



August 2021

# Living with volatility: Survival, revival and growth

Best practices of automotive suppliers in India



# Foreword

The second wave of the COVID-19 pandemic has been one of the most challenging humanitarian crises ever. Economies and industry supply chains across the globe witnessed severe disruptions and the Indian automotive industry was no exception. The vehicle industry in India witnessed two successive years of de-growth – of 14.6% in FY20 and thereafter, of 13.6% in FY21. A sluggish economy accompanied by a cyclical downturn in several segments had adversely impacted the industry. The pandemic further posed a number of challenges to the overall economy.

The auto component industry, in tandem with the vehicle industry, reported a subdued performance in FY21, with de-growth of 3% over the previous year, registering a turnover of INR 3.4 lakh crore (USD 45.9 billion). The automotive value chain faced significant disruptions in FY21 with operations being adversely impacted by the first and second wave of COVID-19. Despite such a volatile environment, the industry displayed great resolve. The automotive component industry supported OEMs well by ensuring a smooth ramp-up and business continuity.

Although the market is witnessing some recovery, the ongoing semiconductor shortage, rise in commodity prices and fear of a third COVID wave continue to add to the uncertainty in the industry. Whilst volatility is the new normal, as the various states of our country unlock, the industry needs to introspect and reflect on how it can not only survive the challenges of today and tomorrow, but also focus on future prospects and harness newer business opportunities that an ever-changing business environment throws at us.

It is in this context that we have themed our annual session as 'Living with volatility: Survival, revival and growth'. ACMA, along with PwC, has conducted a study to understand the best practices that the Indian automotive industry is adopting to live with volatility and chart out its future.

I would like to sincerely thank all the participating business leaders across various segments of the automotive industry for taking time out to share their perspectives. I hope you find this report both insightful and relevant, and welcome any suggestions that you may have.



**Deepak Jain**

President, ACMA

# Message from PwC

## Indian automotive industry: On the path to recovery despite volatility

Just when a rapid recovery seemed imminent in the last financial quarter of FY21, the second wave of the COVID-19 pandemic struck. Demand is expected to see a sharp recovery starting Q2 FY22, with the upcoming festive season expected to usher in a full revival. However, supply side challenges – particularly the global semiconductor shortage that is expected to continue through the rest of this financial year – will moderate the recovery process.

ACMA and PwC conducted a joint study to understand best practices of the Indian automotive industry in the face of volatility. In the past, we have seen cycles of demand growth and troughs in distinct years. Going forward, PwC expects the three states of 'survival, revival and growth' to coexist in different parts of the industry value chain at the same time. Our study evaluates some of the strategies that leading companies in the automotive supplier community are adopting to survive, revive and be ready for future growth.

Automotive suppliers will need to change their operating model in order to be agile, flexible and customer focused, and succeed in the new normal. Our study shows that companies with robust financial management capabilities and a focus on growing value added per employee and strong alliances with suppliers and customers will emerge successful. Attracting and retaining top talent, building and nurturing a core leadership, and separating ownership from company management are some of the other best practices that will help companies thrive amid volatility.

The future is exciting, but also full of challenges. The automotive industry is expected to undergo a major transformation in the coming decade. It is imperative that incumbent players seize the opportunity, innovate, collaborate, and capitalise on the big changes that are now underway. It is time to embrace the change and accelerate into the new future.



**Kavan Mukhtyar**

Partner and Leader – Automotive  
PwC India

Businesses are adapting to volatility and uncertainty as a way of life.

Uncertainty is **impacting various sectors** of the economy.

The **pandemic has further aggravated pre-existing challenges.**

The **ever-widening range of crises** continues to test even the strongest organisations.

Which sectors have taken the hardest hit?

Hospitality and Leisure	86%
Higher Education	83%

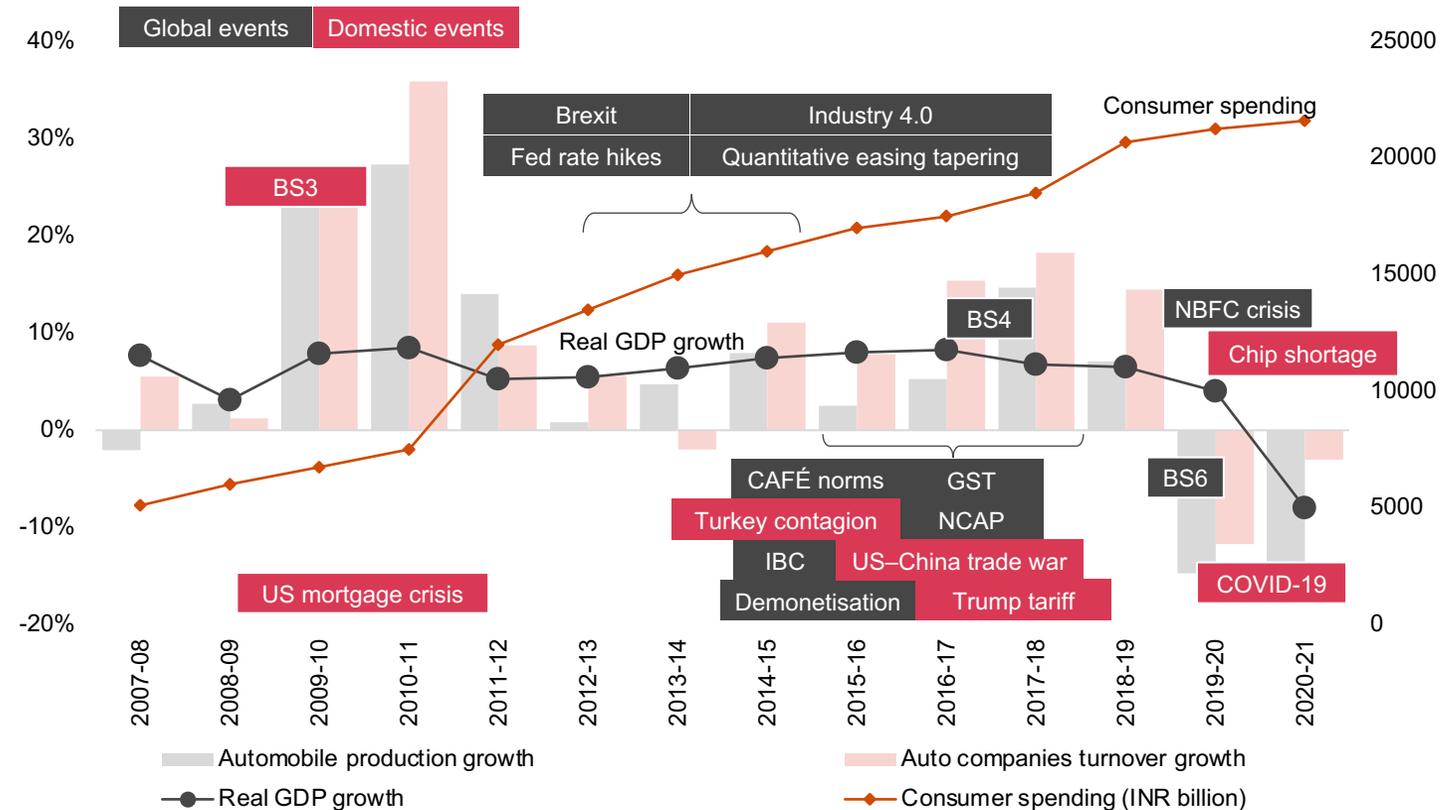
Organisations in these sectors experienced 'negative' and 'significant negative' impact:

Industrial Manufacturing and Automotive	80%
Financial Services	76%
Consumer Markets	72%
Technology, Media and Telecommunications	61%
Government and Public Services	77%
Energy, Utilities and Resources	76%
Health Industries	65%

Source: PwC's Global Crisis Survey 2021

# Changing paradigm in the automotive industry: From stability to volatility

Over the last decade, market volatility has become more frequent and is likely to intensify in the future due to various factors



Source: SIAM, World Bank, PwC analysis

BS: Bharat Stage; CAFÉ: Corporate Average Fuel Economy; GST: Goods and Services Tax; NBFC: Non-banking financial company; NCAP: New Car Assessment Programme; IBC: Indian Bankruptcy Code

The increased frequency of external shocks has had a negative effect on vehicle sales:

- While India's real GDP has grown consistently at around 6% and consumer spending has multiplied by four times in the last 13 years, automotive industry growth rates have been fluctuating.
- This can be attributed to a market driven by both domestic and global events.

## Global

- Crises impacted consumer sentiment as well as the financial position of large OEMs. They also accelerated customer shifts, requiring large capital expenditure (CAPEX) spends by OEMs.
- Supply chain uncertainties have increased due to trade volatility, raw material availability and so on.

## Domestic

- Rapid upgrades in emission norms with reduced intervals between successive norms have led to high CAPEX for OEMs, and the price increase has been passed on to customers.
- Upgrades to the national policy framework and fragility of non-banking financial companies (NBFCs) have further contributed to increased volatility.

# Convergence of six key factors driving volatility in the Indian automotive industry; it will continue beyond the pandemic

1

## Geopolitical issues

- Multilateral to bilateral (free trade agreements [FTAs], etc.)
- Nationalism, protectionism: e.g. China+1

2

## Stricter regulations

- BS4 → 6, CAFÉ
- NCAP for safety
- Product recall, Real Driving Emissions (RDE)

3

## Business model shifts

- Connected, Autonomous, Shared and Electric (CASE) disruption
- Shift to becoming mobility solution providers

4

## Shifting consumer preferences

- Online sales, direct to consumer (D2C)
- Both inter-segment and intra-segment shift
- Pre-owned vehicles

5

## Supply chain bottlenecks

- Disruptions (chip shortage)
- Currency volatility
- Localisation focus

6

## Technology changes

- Connected services (5G)
- Speed of computing
- Digital transformation

Uncertainty and volatility are now the new normal.

