the available workforce do not match those needed for the roles that need to be filled. This is frequently the result of "leakage" from the local manufacturing talent pool, especially due to a lack of incentives for the local workforce, particularly females, to become economically active.

Labour market and immigration policies have also caused an outflow of talent, particularly for trainee positions in Engineering that are not fully accessible to foreign graduates of universities in Qatar. Consequently, many such skilled graduates leave Qatar and seek employment elsewhere.

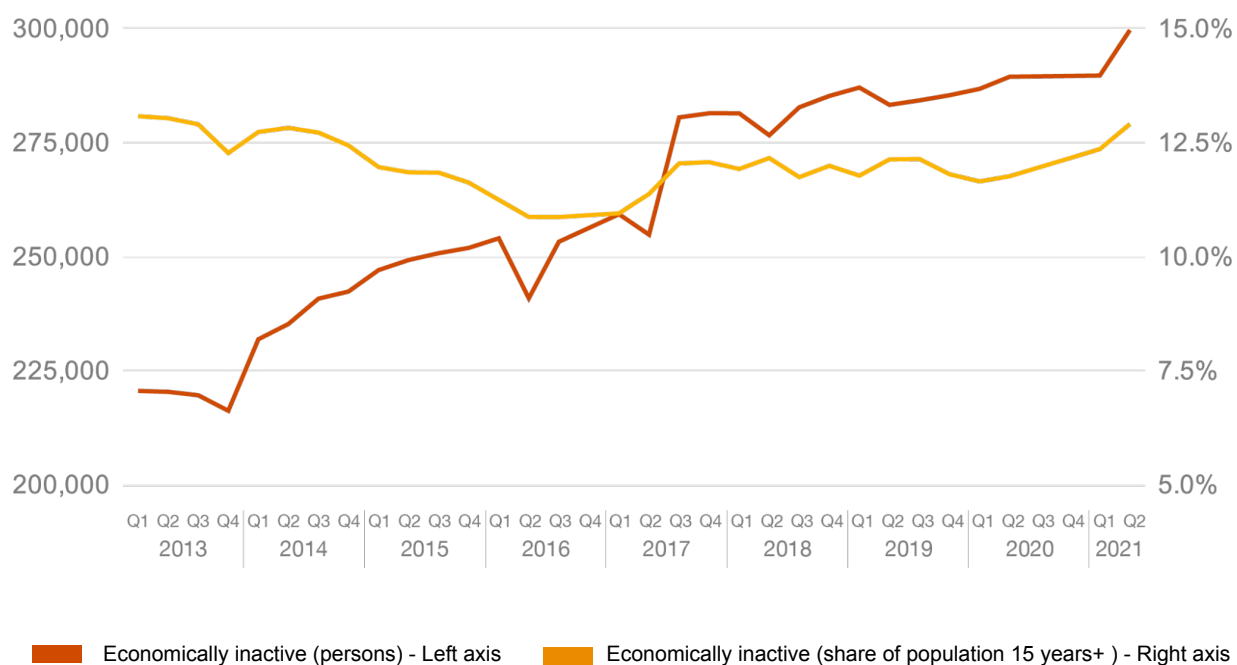
In addition to this high degree of variance in Qatar's labour market, the skills gap may also be attributed to the relatively static structure of the education sector. As the economy evolves, it is essential that the education sector keeps up and adjusts its offering to meet the changing demand for skills. Unfortunately, this has not been the case so far.



Skills gaps often arise when the skills of the available workforce do not match those needed for the roles that need to be filled.

Another key contributing factor is that people with the relevant skills are not actually entering the workforce, but instead choosing to remain economically inactive. The economically inactive population in Qatar (those of working age who are not currently employed or actively seeking employment) has been steadily increasing in recent years, reaching almost 13% in mid-2021. The average age of first-time labour market entrants has also increased due to lack of incentives for entry-level employment.

