CBI Q4 2021 SUPPLY CHAIN HEATMAP

OVERVIEW

- This heatmap aims to be a helpful cross-economy contribution to the government's ongoing effort to tackle supply chain issues and will be updated with new sectors and additional insights on a rolling basis.
- These issues are affecting all sectors, but CBI insights suggests that the most serious supply chain disruption is being seen across freight/logistics, manufacturing, energy-intensive industries, and hospitality/leisure/tourism.
- These sectors are facing supply chain challenges, labour shortages and energy price rises, which are having a direct impact on production levels. They are also seeing significant cost pressures, caused by higher wages, as well as increased distribution, component, and energy costs, which are beginning to be passed on to consumers.

LATEST INSIGHTS

There is growing concern among firms, especially in the logistics, food and drink, manufacturing and retail sectors, that the rapid growth in Covid cases and absences in recent weeks may aggravate supply pressures and further disrupt firms' operating capacity at a crucial time in the run-up to Christmas.

Insights from the UK Financial Services and Risk Management sector:

- Cost pressures are compounding the challenges many firms are facing, as they manage their Covid liabilities whilst also dealing with ongoing supply chain disruptions.
- Insurers are concerned about being able to complete damage claims from adverse weather on time due to a shortage of raw materials. They are assessing risks across their portfolios, and whether they need to increase premiums for businesses so that they can fulfil claims.

Global insights from China, India, the United States, and the EU from the CBI's international offices and CBI members with international operations (see our Annex on p 20-26), with key insights showing:

- Labour shortages and increases in the costs of raw materials continue to drive persistent supply constraints and cost increases across the global economy.
- Increased logistics costs, particularly caused by container supply shortages and unloading delays at ports, continue to bite across global supply chains.
- A range of measures are being undertaken by businesses to address challenges at ports, including firms in India diverting operations to use European and American ports and the introduction of sanctions for delayed unloading of shipping containers in India and the US.

CROSS-CUTTING SOLUTIONS

Supply	Short-term (in the next 6 months):
Chain	• Improve communication with businesses on the work of the Supply Chain Taskforce, including how their feedback is being used
Taskforce	and what areas the group will be focussing on post-Christmas.
Smoothing	Short-term (in the next 6 months):
trade flows	• Launch a small business awareness campaign to drive firms' understanding of the incoming customs controls for January and July 2022.
Energy	Provide short term relief for firms to support with policy and network costs while energy prices remain high. This could include:
	Short-term (n the next 6 months):
	Introduce government-backed loan guarantees for sectors particularly affected.
Labour/skills	Targeting skills interventions and funding towards shortage areas so that skills supply matches economic demand: Short-term (0-6 months):
	Accelerate the approvals and processing of HGV drivers by improving driver testing capacity and speeding-up licence turnaround times, including for re-issuing licences.
	Maximise the use of the DfE's 8-12 week 'bootcamp' model to help people switch jobs or gain employability skills for sectors
	facing shortages such as warehousing, including targeting bootcamps for roles on the Shortage Occupation List.
	Target the Lifetime Skills Guarantee and National Skills Fund at shortage occupations, including for roles requiring Level 2 qualifications and those on the Shortage Occupation List.
	Introduce Equivalent and Lower Qualification exemptions for qualifications funded by the Lifetime Skills Guarantee.
	Mid-term (in the next 6-12 months):
	Making the Apprenticeship Levy more flexible for employers so that it can fund more high-quality training for in-demand roles, including shorter modular courses, product training and more professional courses.
	Ensuring an agile migration system that is highly responsive to changes in economic demand and shortages of labour that the UK's own labour market cannot meet in the short-term:
	Short-term (in the next 6 months):

- Immediately commission the Migration Advisory Committee to start an annual review of the Shortage Occupation List, and report as early as possible.
- Fully implement the outstanding recommendations from the most recent MAC review of the Shortage Occupation List in September 2020.

Mid-term (in the next 6-12 months):

• Put the MAC on a new footing, with a regular rhythm of meetings, adopting a status like the LPC, and adding industry and trade union representation alongside academics and economists.