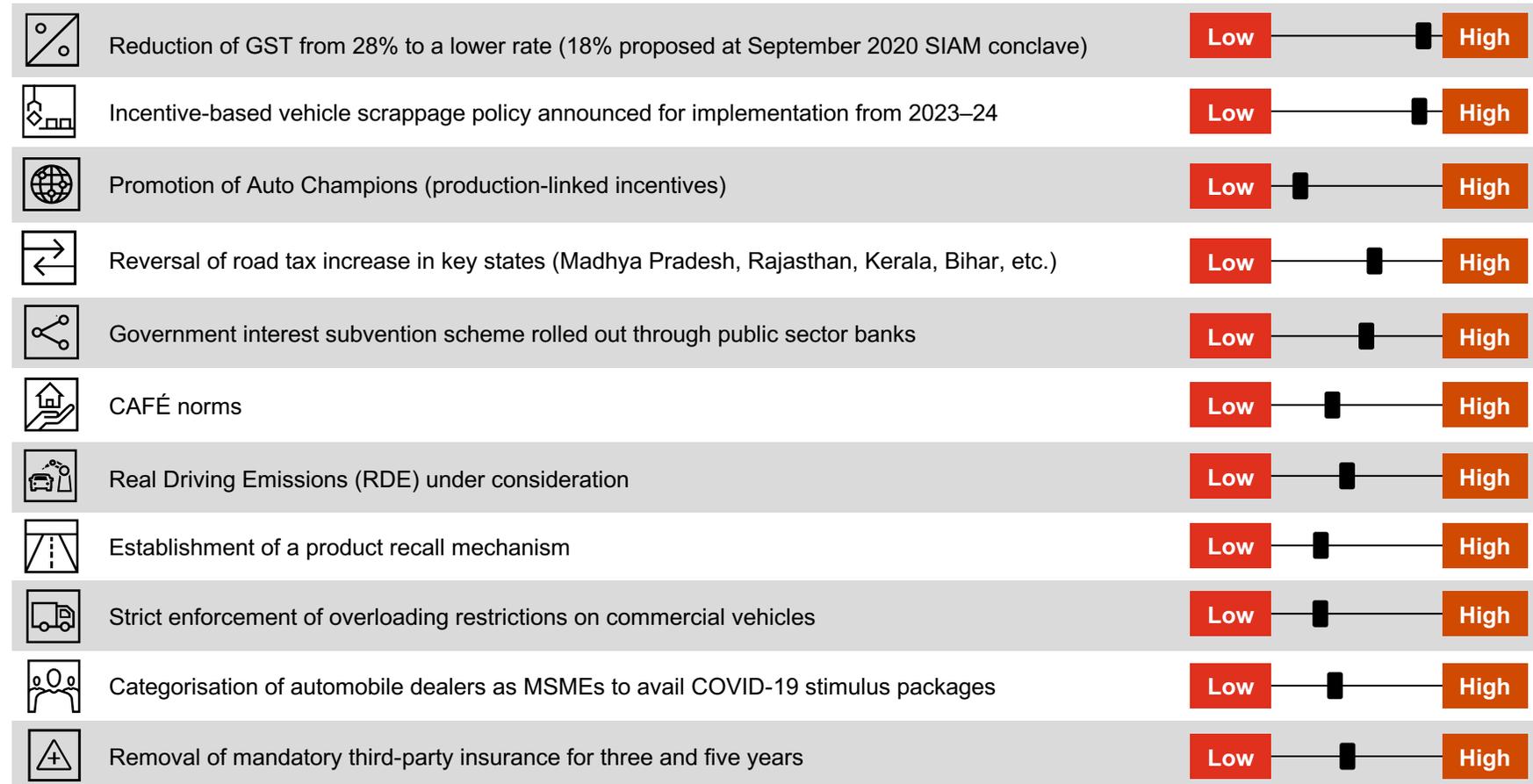
Tariffs, trade wars and economic uncertainty will continue to have an impact next year and beyond.

Meanwhile, the underpinnings of the business model that has sustained the automotive industry for more than 100 years are undergoing some of the biggest changes the model has seen since its inception.



# With 10+ policies in the pipeline, the Indian auto regulatory environment will continue to be dynamic – with demand revival, green economy, sustainability and safety as key themes

## Policy interventions at various stages of evaluation by the Government of India



Source: SIAM 60th Annual Conclave 2020 white paper, PwC analysis

## Implications of recent regulations for automotive industry players

- Compliance burden:** A dynamic policy and regulatory landscape has increased the compliance burden (e.g. CAFÉ norms).
- Price increases:** Regulatory updates such as BS6, upfront payment of insurance and enhanced safety needs have increased vehicle prices by around 15%.
- CAPEX commitment:** Policy shifts towards EVs, etc., result in CAPEX for OEMs and suppliers, in addition to recent CAPEX.
- Increased accountability:** Regulatory updates reinforcing accountability of faults on manufacturers are in the works; component makers will accordingly need to step up their quality focus (e.g. product recall policies under discussion).

## Prominent policy themes

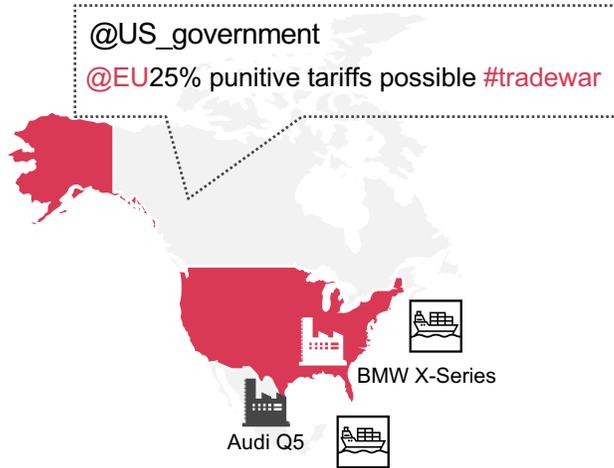
Green economy

Sustainability

Demand revival

Safety

# On the global geopolitical front, trade uncertainties between major automotive markets will continue to pose challenges for purchase decisions



**Case in point: EU passenger car international trade uncertainties due to US–China tariffs | 2018**

**41.6 billion**  
Exports to the US

**6.0 billion**  
Imports from the US



**0.6 billion**  
Imports from China

**24.9 billion**  
Exports to China

**EU passenger cars (USD billion)**

Outer circle: Exports  
Inner circle: Imports



**US tariffs applied exclusively to Chinese goods: USD 250 billion**

**Chinese tariffs applied exclusively to US goods: USD 110 billion**

## Key highlights from the US–China trade scenario (2018)

- Uncertainties over trade tariffs impacted three of the largest auto markets in the world (the US, EU and China) starting 2018.
- While tariffs first started between the US and China, the EU was soon apprised of the possibility of tariffs through a tweet by the US Government.
- Several luxury car brands (such as the BMW X series and Audi Q5) are exported from the US to the EU and China.
- Components worth USD 3.7 billion manufactured by Indian suppliers were exported to the US in 2018.

How has the rise of **protectionism** resulted in **uncertain cost scenarios** and the rise of **'just in case'** supply?

Automakers are building supply redundancies due to punitive and unpredictable tariff regimes (e.g. China+1 strategy)

Redundancies have had a volume impact on suppliers as OEMs try to balance costs and availability with suppliers.

The capacity expansion plans of several OEMs hinge on FTAs such that they can export as well as serve local markets.

The supply ecosystem must grow in conjunction with OEMs' location preferences.

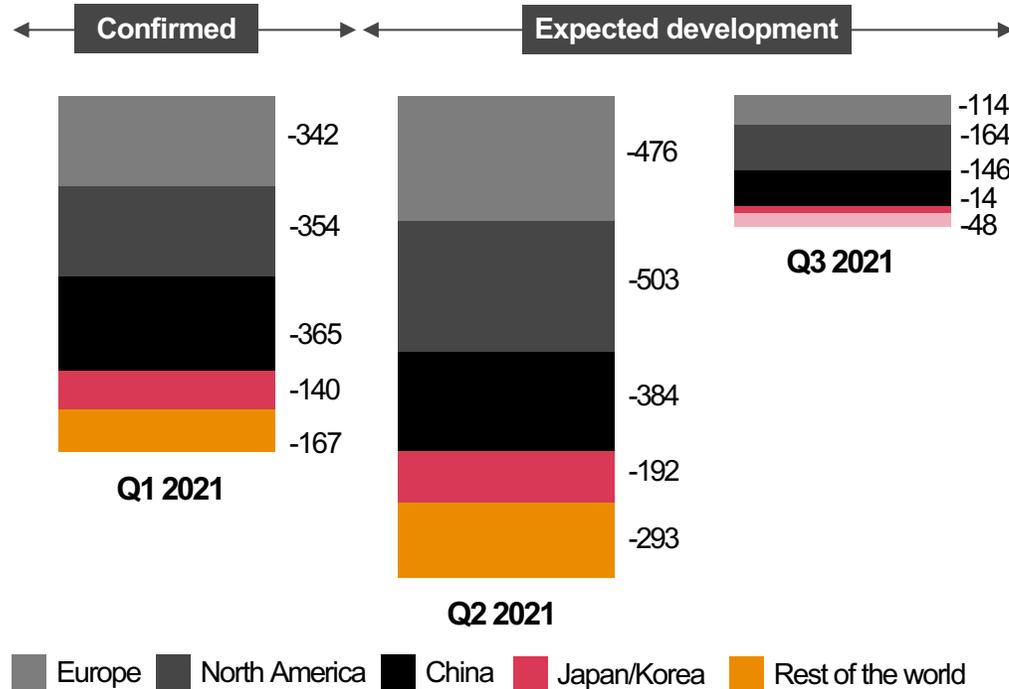
Declining goods trade and increasing services trade shift the focus away from the auto sector.

Vietnam, Thailand, Indonesia and India are key locations waiting to finalise FTAs with the EU and US.

**Source:** UN Comtrade, Ministry of Commerce (GoI), US Government Twitter handle, PwC analysis

# Global events such as the recent semiconductor shortage have led to long-term supply chain volatility

## Impact of semiconductor volume losses (in thousand units, global)



Source: IHS February 2021 release, PwC Autofacts

### What has happened

- In response to the drop in sales and production in early 2020, vehicle **OEMs cancelled** parts of their contracted purchases of semiconductors.
- Due to complementary factors impacting the telecommunications and consumer product industries, the **demand** for chips **skyrocketed** later in 2020.
- OEMs have been managing the shortage of chips and connected supply parts by prioritising the production of **profitable and high-demand** vehicles.



The semiconductor shortage will continue. The consumer electronics sector has made bookings for around 18 months in advance compared to two to three months by auto.



– Strategy head, leading Indian passenger vehicle brand

Compared to 2008–9, India's auto sector has increased its global trade activity by ~2.5x.

Thus, the impact of global events on India's auto supply chain has become more pronounced.