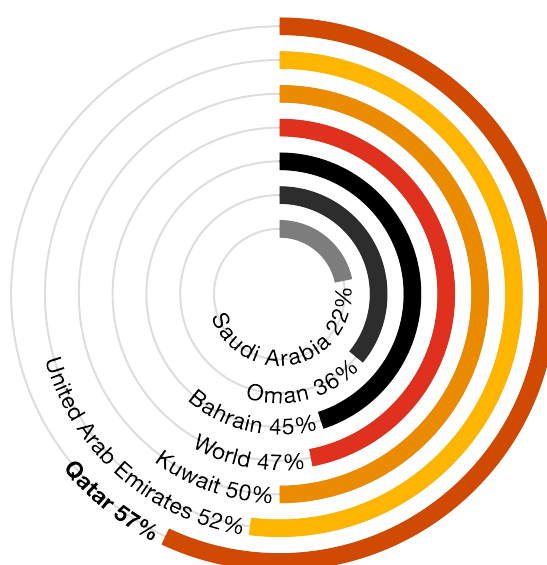
Economically Inactive Population



Source: Planning and Statistics Authority

Females, represent a large proportion of untapped talent in Qatar, with females accounting for just 14%² of the workforce – a significantly lower number than the MENA and global averages of 20%³ and 39%⁴ respectively. This is despite the fact that women are more likely to attend universities in the region, particularly in Qatar where the ratio of female to male enrolment in tertiary education has averaged 1.87⁵ over the last 20 years. Therefore, despite the female participation rate in Qatar (57%)⁶ being one of the highest in the region, it is still significantly lower than that for males, with a total participation rate of 87%⁷. As a result, a significant proportion of females with the necessary qualifications are unemployed and a large segment of these females with sought-after skills will never enter the workforce.

Female Participation Rate, 2019 (%)



Source: World Bank

² Source: Planning and Statistics Authority

³⁻⁷ Source: World Bank

This proportion of economically inactive individuals with relevant qualifications represents a large, untapped talent pool; therefore, the challenge is to design policies that entice these individuals to enter the workforce. However, even if these academically qualified individuals enter the labour market, their lack of relevant experience will likely still result in a skills gap.

Labour misallocation may also be partially attributed to Qatar nationals, particularly those with STEM (Science, Technology, Engineering and Mathematics) degrees, preferring to work in the public sector. The wages, prestige, benefits and the security of public sector employment often makes the private sector appear less attractive in comparison.

According to the Labour Force Survey⁸ conducted during the first quarter of 2021, only one-third of unemployed Qatari males of working age were willing to work in the private sector; the rate for unemployed Qatari females was even lower at just 17%⁹.

While Qatar's economy will continue to attract expatriate workers to fulfil its developmental goals, the factors discussed in this paper will lead to the underutilisation of local talent. Expatriate workers account for almost 95%¹⁰ of total employment in Qatar; while this is in line with the expatriate proportion of the total economically active population, it demonstrates Qatar's reliance on the skills of international employees. This is particularly true for the manufacturing sector, where expatriates accounted for 98%¹¹ of the workforce in 2019.

Currently in the manufacturing sector, demand for labour is equal to the supply but according to our forecasts for labour within the sector, it is estimated that a skills gap of more than 20,000 workers will emerge between 2022 and 2030. This represents a massive opportunity for growth.

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Qatar Manufacturing Sector Skills Gap 2022-2030