Sector	Supply side constraints	Cost pressures	Downstream effects/risks	Immediate (Q4), short-medium (Q1-Q22022) and medium-long (Q3'22-Q4'22) expectations	Actions businesses are taking
NEW: Financial Services & Risk Management Input gathered from businesses and Trade Associations including:	Cashflow Cost pressures are compounding the challenges businesses are facing into as they manage their Covid liabilities whilst dealing with supply chain challenges. Raw materials Insurers are worried about being able to fulfil claims on time (e.g. after natural weather events) due to the raw materials shortage.	Overall costs Businesses are reporting increasing insurance costs and rising costs associated with working capital. Raw materials Rising costs of materials makes it increasingly challenging for insurance companies to fulfil claims.	Cashflow challenges for businesses have been compounded. Storm and flooding damage will take longer to repairs, which risks buildings being left in disrepair for months. Risk of insurance companies having to put up their premiums in order to fulfil claims.	Supply chain pressures expected to last for the whole of 2022.	Insurers are considering their risk across their portfolios. Businesses are assessing their own financial risks.
Input gathered from businesses and Trade Associations including: Logistics UK & Road Haulage Association	Labour Firms are concerned that changes to COVID rules on self-isolation and international travel in response to the Omicron variant will further reduce	Logistics/distribution costs Firms are preparing for further supply and cost pressures on their supply chain due to the introduction of import	Rising costs have meant higher prices being passed on, a reduced customer offering and managing	Not expecting issues to be resolved before late 2022/2023 at the earliest. *Chinese New Year is a key milestone.	Firms are setting up their own driver training academies to speed up onboarding of new drivers.

 UK Warehousing 	the availability of HGV	controls from the EU	customers'	Normally a quieter	Industry
Association	drivers.	on January 1 st .	expectations.	period afterward	significantly
CBITA Network				but haven't seen	increasing wages to
call	Vacancy challenges with	Costs of shipping	Local authorities	demand drop over	help retain and
Call	HGV drivers - 69% of firms	containers from China	can't pay drivers	the last two years.	recruit staff for
Rag rating: RED	reporting severe/very	increased by up to 10x	at competitive	Expect levels of	both HGV drivers
Rag lating. RED	severe issues in	over the past year.	rates. This could	demand to remain.	and warehouse
	recruiting/retainingstaff.		have an impact	Could cause further	operatives.
Employs: 1.1m		*Firms speak of costs a	on winter	bottlenecks at ports	operatives.
	Lack of forklift drivers and	year ago at \$3k for a	services, e.g.	if HGV drivers not	*Logistics firms
	warehouse operatives in	40ft container, for	gritting.	available.	pushing for greater
	the lead up to the peak	2022 it is up to \$14k.			engagement
	November period is		Waiting time at	*Container rates	between logistics
	exacerbating port issues.	Supply chain seeing	ports is taking	have come down a	and port operators
	Commoning O2 2010 with	hikes in costs of raw	around 12% of	little which is seen	to help alleviate
	Comparing Q2 2019 with Q2 2021, Logistics UK	materials – contractors unable to deliver on	global shipping	as a temporary Christmas Iull but	bottlenecks at
	reported a fall of 31.5% in	commitments.	capacity at any given time.	expected to go back	certain ports.
	forklift drivers and 14.7%	communents.	given unie.	up.	•
	in managers and directors			αp.	Warehousing
	in storage and	Wages and/or benefits			industry supporting
	warehousing.	HGV driver shortage leading to 10-15%			two industry-led
	Logistics	wage increases -			career/job
	Arrival patterns are	expectation this will			engagement
	increasingly erratic, with	need to increase			programmes aimed
	some ships coming in with	further.			to promote the
	more containers than	raraici.			industry and its
	expected or in some cases				roles: Think
	allowed.				Logistics and
	Issues with port capacity				Tempus Novo
	and containers in wrong				
	places - firms having to				
	add extra days/weeks into				
	delivery lead times.				

Regarding the global schedule reliability, (measured as turning up 24 hours or earlier from scheduled time), is down to lowest levels historically. Previously 85-90% in 2015. Currently around 30%. This doesn't include blanks or nonsails.		
Warehousing *Concerns from members about limited warehousing/ land available to build warehousing space, creating storage capacity issues in the UK in which to house stock. Land prices also rising as a result.		
Raw material/components Lack of supply of vehicle parts and whole vehicles is making it harder to fulfil/honour transport contracts.		