### Trade volume of auto components (in USD billion)



Source: Ministry of Commerce (GoI), ACMA, PwC analysis

Industry players must find a solution to this shortage, especially when electronic content in cars of the future is pegged at >40%

**~4 km**

average length of electrical wiring in a modern car

**38x jump**

in data consumption in the last 5 years – it's evident that customer data and connectivity needs will extend to their vehicles

Transition to

**5G**

communication protocols will make a host of connectivity features viable, thereby signalling impending disruption

### Implications of increasing electronic content for vehicles

<b>Human-machine interfaces</b>	<b>Infotainment</b>
<b>Advanced driver assistant systems (ADAS)</b>	<b>Connectivity, computing, cloud-based enablement</b>

- Electronic control units (ECUs)/data concentrator units (DCUs) will become a new market segment to support high-power computing needs within a vehicle.
- Vehicle sensors, ECUs, wiring harnesses and other similar hardware components will become increasingly commoditised.
- Automotive sensors will have high processing capabilities.
- Data storage, privacy and security will be key differentiators.

Sources: Auto Service Professional, Mobile Broadband India Traffic Index, PwC analysis

Which consumer technologies are driving a change in consumer preferences and thus higher 'electronification'?

### 7 consumer technologies of the future



5G networks and cloud computing



Consumerisation of artificial intelligence



Subscription video on demand (SVOD) and its network effects



Cloud gaming and gamification



Digital health, wellness and wellbeing



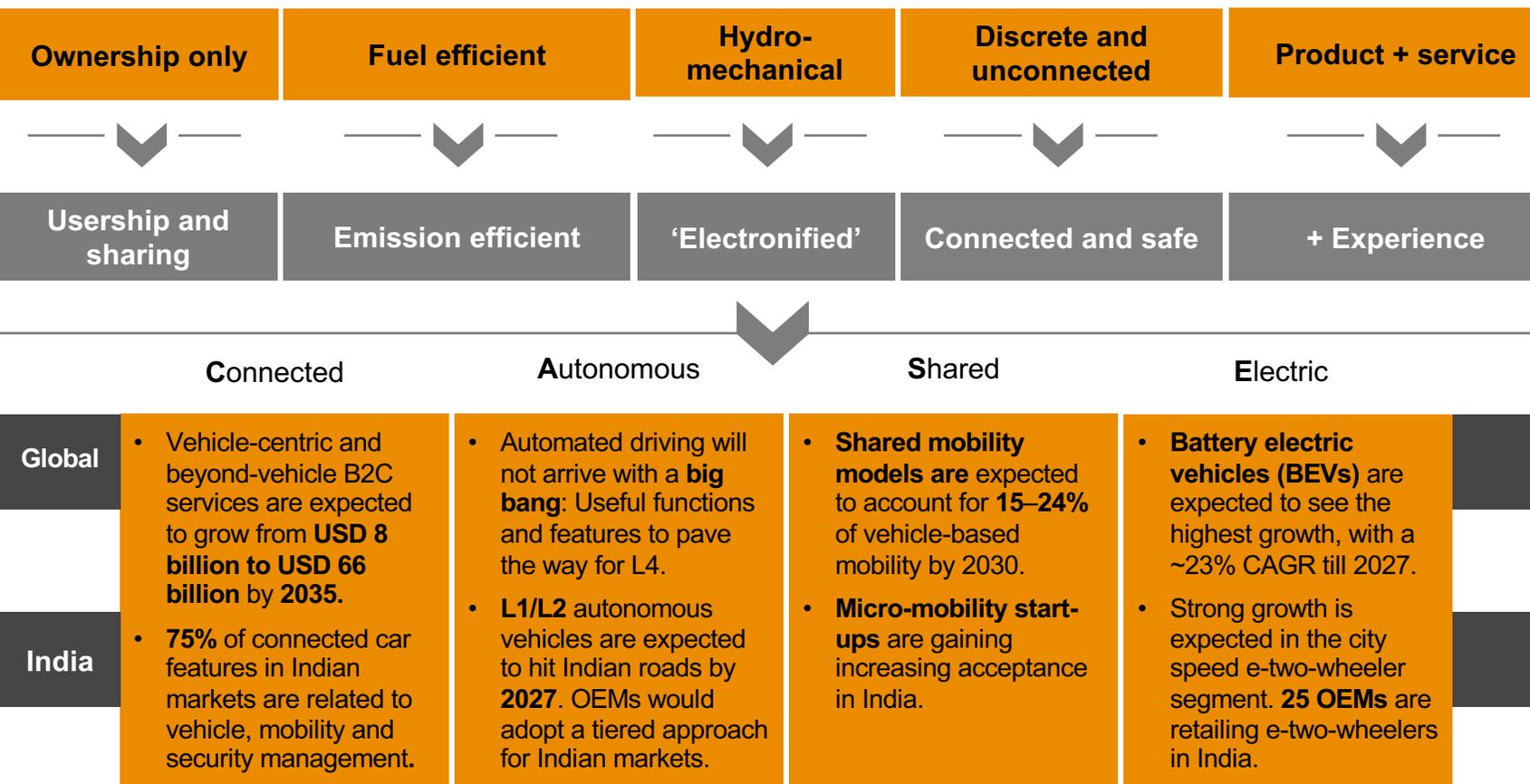
Augmented reality



Personal robots

# The future of mobility will be characterised by CASE disruption, leading to a significant shift in industry profit and revenue pools for traditional industry players

## Business + customer shifts



Source: PwC Strategy& 2020 Digital Auto Report, Fortune Business Insights, PwC research and analysis

## CASE disruption

The increasing proliferation of business and operating models requires players to **re-evaluate** their **CASE strategies** with a view on available technology, value pool sizes and unit economics. It is estimated that traditional profit share from supplier business shall nearly halve from 71% to 41%.\*

- 1. Connected:** Behind the first peak of expectations with most value expected in B2B applications (e.g. fleet management)
- 2. Electric:** While BEV use cases are approaching the plateau stage, fuel cell use cases have not yet peaked
- 3. Automated:** Higher value expectations in L4 goods transport than in private passenger transport
- 4. Shared:** Micro-mobility with high value expectation – on par with ride hailing

\*These numbers indicate the shift in the global profit pool.

# EV adoption would play out across multiple scenarios in India – driven by cost economics, ‘localised’ shared mobility, availability of infrastructure and state-level EV policies



Different scenarios: EV strategy and mobility adoption

	Localised	Import dependent
Increased shared mobility	<p><b>Mass, cost and mobility driven</b></p> <ul style="list-style-type: none"> <li>• Cost of ownership and acquisition favourable</li> <li>• EV fleets take to the roads</li> <li>• Government and private operated EVs</li> <li>• Inter-city rides</li> <li>• Private buyers prefer EV over IC</li> </ul> 	<p><b>Selective, subsidies driven</b></p> <ul style="list-style-type: none"> <li>• Cost economics not favourable, except EV subsidies</li> <li>• Government-driven subsidised transport applications of EV</li> </ul> 
Enduring private usage	<p><b>Selective, cost driven</b></p> <ul style="list-style-type: none"> <li>• Cost of acquisition favourable but ownership cost and maintenance not favourable</li> <li>• Shared mobility not a favourable option to choose</li> <li>• IC demand is replaced by EV demand in the case for private buyers</li> </ul> 	<p><b>Selective, environment-consciousness driven</b></p> <ul style="list-style-type: none"> <li>• Cost economics not favourable</li> <li>• Shared mobility not a favourable option</li> <li>• EV demand will be driven by environment-conscious and prestige-seeking customer segments</li> </ul> 

## Imperatives for component suppliers for EVs vs mobility

1. **Electric vehicle (EV) skateboards** are getting widely popular with different automakers; OEMs and component makers are looking to collaborate to bring down development costs and build capabilities.
2. **The high-voltage (HV) architecture** comprises different components and presents a wide range of opportunities for suppliers.
3. **Players who can collaborate** and champion the **required capabilities** (technical and non-technical), weave them into various **EV business models** (product sales, charging services, other monetisation avenues) will be well positioned for the future.

While volatility will be a major factor, CEOs are positive of growth

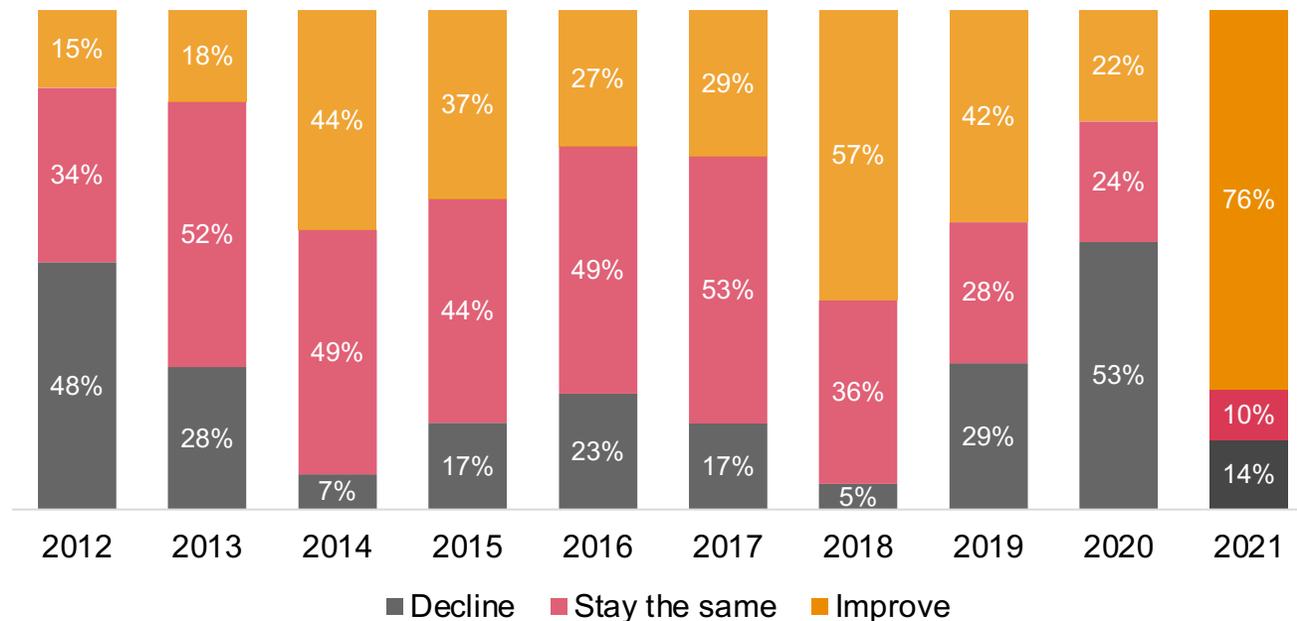
Forces stemming from a dynamic regulatory environment, new business and operating models, supply chain disruptions and shifts in customer preferences have made living with volatility the new normal.