Sum of Demand

55,000-60,000

Sum of Supply

30,000-35,000

Sum of Gap

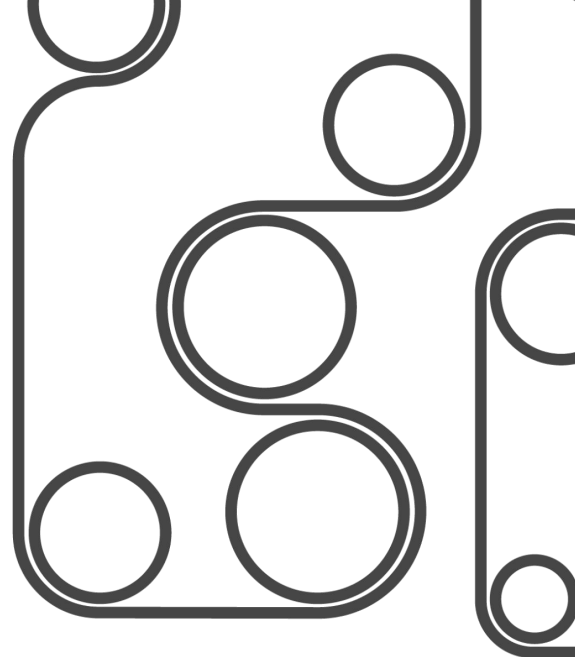
20,000-25,000

Source: PwC

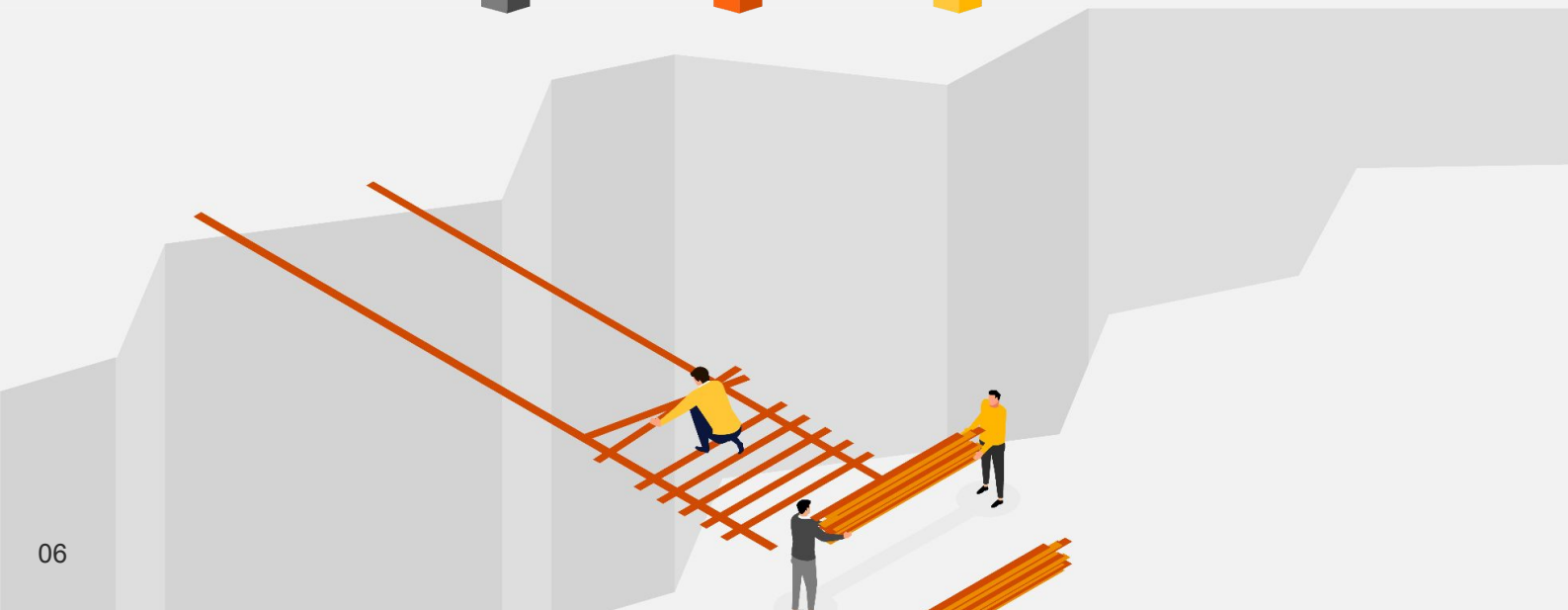
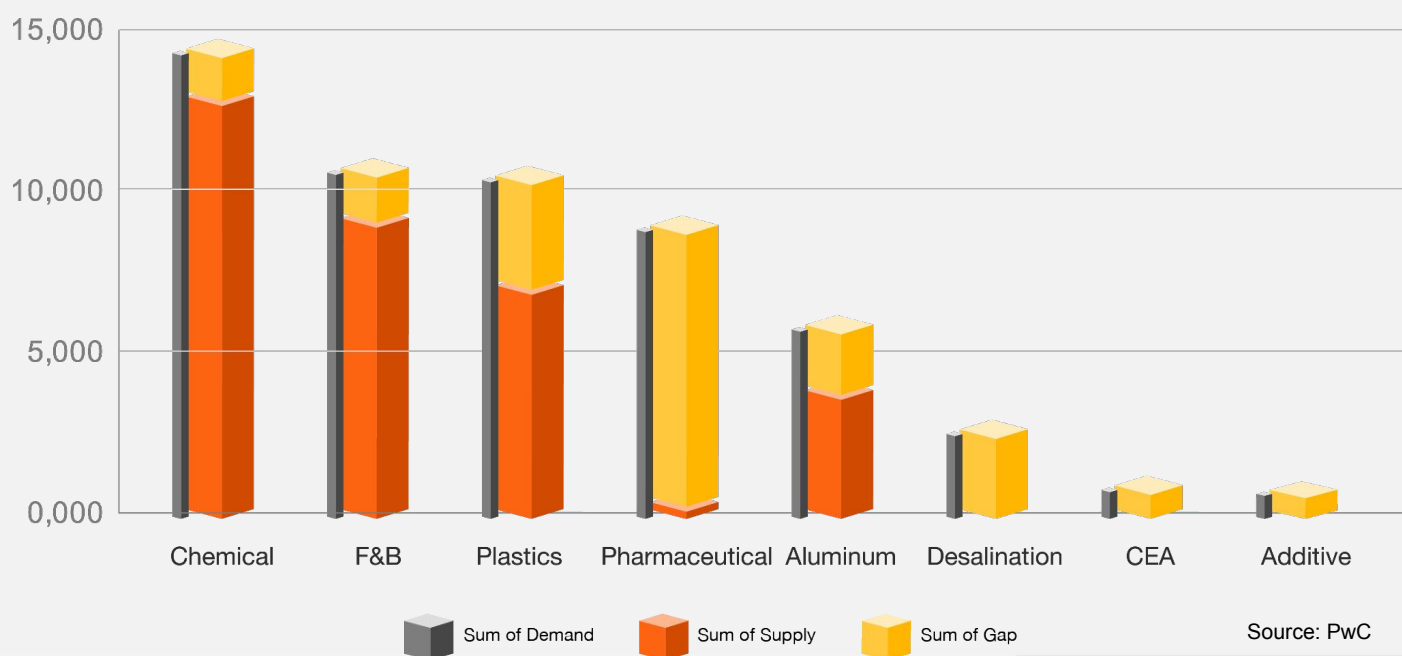
⁸ https://www.psa.gov.qa/en/statistics/Statistical%20Releases/Social/LaborForce/2021/LF_Q1_2021_AE.pdf