Food & drink retail	Labour	Raw	Increases in the	Foreseethe	Incentives for new
	*Firms are concerned	materials/components	prices of goods	challenges	and existing staff,
Input gathered from	about the new self-	Cost of products has		becoming more	new training and
businesses and Trade	isolation rules for	increased. Ongoing	Late inbound	acute over the 'so-	technologyto
Associations including:	confirmed contacts of	price escalation in	deliveries	called' golden	empower said staff
BRC	Omicron cases,	agricultural markets is		quarter (Q4 2021).	and improve
	irrespective of vaccination	driving a lot of cost	Inability to stock		retention.
CBI TA Network	status. There is a risk this	pressure.	high volume/key	Continued supply	
call	could result in the closure		items	chain disruption,	In some cases,
	of an entire store/supplier	Logistics/distribution		and reduced levels	raising pay.
Rag rating: AMBER	site (particularly now that	costs	Substantially	of stock	
	social distancing measures	Food/drinkand	reduced stock	volume/variety into	
Employs 1.5m	are no longer in place).	agricultural sectors are	levels of available	H2 2022.	
	Co. td	concerned by their smaller firms'	goods		
	Covid means staff	readiness for new	Extended last		
	absences are already at double normal rate,	customs controls on	mile (home or		
	•	EU imports,	customer)		
	aggravating already pressing shortages.	particularly for food	delivery		
	pressing shortages.	and plant-based being	timescales		
	Having to compete more	introduced in January,	timescales		
	than ever with	which may result in	Extended home		
	manufacturing and	increased cost and	delivery		
	hospitality for seasonal	supply pressures.	timescales		
	staff in the lead-up to				
	Christmas.	Significant disruption			
		and cost increases			
	Beyond HGV, picking,	anticipated.			
	process and packaging				
	shortages also biting.	Wages and/or benefits			
		Challenges around			
	Increased reporting of	anticipated increases.			
	food waste due to labour	Other			
	shortages in fields such as				
	butchery, and labour	Business rates, NI			
		contributions,			

	shortages in food production/packing. Logistics Pressure on logistics (see 'Freight/Logistics' for more detail). Raw materials CO2 shortages – questions about what will happen in early 2022 when government support is due to expire.	potential for an online sales tax.			
Non-food retail Input gathered from businesses and Trade Associations including: BRC CBITA Network call	Raw materials/components Shortages of some products caused by upstream commodity price rises or disruption, such as lumber (furniture) and other components such as semiconductors	Raw materials/components Cost of products has increased. Logistics/distribution costs Significant disruption and cost increases	Increases in the prices of goods Late inbound deliveries Inability to stock high volume/key items	Foresee the challenges becoming more acute over the so-called 'golden quarter' (Q4 2021). Continued supply chain disruption,	Incentives for new and existing staff, including new training and technology to empower said staff and improve retention.
Rag rating: AMBER Employs: 3m + wholesale: 1.2m	(computing & electronics). Labour *Firms are concerned about the new self- isolation rules for confirmed contacts of Omicron cases, irrespective of vaccination	*Large retailers previously able to book shipping containers in advance. Struggling to book now, so having to buy more on spot rates. Costs at \$14k for	Substantially reduced stock levels of available goods Extended last mile (home or customer)	and reduced levels of stock volume/variety into H2 2022.	In some cases, raising pay.
	status. This could result in the closure of an entire	a 40ft container on contract and around	delivery timescales		

	store/supplier site	\$16-17kfor one box at			
	(particularly now that	on-the-spot rate.	Extended home		
	social distancing measures		delivery		
	are no longer in place).	Wages and/or benefits	timescales		
	are no longer in place).	HGV drivers/ fleet	timescales		
	Increasingly challenging to	operator shortages			
	hire for shifts during	have caused costs for			
	'antisocial' hours, despite	these roles to jump by			
	premiums being paid for	up to 40% in some			
	these shifts.	instances, with			
	these shirts.	substantial cash			
		incentives being			
		offered.			
		onerea.			
		Other			
		Business rates, NI			
		contributions,			
		potential for an online			
		sales tax.			
		Sales lax.			
Manufacturing	Labour	Logistics	Higher costs	Challenges with	Growing evidence
	*Firms are concerned	Firms are preparing for	being passed on.	availability of	of firms being more
Input gathered from	about the impact of some	further supply and cost		labour, higher	flexible in
businesses and Trade	of the changes to	pressures on their	Inability to fulfil	commodity and	accepting deliveries
	domestic and	supply chain due to the	order books of	forward	outside of working
Associations including:	international Covid rules.	introduction of import	clients.	energy/fertiliser	hours.
 Food & Drink 	 The requirement to 	controls from the EU	Example: *Food	prices means	
Federation	self-isolate if you have	on January 1 st .	manufacturers	expectations are	Focus on enhanced
• SMMT	been identified as a	· · · · · · · · · · · · · · · · · · ·	report making	that these	recruitment and
• AMEDA	close contact of an	Energy	around 50	challenges persist	retention methods,
 CBITA Network 	Omicron cases risks	Impact of rising	changes per week	well into 2022 at	including offers of
Call	aggravating existing	agricultural	to their	the very least.	upskilling and wage
NFU	staff shortages.	commodities and	production plans		increases.
1110	 Manufacturing firms 	energy prices –	because of supply	*Uncertainty about	
Dec vetice DED	who need to move	fertiliser has increased	chain issues.	whether Covid	Scaling-up
Rag rating: RED	specialist staff – such	by 300% year-on-year.	Currentlycausing	measures will be	apprenticeships,