However, companies are hopeful of growth in this environment of opportunity.



# A record share of CEOs believe global economic growth will improve in 2021

Question: Do you believe global economic growth will improve, stay the same or decline over the next 12 months?



Source: PwC 24th Annual Global CEO Survey

## An improved outlook

When asked about their outlook on the global economy, 88% of India CEOs say they believe it will improve during the next 12 months.

Overall, 76% of global CEOs say they believe it will improve during the next 12 months. That's nearly 20 percentage points greater than the previous record high for optimism in all the years we have been asking this question. It also marks a significant rebound from our 2020 survey (conducted in the autumn of 2019), when just 22% of CEOs expected improved growth.

Little could anyone have known that the coronavirus would strike, causing global GDP to contract by 3.5% in 2020 – marking its worst performance since the Great Depression. In the wake of such a decline, some bounceback seems inevitable. And it's already underway in China and elsewhere.

# 88% of India CEOs

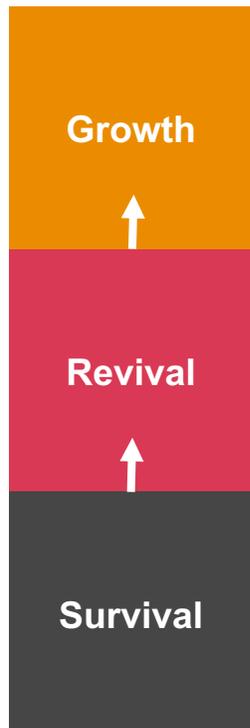
are confident about global economic growth improving over the next 12 months, while 70% are confident about their own revenue growth in the same period.

Source: PwC 24th Annual Global CEO Survey

# Our view is that **three states will coexist** in the context of any organisation: **Survival, revival and growth**

From **gradual or sequential**

to **coexistence** of all 3 states



**Survival:** Utilise scenario planning to build what-if plans –

- Build business forecasts for each possible scenario by considering the most relevant assumptions for base inputs to the forecasting models.
- Lay down a plan of action for each possible scenario and communicate the same to stakeholders.

**Revival:** The resurgent part of business –

- Gear up for rebound by ensuring adequate resource allocation for quick scale-up of assets.
- Evaluate restarting of halted projects to deliver future growth.

**Growth:** Those who invest in growth during crises will come out stronger and be in a better position to handle the ongoing volatility.

Thus, automotive suppliers will need to change their operating model in order to be agile, flexible and customer focused, and succeed in this environment.

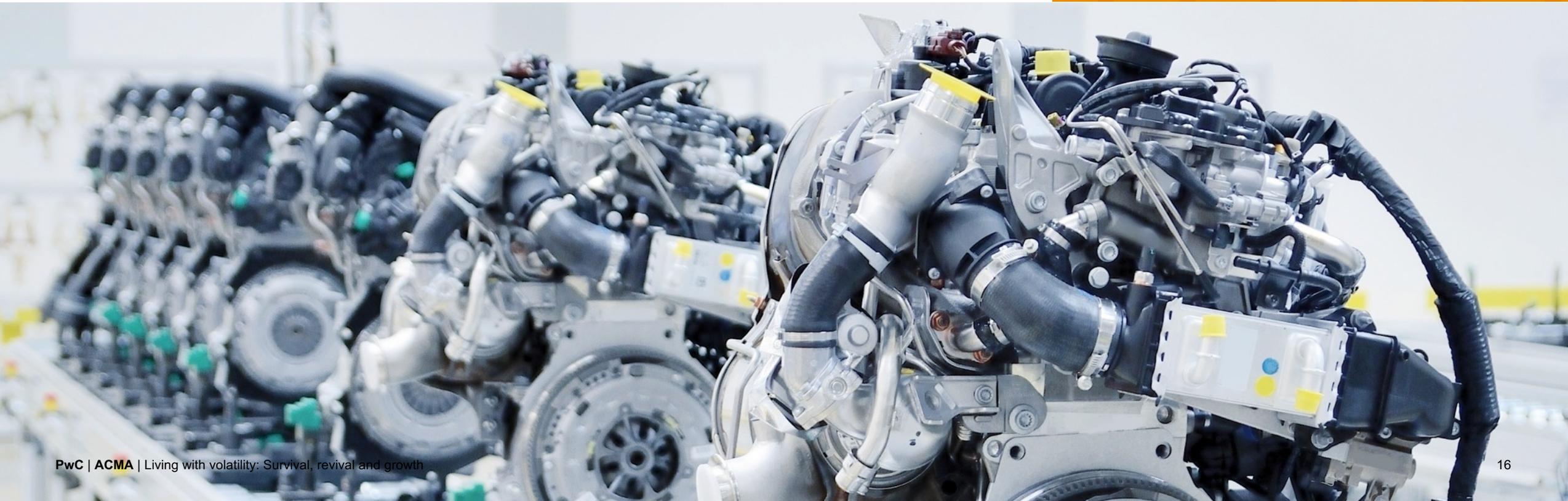
Let's look at some of the best practices being followed in this new normal.

“

Planning for growth is not new, but what's new is that volatility implies a trade-off situation between investing for the future vis-à-vis staying afloat – which is further accentuated with the market disruption impacting management decisions.

”

- CEO, leading tier-1 supplier



# Survival: Planning for what-if scenarios and reacting to the plan

We believe that the two key elements for survival in this environment have been redefined – **financial prudence and risk and crisis management.**



Financial prudence



Risk and crisis management



Break-even point (BEP) reduction



Workforce enablement



Supplier relationships



Customer intimacy



Business continuity capabilities will be the purchase criteria for OEMs. Suppliers need to plan for resilience. They should not be spread across too thinly and instead have strong linkages with their own tier-2 suppliers to support and build their capabilities. Premium will be paid for companies that can handle volatility better along with more robust risk management.



– CXO of a leading automotive OEM



# Key elements of the survival framework



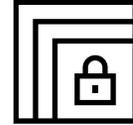
## Financial prudence

### Real-time finance and critical ratio monitoring

Real-time monitoring of critical financial ratios and cash heads is imperative and will remain areas of concern. Finance functions across organisations must become more efficient to drive value.

#### Best practice #1

An MSME analysed its cash flow to discover the presence of manageable working capital due to variable cost reduction from low demand. The firm decided to pay off short-term high-interest loans instead of building cash reserves. Hence, the MSME preferred clearing debts that would constrain cash flow in the future.



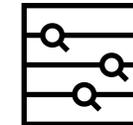
## Risk and crisis management

### Finance costs, term loans pay off and workforce migration

Firms must maintain a financial risk register that is evaluated at high frequency. Custom dashboards can be prepared for tracking key risk metrics with risk-level thresholds.

#### Best practice #2

A piston manufacturer used a financial risk dashboard with a built-in escalation workflow. On the basis of the thresholds defined, escalations were sent to essential stakeholders in time to review key metrics and control the possibilities of incurring financial losses.



## BEP reduction

### Reducing fixed costs, revisiting leases for facilities and asset sharing

While fixed-cost cutting programmes must be run, firms must also monetise non-core assets and explore innovative ways of asset sharing to achieve break-even reduction.

#### Best practice #3

An auto-electronics manufacturer decided to revisit its contracts and review the expenditure on non-core assets. It renegotiated its leases to obtain more favourable pricing and tenures. Additionally, it decided to reduce spending on non-core assets such as vehicles awarded to employees by increasing the duration of vehicle retention.

Source: PwC analysis

# Key elements of the survival framework



## Workforce enablement

Virtual work and vaccination drives across plants

Employers must go the extra mile to enable employee comfort and wellness in these challenging times which frequently disrupt daily life.

### Best practice #4

At the onset of the second wave of infections, workers were apprehensive that the hardships they faced during the first wave would be repeated. Several manufacturers came together to provide their workers with mattresses, food, water and sanitary items for workers so that they could be housed within factory premises for an extended period of time.



## Supplier relationships

Tier-N supplier viability, import dependencies and chip shortage

A firm's relationship with its suppliers must change from being transactional to one of heightened cooperation since strong ecosystems are needed to survive in the prevalent scenario.

### Best practice #5

Factories faced a severe labour crunch one month into the pandemic due to reverse migration. One of India's largest OEMs sent its workers to tier-1 supplier factories to plug gaps in workforce availability.



## Customer intimacy

Programme management efficacy and profitability of programmes

Customer sentiment must be captured continuously in a dynamic environment. This will require collating information across customer touchpoints.

A European automaker had to shut its factories in Europe due to strict COVID-19 norms. The OEM's business team identified the models preferred by truck drivers across European and North American markets at the onset of the pandemic. This quick diagnosis allowed the OEM to ensure the supply of the preferred model to multiple countries while manufacturing of other models was deprioritised.

Source: PwC analysis

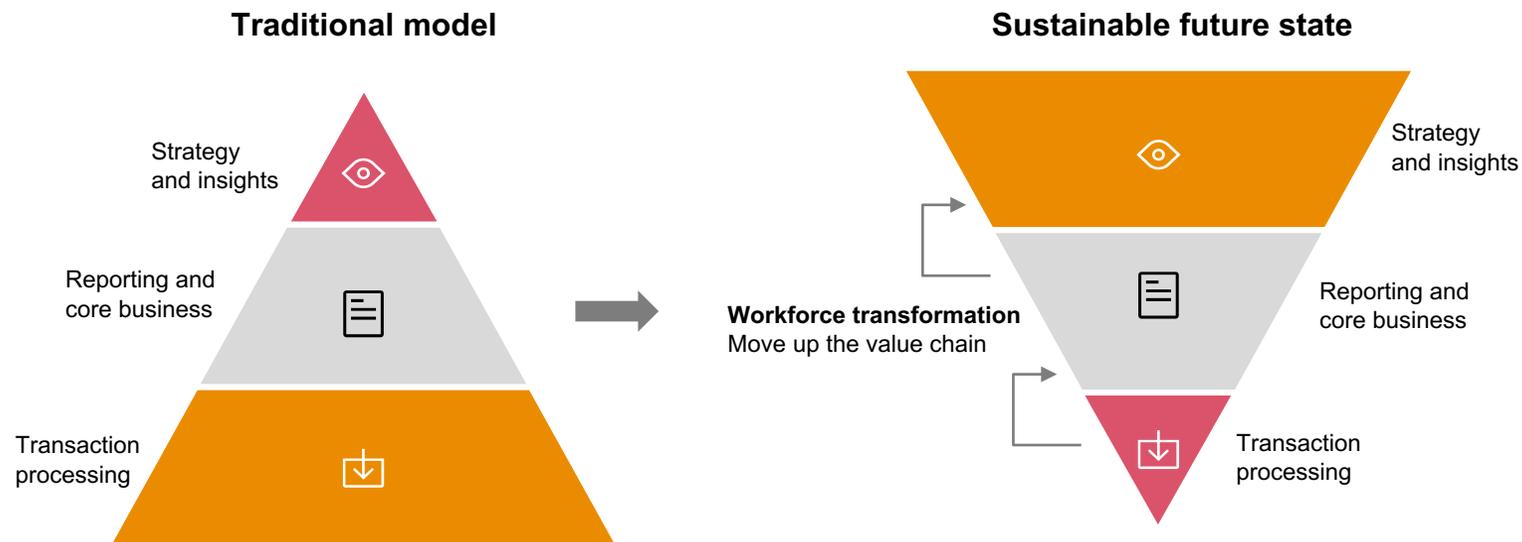
## Best practice #6

### Real-time finance as a business partner

#### For agility in risk management and identification of growth opportunities

A leading glass manufacturer started looking at its finance function in a highly strategic manner – delivering value through insights underpinned by efficient processes. Out of the approximately 30 key performance indicators (KPIs) tracked by the finance team, 8 were viewed as 'critical'. Alarms and triggers were set up for various ratios to anticipate the financial implications of various scenarios. The finance team was tasked with 'thinking ahead' and taking proactive action to avoid a crisis, resulting in them operating based on real-time finance information. Early warning systems and several lines of defence were also put in place to minimise any losses. This is also our view of the future state of sustainable finance and risk management.