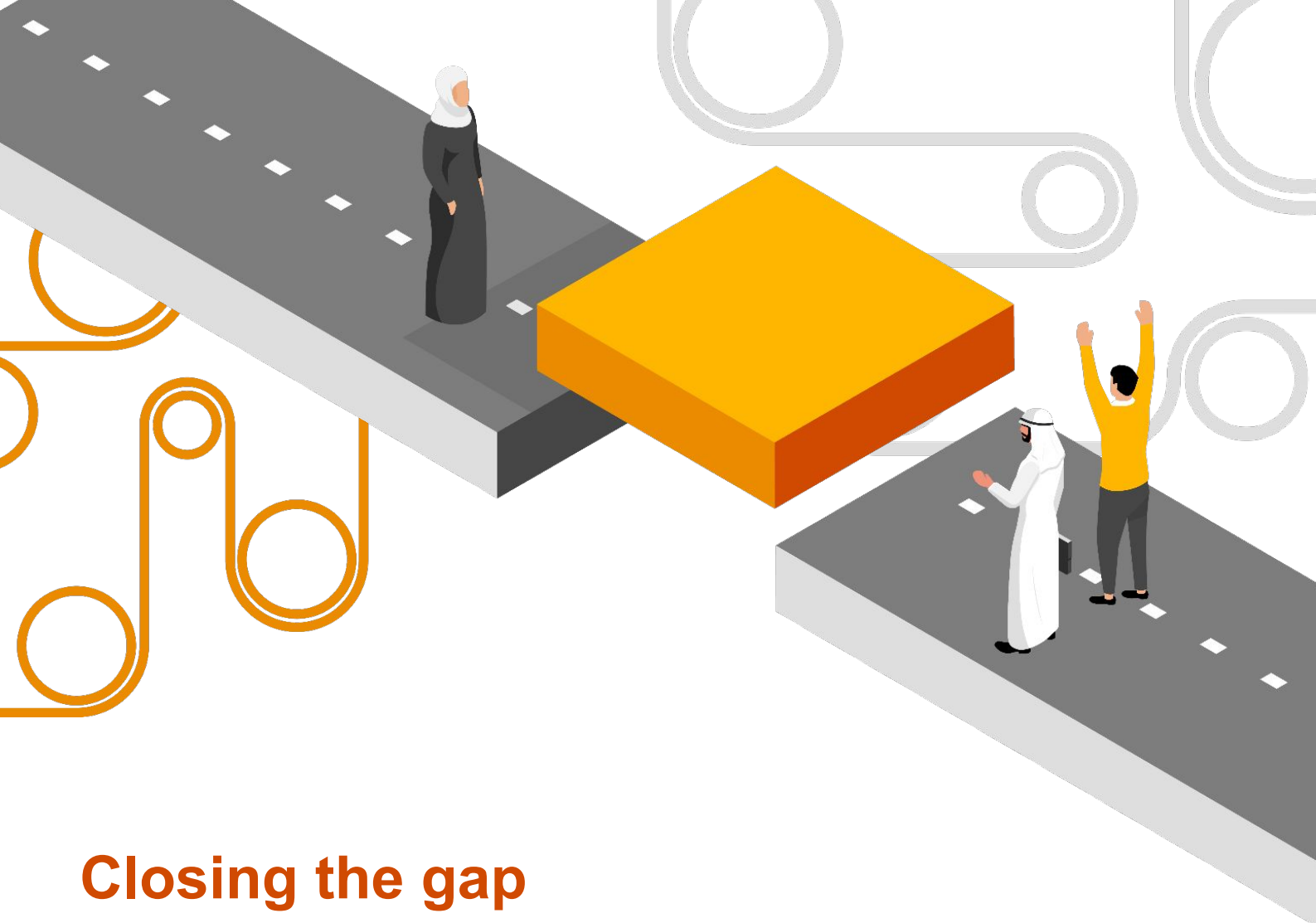
⁹⁻¹¹ Source: Planning and Statistics Authority