Another leading electronics player used a similar approach to uncover business opportunities through scenario planning for short- and long-term risks. This led to a diversification opportunity in the form of oxygen sensors for the supplier.



Source: PwC analysis

PwC | ACMA | Living with volatility: Survival, revival and growth



Finance is a science and should not be seen as an ownership function. We must invest in independent and professionally qualified teams.



– Promoter of a leading electronics and electrical supplier

**A sustainable finance function must be viewed in a highly strategic manner – delivering value through insights underpinned by efficient processes.**

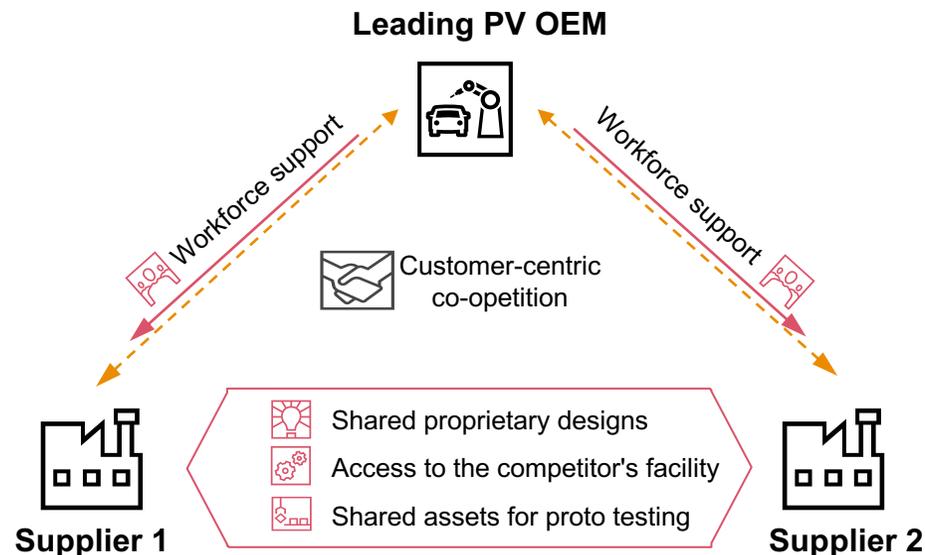
## Best practice #7

### Co-opetition and collaboration

#### For crisis management and improving customer intimacy

The automotive industry has come together during the pandemic and various initiatives are being taken to manage crises, giving a new meaning to collaborative working. During the pandemic, a leading engine component manufacturer collaborated with its competitor – to the extent of sharing confidential proprietary designs – to serve customers and fulfil order obligations. The spirit of collaboration was mutual, and the competitor adhered to the manufacturer's request by providing access to its factory premises and shared assets for prototype testing.

A leading passenger vehicle (PV) manufacturer articulated that co-operation will also witness 'reversal of the past' through initiatives such as factory-in-factory (FIF). While operating models are yet to evolve (e.g. OEM owned and supplier operated), a shared/asset-light approach would mean better control over costs.



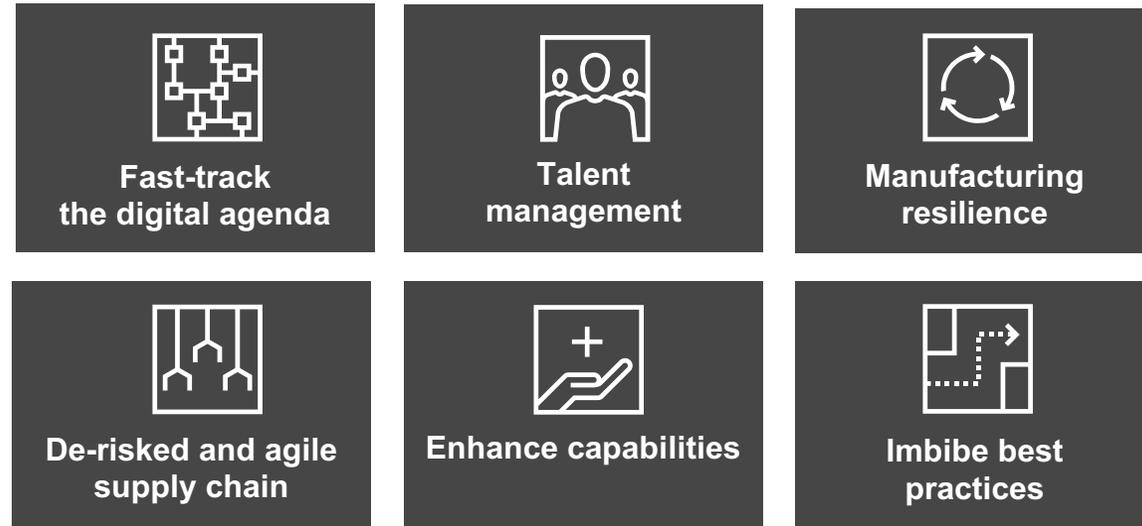
This pandemic has made the industry more collaborative. The industry has really come together and there's never been so much dialogue between all the players.



– ACMA-PwC report on India's automotive component industry: Post COVID-19 outlook, December 2020

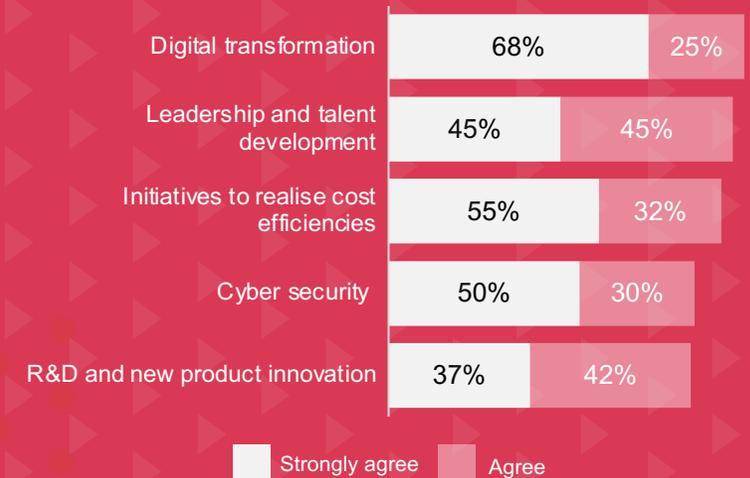


# Revival: What we need to achieve readiness for scale



More than **90%** of India CEOs are willing to invest more in **digital transformation and leadership development.**

**Changes to long-term investments over the next three years due to COVID-19**



Source: PwC India's 24th Annual CEO Survey

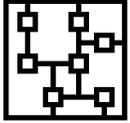


We see 'digital' as the step towards revival. We accelerated our digital agenda by five–six years. We also carved out a new role and onboarded a global chief technology officer (CTO) to drive innovation.”



– Promoter of a leading supplier

# Key elements of the revival framework

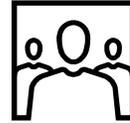


## Fast-track the digital agenda

Automation, digital operations and product mix for CASE disruption

### Best practice #8

With fast-evolving business conditions and disruption in business models, manufacturers must accelerate their pace of digital adoption. Key business enablers such as analytics dashboards, remote work and customer preferences are optimally executed through digital platforms. Their key motto must be digital for products, enterprise and customers.



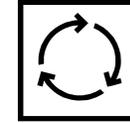
## Talent management

Value added per employee, motivation, retention and leadership

The new realities of remote work, inflation concerns and business disruptors require rewiring of HR policies to maintain employee motivation.

### Best practice #9

An electronic components manufacturer has decided to include stock options for its employees as well as increase the component of performance-based pay for compensation, restructuring and balancing costs with productivity.



## Manufacturing resilience

Stabilise – ramp up or down as per supply-demand scenarios

Firms must have a hawk-eyed view of both supply and demand given the inaccuracy of traditional predictive models in the prevalent business scenario. Leading indicators must be identified as well.

### Best practice #10

An OEM of tractors is tracking rainfall and harvest quality in Rajasthan's individual villages to determine demand. This focus has allowed it to maintain optimum stock at micro-market levels and provide improved services to customers.

Source: PwC analysis

# Key elements of the revival framework



## De-risked and agile supply chain

### Alternative supply base and FIF

Frequent supply disruptions require firms to develop a 'risk inventory', thereby driving up holding costs. However, firms must utilise other de-risking measures such as network optimisation, manufacturing footprint decisions and dual sourcing.

#### Best practice #11

A supplier for a leading automotive OEM was manufacturing two different parts in different Indian states. As soon as a lockdown was announced in one of the states, the supplier moved swiftly to set up limited capacities for manufacturing both the parts in both the factories. The move ensured continued operations for the OEM.



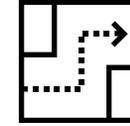
## Enhance capabilities

### Reskilling and redefining strategic positioning

Identification of bottleneck capabilities, multiskilling of workers and in-house critical capabilities will help manufacturers avoid frequent disruption and gain a competitive edge in the market.

#### Best practice #12

A large supplier of PV components identified welding as a bottleneck operation to produce critical parts. The supplier trained its workers from other non-bottleneck stations to execute welding operations. This initiative allowed the supplier to remain functional with minimal disruptions during worker shortages.



## Imbibe best practices

### Joint venture (JV) partners and OEM communities

Manufacturers must create forums and participate in exchanging ideas and cross-industry best practices.

#### Best practice #13

A leading global OEM's suppliers housed in a COVID-affected region of the EU were facing severe cost challenges to keep factories operational. The OEM developed an FIF concept to help its suppliers reduce fixed cost. The concept involved the supporting manufacturer setting up its factory within the factory premises of the principal manufacturer. The setup resulted in dedicated supply, quasi just-in-time (JIT) advantages as well as indirect tax benefits.

Source: PwC analysis

## Best practice #14

### Economic value added per employee as a key metric For evaluating the automotive component portfolio

As business complexities increase, attracting top talent is a key success factor towards driving growth. One of the leading glass suppliers believes that pay in the automotive sector is not commensurate with that in other sectors and hence retaining top talent becomes tougher. The promoter of the company believes in generating wealth for the top 2–3% talent, as income is not enough to retain this layer. Organisations must invest in building capabilities that pave the way for a clear growth journey and create wealth for this group through stock options, etc. This is the core team of culture carriers. The big middle layer's compensation, on the other hand, should be linked to net productivity gains. With respect to the bottom layer, the company is opting for digitisation to achieve greater efficiency as well as a talent refresh in lower-end work.

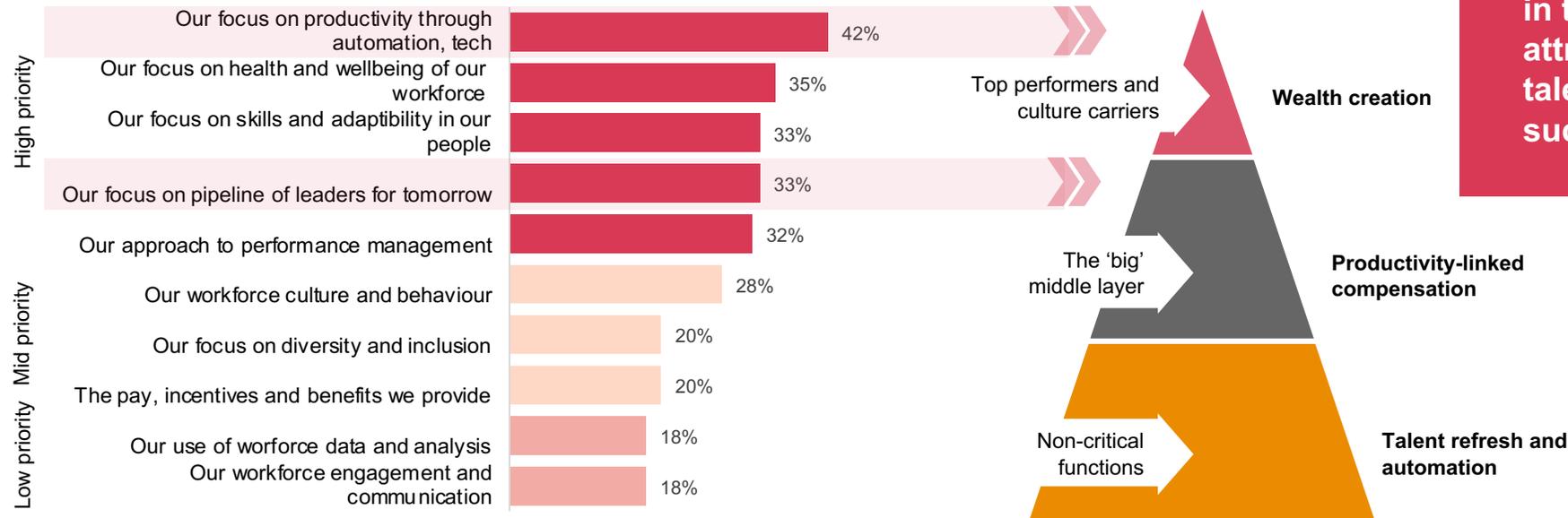


“Generating wealth for the top 2–3% of your talent is not enough. For example, stock options could be one method to reward top talent. Such practices are uncommon in the automotive sector.”



– Promoter of a leading glass manufacturer

### Aspects of workforce strategy that will impact an organisation's competitiveness



Source: PwC India's 24th Annual CEO Survey

As business complexities increase in the automotive industry, attracting, retaining and growing top talent will be a key factor for success.

## Best practice #15

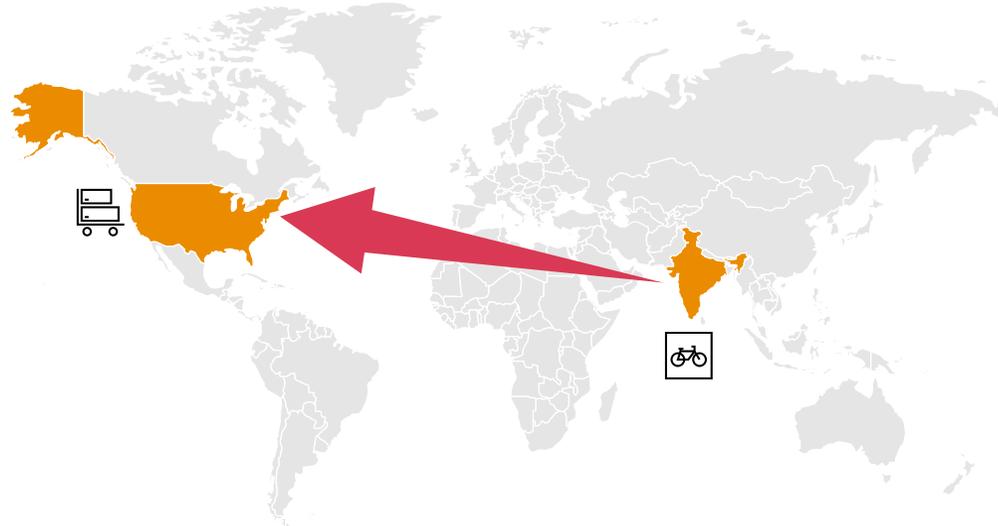
### Anticipate trends in customer demand

**To diversify and reduce exposure to demand volatility, especially for tier-2++ cities**

A piston manufacturing MSME is of the opinion that the biggest challenges faced by such enterprises are managing finance cost and demand volatility. The company took several measures such as paying off term loans and availing Government schemes to reduce financing cost.

During this period of muted demand in the auto segment, the company decided to accelerate the development of a new product for gardening applications. It housed a small team inside the factory premises and developed a prototype within seven to eight weeks. As the market reopened, the company catered to a different segment of high-speed garden and lawnmower engines. The company expanded into a new market with a fresh segment as a part of its diversification strategy.

From being a 100% domestic auto sector player, the company now has >45% export-driven sales and the top-line profile is diversified with 50–60% revenue from non-auto business. This is a leading example of a company simultaneously protecting its business from the risk of demand volatility and turning it into an opportunity by expanding into an adjacent market.



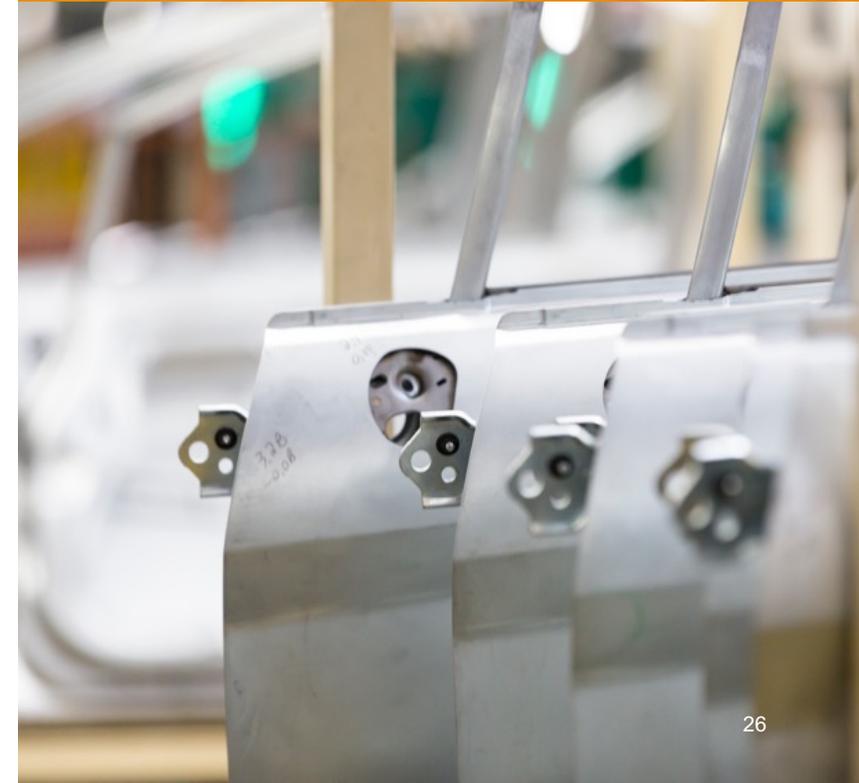
This map is not to scale. It is an indicative outline intended for general reference use only. The accuracy of this product is dependent upon the source data and therefore absolute accuracy for navigation or legal purposes cannot be guaranteed.



People were spending more time at home during the onset of the pandemic. The US gardening equipment market is an attractive adjacent market for our products. We used the pandemic to effectively accelerate our product development and prototyping efforts.



– Promoter of a piston manufacturer (MSME)



# Growth: Opportunities as we recover from crises



“

Promoter-driven companies should become more professionalised. They should empower their top leadership to take decisions. Centralised decision making will become difficult with increasing business complexities.

”

– Chief purchase officer of a leading OEM

“

Growth will come on the back of knowledge arbitrage. The more complex process- and product-related problems you solve, the better is your hedge against operating risks of losing business.

”

– MD and CEO of an electrical power train systems supplier

# Key elements of the growth framework



## CASE disruption

### Lightweighting and localisation

This disruption has led to several new entrants as well as players diversifying into market adjacencies.

#### Best practice #16

A leading global technology player has entered the auto market to become a key competitor in the autonomous vehicles and ADAS space. The firm's ADAS solutions are currently being sold in the EU, North America and India.



## New markets

### Exports and aftermarkets

In the environment of disruption in the auto sector, firms must continuously evaluate new markets. The search for new markets shall encompass new products, geographies and segments.