According to our analysis of strategic sub-sectors, the pharmaceutical sub-sector is expected to have the largest absolute skills gap between 2022 and 2030, with current supply rates only meeting 4% of potential demand. The largest relative gaps, however, are in the Controlled Environment Agriculture (CEA), Additive Manufacturing and Desalination sub-sectors, which have the least amount of current transferable talent. The skills gaps are expected to vary across sub-sectors, with those that are most reliant on specialist skills experiencing the largest labour supply shortage. Overall, it is unlikely that the current supply can meet the level of demand, therefore, measures should be taken now to ensure the sector has the capacity to grow.



Skills gap by sub-sector 2022-2030





Closing the gap

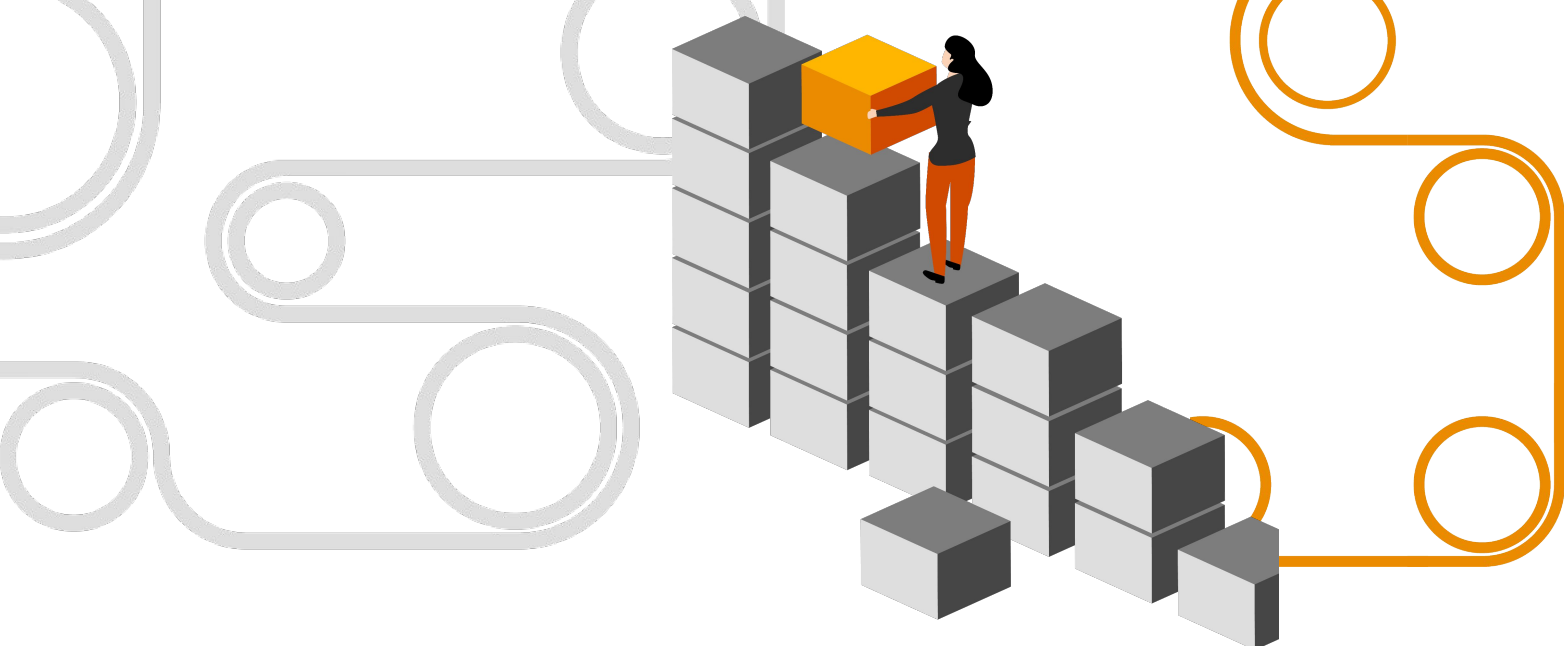
The economic gains of eliminating this potential gap feed through two channels. Firstly, the value added per worker increases if they have the appropriate skills to carry out the role, thereby increasing productivity. Secondly, having enough skilled workers to meet all the demand will allow for an increase in production, increasing the sector's gross value added and overall contribution to growth. Even if other pillars of the Manufacturing Strategy are successful, such as improving access to finance and promoting FDI, an actual increase in real production remains dependent on the availability of appropriate skills to fill emerging roles and facilitate sector development. Long-term efforts made now to fill these skilled roles will ultimately result in a higher level of expertise among Qatari nationals and support the development of the local talent ecosystem.