#### Best practice #17

A global tyre brand that is currently manufacturing tyres for four-wheelers is expanding its portfolio of market segments and entering the market for two-wheelers. The firm started its journey by assessing the value-chain capabilities it needs to play and win in the two-wheeler tyre segment.



## Innovation management

### Open innovation with start-ups and corporate venture capitals (VCs)

Co-creation and venture funds allow manufacturers to assess, build and scale new solutions quickly and cost effectively. In today's business environment, time-to-market can be detrimental to a firm's success.

A global tyre manufacturer has instituted an open innovation programme to develop digital tyre solutions for mobility players. Several new digital solutions requiring cross-industry expertise are being developed within the innovation ecosystem of the firm.



## Managing trade-offs

### Future manufacturing footprint and portfolio decisions

With heightened disruption and fast-changing consumer preferences, companies must continuously evaluate trade-offs to arrive at future product categories as well as product portfolios. Frequent evaluation of trade-offs requires identified leaders within an organisation to be empowered to make these decisions.

#### Best practice #18

A large forging player forayed into the aluminium die casting space as the segment offered it a complementary product market and helped it double down on the two-wheeler segment.

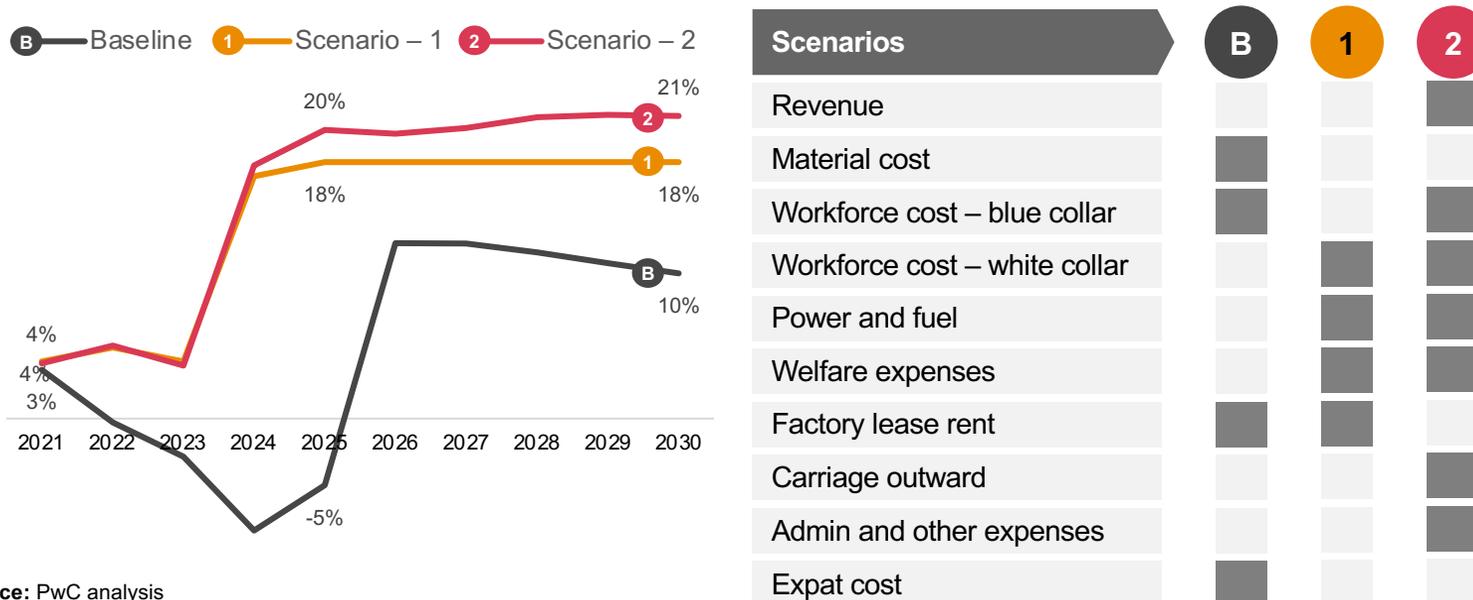
## Best practice #19

### Scenario planning for future manufacturing footprint

#### Footprint optimisation in line with growth options and scenarios

A leading manufacturer of anti-vibration products has plans of diversifying into electronic components over the next decade. As per the company's view, the current manufacturing location and partner ecosystem doesn't augur well for its long-term vision. Future product mix, proximity to electronics suppliers and requisite skills availability are the factors that prompted the company to re-evaluate its manufacturing footprint across India. The company went well beyond just location assessment and evaluated the possible bottom-line scenarios and risks involved corresponding to the growth expectations, thus building shareholder confidence.

#### EBITDA (%) in long-term growth – various manufacturing scenarios (illustrative)



Source: PwC analysis



We need a war chest (reserves) to deal with volatility. It can get pretty risky if you have a highly leveraged position with low margins and no appetite for investment.



– Promoter of a leading electronics and electrical supplier



Never miss out on investment opportunities with confirmed customers. Believe in India's growth story.



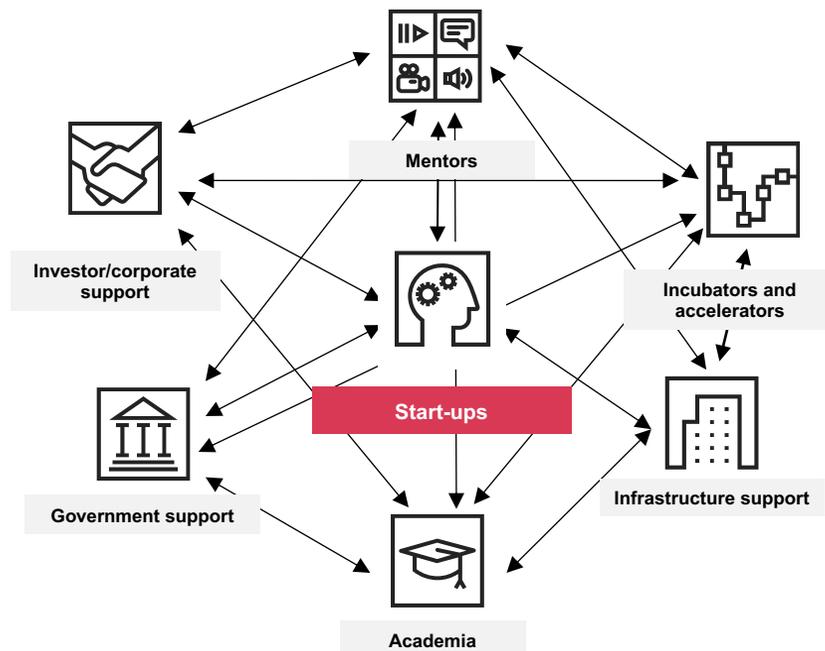
– CXO of leading automotive supplier

## Best practice #20

### Open innovation

#### Collaborate with start-ups and find agile and nimble ways of engagement

- ACMA is working on building a start-up platform.
- It aims to understand, develop information about, and assess the **start-up ecosystem** relevant to auto and mobility players.
- It plans to **build a vibrant community** with regular engagements, knowledge-sharing sessions and innovation competitions.



#### Changing customer needs

Ownership to usership

#### New business models

Automated, connected, electric and shared (ACES) vehicles impact

#### New genre of competition

Tech players

#### New ways of working

Digital and remote

#### Evolving marketplace

Product to service



Investing in start-ups is a good idea, but one needs a different mindset to be able to do this.



- ACMA-PwC report on India's automotive component industry: Post COVID-19 outlook, December 2020

A recent ACMA-PwC study revealed that 85% of suppliers have not actively engaged with start-ups yet, but feel the need to do so.

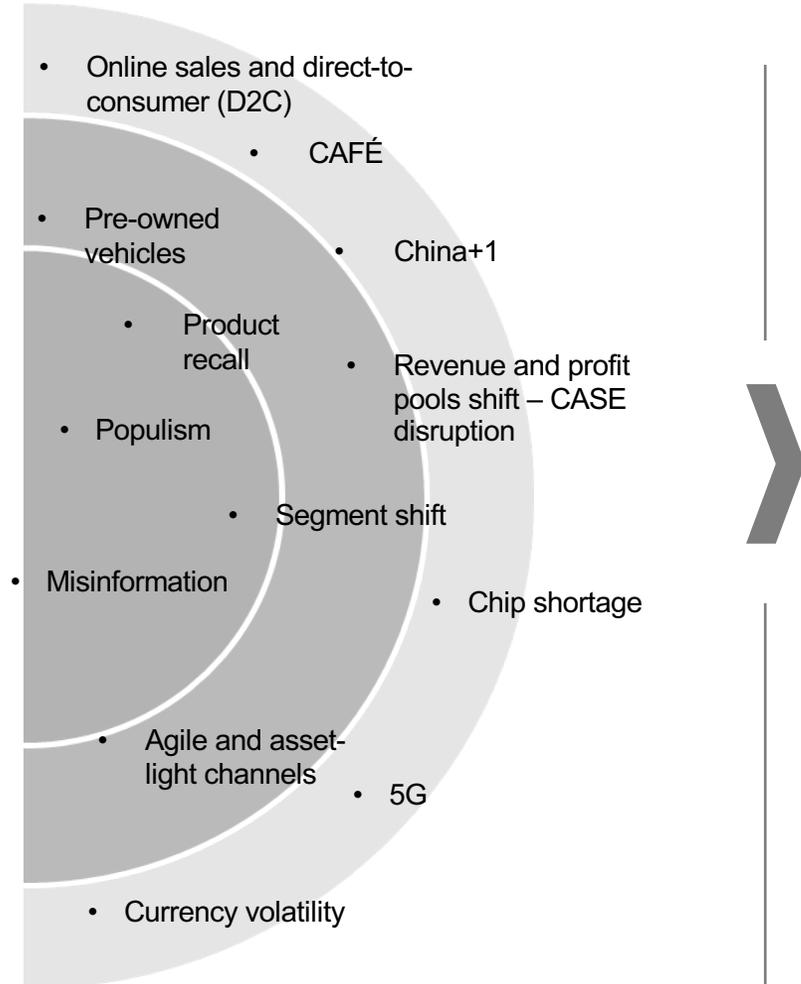
Survival		Financial prudence	<b>1</b>	Reduce leverage and finance cost burden, and target fixed-cost items
		Risk and crisis management	<b>2</b>	Financial risk dashboard with built-in thresholds and escalations
		Break-even point (BEP) reduction	<b>3</b>	Revisit contracts and monitor expenditure on non-core assets
		Workforce enablement	<b>4</b>	Prioritise worker wellbeing through the provision of essentials inside a factory
		Supplier relationships	<b>5</b>	OEM sharing workforce with tier-1 suppliers
		Customer intimacy	<b>6</b>	Real-time finance as a business partner
Revival		Fast-track the digital agenda	<b>7</b>	Coopetition and collaboration
		Talent management	<b>8</b>	Digital organisation – digital for product, enterprise and customer
		Manufacturing resilience	<b>9</b>	Stock options for top performers, emphasis on productivity-linked compensation
		De-risked and agile supply chains	<b>10</b>	Micro-market focus for demand assessment
		Enhance capabilities	<b>11</b>	Capacity/resource redistribution
		Imbibe best practices	<b>12</b>	Cross-skilling of critical resources (e.g. welders)
Growth		CASE disruption	<b>13</b>	Asset sharing (e.g. FIF)
		New markets	<b>14</b>	Economic value added per employee as a key metric
		Innovation management	<b>15</b>	Anticipate shifting trends in customer demand
		Managing trade-offs	<b>16</b>	Semiconductor player in the auto/ADAS market – new ‘genre of competition’
			<b>17</b>	Forging player ‘acquiring’ capabilities in aluminium die casting (growth area)
			<b>18</b>	Segment-specific capabilities applied to other segments (e.g. PV to two-wheeler)
			<b>19</b>	Trade-off – scenario planning for future manufacturing footprint
			<b>20</b>	Innovation programmes and collaboration with start-ups