As Qatar continues its path of diversification and strives to achieve its Vision 2030 objectives, closing the skills gap should be a key priority for the manufacturing sector's growth.

Priority action areas should be selected based on the following criteria: first, the size of the talent gap, and second, the potential for GDP gains.

Our analysis shows that if the talent demand in the Qatar pharmaceutical manufacturing sub-sector alone is met, the sector is likely to contribute an additional QAR 4.7bn (USD 1.3bn) to the GDP in 2030.

“Closing the skills gap should be a key priority for the manufacturing sector's growth.”



GDP growth can be maximised if appropriate action is taken and if National Vision Programmes are supported by sector growth. Collaboration among key stakeholders will be required to realign labour force skills and ensure they are suitable for driving the growth of the manufacturing sector. The necessary interventions will require action from government ministries, the education sector and manufacturing businesses. These initiatives will fall under three distinct priority areas: **talent planning**, **talent attraction** and **talent development**.

Learning from the successful practices of countries with advanced manufacturing sectors, a national Skills Observatory can be established to assess the expected demand for talent. The Skills Observatory's role will be to direct analytics and interventions for manufacturing skills in order to meet the manpower requirements of various manufacturing subsectors. This will be accomplished through three key functions: **skills analytics**, **intervention governance** and **impact assessment**.

Skills analytics entails maintaining a skills and qualifications framework, updating demand forecasts based on manufacturing strategy updates, liaising with industry participants for talent supply data, and generating skills analytics for decision making and identification of potential gaps. Meanwhile, the intervention and impact assessment roles oversee the applicability, feasibility and implementation of each of the interventions suggested in the following sections. They should also engage with stakeholders on the interventions and monitor their progress, assessing effectiveness and recalibrating measures as needed.

Attracting and developing talent will also require action from government entities in collaboration with ministries.

	Entity	Role
Plan for talent	Ministry A	Evidence based planning and forecasting of talent needs; monitoring and evaluation of interventions
Attract talent	Ministry B	Labour policy to support talent requirements
Develop talent	Ministry C	Sustainable skills generation linked to Labour market needs

To support future growth, we have prioritised five interventions to bridge the talent demand and supply gap in the manufacturing sector.

We propose three initiatives for skills development. To begin with, we identified the need for academic institutions to modify their programmes to accommodate larger cohorts. We also propose that ministries offer targeted scholarships to students pursuing subjects that are only minimally or not catered to by academic institutions in a particular list of selected skills relevant to strategic manufacturing sub-sectors. Furthermore, we recommend developing and subsidising technical training related to strategic sub-sectors.

Our second set of initiatives is aimed at attracting talent and includes a call to action from ministries. We identified a need for ministries to develop an enhanced incentives framework for nationals employed in the private sector, with the intention of closing the wage and benefit gap between the public and private sector manufacturing.

The final set of initiatives focuses on revising and realigning visa requirements for expatriate workers, further increasing the availability of appropriately skilled workers.

- Adjusting academic programmes to increase cohort size by 50-100% for targeted mid-expertise skills that are currently underserved by academic institutions, such as various engineering, pharmacy, biochemistry and food sciences disciplines, has the potential to increase supply even further.
- The successful implementation of technical training initiatives is expected to add additional workers to the manufacturing labour supply. This means developing and subsidising technical programmes applicable to strategic sub-sectors with the aim of accelerating the employee career progression through skill development and retaining employees from non-strategic sectors.
- Offering specialised scholarships and incentivising nationals to join the private sector are crucial for closing the skills gap at the highest levels of skills. Specialised scholarships should focus on advanced skills that are not, or are only minimally catered for by academic institutions, where the demand may not be sufficient to introduce a new discipline. Aquaculture, horticulture, agronomy, rapid prototyping and microbiology are examples of such skills.
- Incentivising nationals, should focus on national talent at mid to advanced skills. Our analysis indicates that wage subsidies for national talent will close the wage differential between working in the public and private sectors; this should encourage those with the desired skills to enter the manufacturing sector workforce instead of joining the public sector.

We have used estimation techniques based on a number of reasonable assumptions to carry out analysis of the potential impact of each of these initiatives. Based on our analysis, we estimate that if all initiatives are implemented successfully, the largest skills gains will be achieved by revising visa policies and realigning admissions systems. Specifically lowering restrictions for semi-skilled and unskilled expatriates from a predefined list of countries where the required skill sets are available.

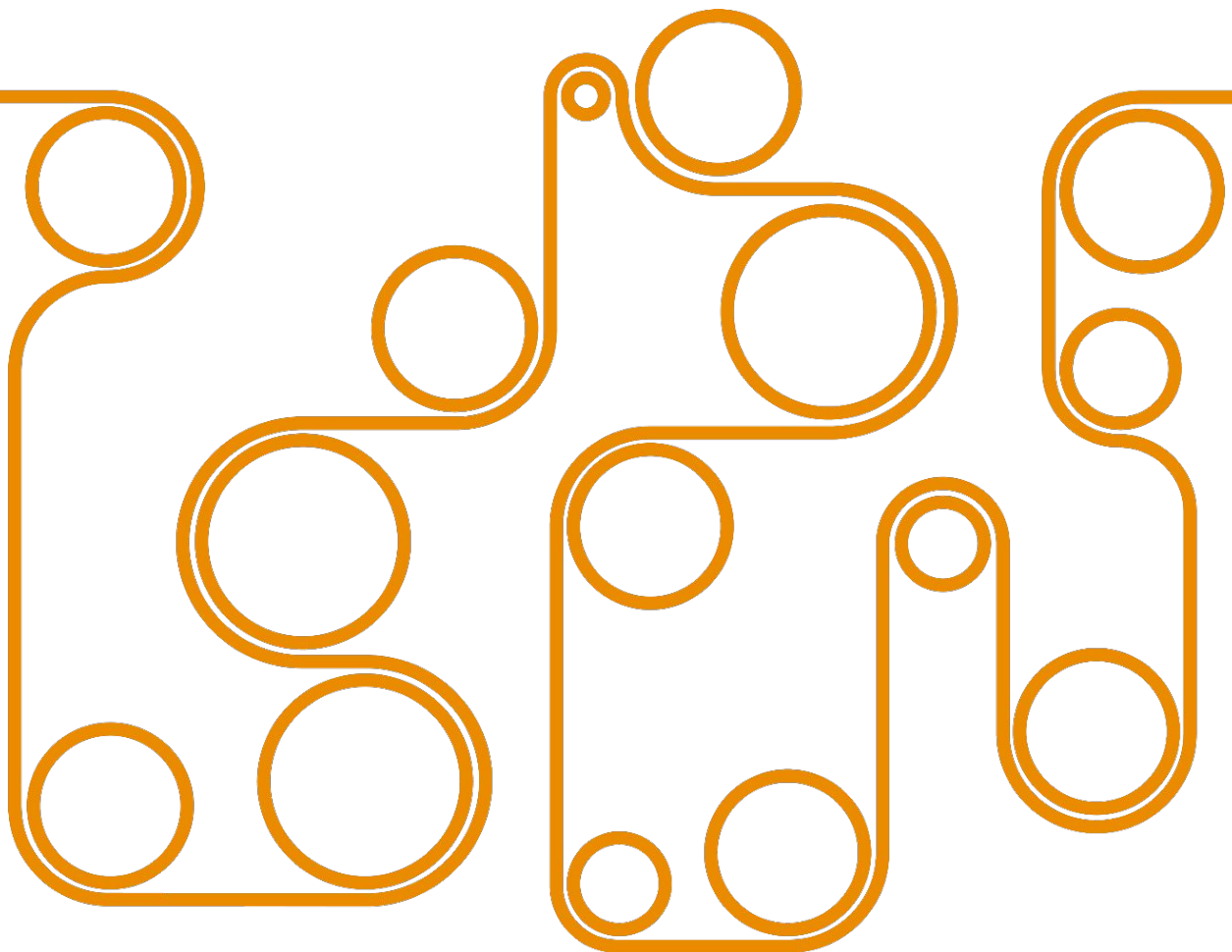
If all five of these initiatives are implemented concurrently, the cumulative expected benefits are estimated to be sufficient to bridge the expected skills gap between 2022 and 2030.

To support the development of appropriate skills and competencies vital to the growth of the manufacturing sector, key stakeholders need to work collaboratively to implement recommended initiatives.