## Summary

# 20

best practices followed by leading industry players to navigate volatility

# The road to SAFNET



	<b>S</b>	<b>Strong</b>	To bear shocks and unpredictable events
	<b>A</b>	<b>Agile</b>	To respond to a change in situation promptly
	<b>F</b>	<b>Flexible</b>	To scale up or scale down depending on market requirements
	<b>N</b>	<b>Networked</b>	To hedge the risk of volatility through strategic alliances with customers as well as suppliers
	<b>E</b>	<b>Enthusiastic</b>	A team that is passionate and resourceful is necessary to excel amid volatility
	<b>T</b>	<b>Technology enabled</b>	To enhance value creation by increasing productivity

Source: PwC analysis

# PwC's framework for the automotive industry: Navigating volatility

**S – Strong:** Build on your organisation's strength to absorb shocks and be prepared for unpredictable events.

**A – Agile:** Modify processes, cultures and mindsets to speedily adapt to changes.

**F – Flexible:** Create the necessary flexibility within your manufacturing, supply and distribution chain as well as the organisation to quickly scale up or down, depending on evolving demand peaks and troughs.

**N – Networked:** Successful automotive component suppliers will enhance their competitiveness through the strength of their network with strategic alliance partners, including customers, tier-2 and 3 suppliers, and the broader ecosystem of service providers.

**E – Enthusiastic:** Some of the best companies in the automotive component supplier industry have nurtured the passion and enthusiasm of their employees to protect themselves from an unpredictable environment. Cohesive teams with high levels of motivation and a focus to succeed have done exceedingly well under adverse circumstances.

**T – Technology enabled:** Component suppliers that are technology enabled will have an edge over teams that resist change as complexities keep growing in the automotive industry. Being enabled on both the operating technology (OT) and information technology (IT) front is a foundational element to navigate volatility.

Automotive component suppliers will need to deal with volatility by transforming their organisations. ACMA and PwC's study helps us in analysing the top-performing companies and their best practices to adapt to volatility. We have also examined some of the global best practices in the automotive industry for dealing with uncertainties.

PwC recommends a holistic transformation framework in order to survive, revive and grow amid volatility. We suggest that automotive component suppliers transform themselves to create a 'SAFNET'.



# The role of SAFNET in navigating volatility

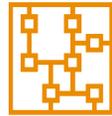


## Strong

### 1. Strong to bear shocks and unpredictable events

Leading automotive component companies are revisiting the financial principles on which they operate. They are evaluating the performance of their businesses in a zero-revenue scenario. They are examining the fixed expenses under the assumption that cash inflow would be negligible or close to zero. Leading companies hope to build reserves capable of covering at least six months of expenses during the zero-revenue period. Such a war chest will provide the required financial strength to endure a crisis.

Automotive component categories that are commoditised operate with wafer-thin margins and high levels of debt equity. Stakeholders in such companies must recognise that their survival would be at risk if they do not address their high-cost structure or low-price realisation. Such companies should take a deeper look at their viability in this volatile environment. They must ask themselves the fundamental question about whether they should continue to be in this business unless they can improve their margins through better price realisation and cost reduction, or review their technology to improve productivity.



## Agile

### 2. Agile so that changing situations can be responded to promptly

Frequent changes in the market situation due to regulations and alterations in business models and competitive action require a rapid response from automotive component suppliers. Best-in-class companies excel in taking fast decisions based on the availability of accurate information and insights. Organisation structure is also a crucial determinant of the speed of decision making. Multiple layers in an organisation mean that the top leadership receives delayed information, resulting in slower decision making. This gets further complicated as information needs to pass through various tiers of leadership and the execution is time-consuming as the actions trickle down at a slower pace through multiple layers.

Many of the automotive component companies in India are legacy organisations that have existed for decades.



## Flexible

### 3. Flexible so that you can scale up or down depending on market requirements

Top-performing companies have built flexibility into their manufacturing design. The core principle is to proactively work towards a multi-skilled workforce. Manufacturing assets should be flexible with the ability to easily switch capacity with changes in the product mix. Also, building a dependable set of supplier partners is a crucial element to build flexibility and adapt to volatile demand. Maintaining the right balance of permanent and contract workforce is another critical lever that delivers flexibility for automotive component suppliers.

# The role of SAFNET in navigating volatility



## Networked

4. Networked to hedge the risk of volatility through strategic alliances with customers as well as suppliers

Volatility puts the weakest link in the manufacturing chain under tremendous strain. Best performing automotive component companies have realised the power of building a network of trusted customers and partners that deliver in harmony with each other. Strategic partnerships with customers are the best option available to counter the adverse impact of volatility. Tier-1 suppliers must focus on strengthening their network of tier-2 and 3 suppliers. A strong network also helps companies in reducing their break-even points and ensures the flexibility to scale up or down, depending on the demand trends.



## Enthusiastic

5. Enthusiastic team that is passionate and resourceful is necessary to excel amid volatility

Implementing out-of-the-box solutions while operating under several constraints and high levels of stress is necessary to excel during volatility. The COVID-19 pandemic proved that automotive component suppliers with motivated teams displayed a lot of tenacity to find creative solutions to deliver amidst the lockdown.

Building trust and connecting with employees, continuing with ongoing communication and aligning with common goals are the key factors to ensure your team's best performance. Building a well-trained and talented core leadership team ensures that the organisation adheres to the right cultural values and behaviours. An enthusiastic and motivated workforce can deliver spectacular results amidst volatility.



## Technology enabled

6. Technology enabled to enhance value creation by increasing productivity

Technology-led automotive component companies are the ones that are best performing financially with high valuation in stock markets as well. As the degree of complexities increases, automotive OEMs will increasingly rely on tier-1 suppliers to be their technology partners. Companies that invest in both operating and information technologies will deliver enhanced value creation and productivity. Companies that operate in low-margin commodities need to focus on technology-led cost leadership.

# The road ahead: Growth with volatility – are you ready for the transformation?

- The Indian automotive and component industry is expected to continue to see a sharp recovery over FY22–FY23. Over the next decade, the industry is likely to continue on a healthy growth trajectory. However, growth will continue to be accompanied by high-frequency volatility.
- Automotive suppliers in India should try and embrace this volatility and accept these changes as the new normal.
- The PwC-ACMA study shows that the leading automotive component companies in India are thriving in the volatile environment by adopting best practices that can be summarised through the SAFNET framework.
- Automotive component suppliers should do a detailed self-assessment on how they perform on the SAFNET framework.
- Suppliers would need to set clear improvement goals to make their organisation Strong-Agile-Flexible-Networked-Enthusiastic-Technology enabled.
- Companies should form cross-functional teams focusing on the three states of survival, revival and growth. Organisations should align themselves with these design principles in order to prepare for the transformation ahead.



# Authors

## **Kavan Mukhtyar**

Partner and Leader – Automotive  
PwC India  
kavan.mukhtyar@pwc.com

## **Amit Dakshini**

Director, Automotive Management Consulting  
PwC India  
amit.dakshini@pwc.com

## **Somnath Chatterjee**

Associate Director, Automotive  
Management Consulting  
PwC India  
somnath.chatterjee@pwc.com

## **Manan Tolat**

Associate Director  
PwC India  
manan.tolat@pwc.com

## **Akhilesh Oberoi**

Senior Consultant  
PwC India  
akhilesh.oberoi@pwc.com

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Tata Motors

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Chairman and MD  
Lumax Industries

## **Sunil Arora**

MD  
Abilities India Pistons & Rings

## **Swithun Manoharan**

Senior Vice President  
TAFE

## **Harish Lakshman**

Vice Chairman  
Rane Group

## **Sunjay Kapur**

Chairman  
Sona Comstar

## **Vinod Sahay**

Chief Purchase Officer – Auto & Farm  
Sectors  
Mahindra & Mahindra

## **Ramesh Gehaney**

Executive Director and COO  
Endurance Group

## **Vivek Singh**

MD and Group CEO  
Sona Comstar

## **Ashok Taneja**

MD and Chief Mentor  
Shriram Pistons & Rings

## **Sanjay Labroo**

MD and CEO  
Asahi India Glass

## **Vinnie Mehta**

Director General  
ACMA

## **Sushil Rajput**

Deputy Director (Government  
Affairs & Public Policy), ACMA

# About ACMA

The Automotive Components Manufacturers Associations of India (ACMA) is the apex body representing the interest of the auto components manufacturing industry in India. Set up in 1959, the body represents over 850 component manufacturers in India, with a combined turnover of over USD 46 billion in 2020-21.

ACMA member companies contribute over 85% of the total auto component output in the country. In the domestic market, companies supply components to vehicle manufacturers as original equipment, to tier-one suppliers, to state transport undertakings, defense establishments, railways the replacement market. A variety of components are being exported to OEM's and after-markets worldwide.

ACMA's active involvement in trade promotion, technology up-gradation, quality enhancement and collection and dissemination of information has made it a vital catalyst for the component industry's development. ACMA has signed over 30 MoUs with its counterparts across the globe for promoting exports and international linkages. ACMA is represented on a number of panels, committees and councils of the Government of India and at the States through which it helps in the formulation of policies for the component Sector.

ACMA is an ISO 9001:2015 Certified Association.

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