Conclusion

The manufacturing sector in Qatar is a priority sector under the National Vision 2030 programme and a key contributor to the government's economic diversification agenda. Action is needed to ensure that the sector achieves its full growth potential. A large skills gap is expected as a result of skills leakage across the manufacturing sector and due to structural challenges, that include the misalignment of the education sector with the evolving economy. It is critical that these challenges are addressed through collaborative action among key stakeholders in order to ensure the growth of the manufacturing sector.

The initiatives proposed in this paper, if successfully implemented, will provide the required momentum to increase output and further develop targeted sub-sectors, thereby driving growth in the manufacturing sector. Additional economic gains will also be generated through increased value added per worker, contributing to the sector productivity. The earlier these actions are taken, the sooner the benefits will begin to filter through to the sector, increasing the overall economic growth, strengthening the non-oil economy and supporting strategic government objectives.



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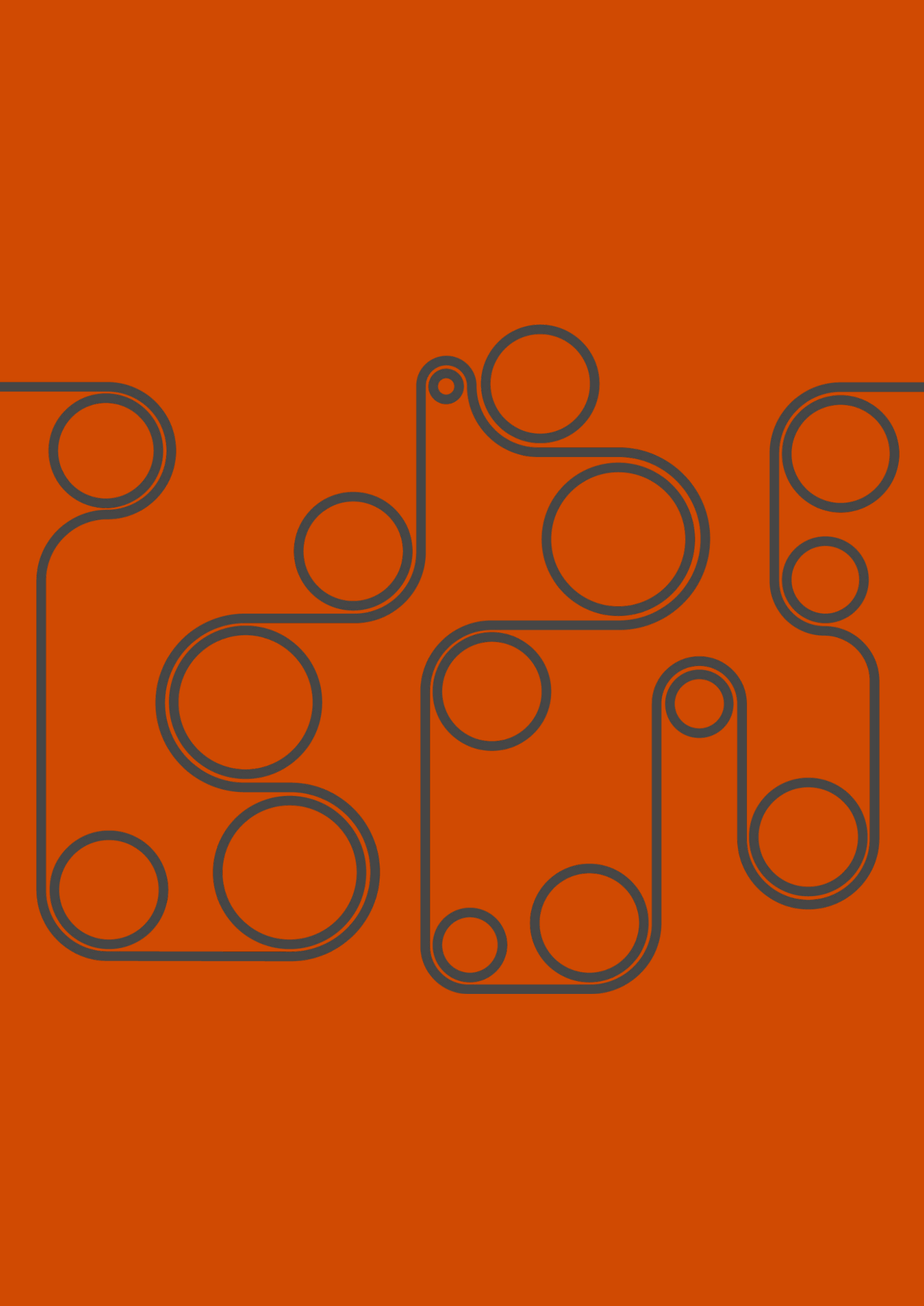
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