	as heating engineers –		minimum of 1-	introduced (when,	but it will take time
Employs:	are worried that the	Companies that are	day delays to	how, to what	to feed through.
2.1m	new international	hedged until 2022 are	client orders.	extent) is making	into the labour
	testing rules will deter	still concerned about		workplace and	force.
	many from coming to	supplier failure and		workforce planning	
	service crucial	that they will need to		challenging for Q4	Working closely
	systems.	renegotiate at much		and Q1 2022.	with suppliers to
		higher prices.			maximise flexibility,
	Staffing shortages are			Semi-conductor	including
	biting across the sector,	Raw materials		shortages in the	rescheduling and
	especially HGV drivers,	Raw materials costs		automotive sector	longer factory
	process/packaging and	are strongly influenced		may last until 2023.	goods intake
	engineers.	by commodity pricing,			opening hours.
		and increases are in			
	*Emerging evidence that	the range 25-40%.			Liaising closely with
	manufacturing firms who				customers on
	have significantly	Wages/other benefits			demand-side
	increased wages	Removal of furlough			changes which
	commenting that pressure	has further impacted			have rapid
	on drivers for their	the automotive sector			implications for
	distribution centres is	considering the semi-			deliveries due to
	easing slightly but staffing	conductor crisis,			delays.
	warehouses becoming	meaning no headroom			
	harder.	- no HMRC deferments			Food and Drink
		or loan schemes.			Industry working
	Many older and EU				cross sector to
	workers that stopped				understand the gap
	working during the	*Members talking of			across the food
	pandemic are not	steel prices being up			supply chain.
	returning.	111% over last year, as			
		a result they're having			
	Yet to be seen how recent	to increase their prices			
	visa allowances for HGV	by 25%.			
	drivers will help, especially	,			
	in the run up to Christmas.				

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HGV driver shortage		
causing delays to product		
distribution.		
*Early signs of increased		
absences caused by a		
rising number of Covid		
cases, especially among		
unvaccinated staff having		
to self-isolate if contacted		
by Test & Trace.		
by lest & frace.		
Raw materials		
Manufacturersare		
struggling to secure		
enough parts to fix /		
maintain factory machines		
and components.		
Global semi-conductor		
shortages are causing		
production stoppages and		
managed reductions in		
shift patterns in the		
automotive sectors.		
Production was down 30%		
in Aug and sales down		
35% in September.		
On CO2 shortages - which		
are crucial for food		
manufacturing - questions		
about what will happen in		
early 2022 when		
government support is		
due to expire.		

Energy Intensive	Energy	Energy	So far, Ells have	Expecting sustained	Firms currently
	In the event of national	Energy is normally 30-	largely absorbed	high energy prices	absorbing costs to
Industries					•
	energy supply shortfall	35% of production	the significantly	for at least the next	keep production
Input gathered from	this winter, firms are	costs for many of these	higher energy	six months, and	lines running.
Trade Associations	concerned that they will	firms but now it may	costs but with the	possibly into H2	
including:	be among the first forced	be up to around 65% in	continued	2022, based on the	
Energy Intensive	off the gas network. A	some cases.	escalation many	forward energy	
	sudden shutdown would		producershave	price.	
Users Group	risk threaten the viability	Many firms have	had to pass on		
• UK Steel	of many businesses.	already purchased	temporary		
 British Glass 			surcharges to		
		energy for the	their customers.		
Rag rating:		upcoming winter and			
3 1 3		so will not have to fully	Sustained high		
Employs:		pay the higher prices	energy prices will		
0.2m		immediately.	cause firms to		
0.2111			prioritise product		
		A small number of	lines based on the		
		firms are already facing	energy intensity		
		higher energy prices	of the process		
		now – higher than paid	and not run some		
		-	production		
		by their international	facilities		
		competitors – which is	continuously to		
		leading some to	save costs.		
		consider scaling back			
		or pausing production.			
		As high prices continue			
		for longer, more firms			
		will be affected.			
		30 411000041			
		Wages/benefits			
		HGV driver shortage	•		
		adding to costs			
		through having to pay			

		significantly increased salaries. Raw materials Slightly lower costs of some raw materials, any gain has been eradicated the soaring energy and transport costs.			
Input gathered from Trade Associations including: Build UK FMB CBITA Network Call Rag rating: AMBER Employs: 2.3m	Raw materials/components Certain items – timber, cement, steel PVC products – remain in short supply. 82% of builders have delayed jobs due to a lack of materials, and 8% have been forced to cancel. *Example of firms having difficulty with accessing cement in Scotland. Having to ship cement from Northern Ireland to Scotland, creating additional cost and labour strains, plus emissions impacts. Labour Lack of skilled labouris exacerbated ahead of	Overall costs Prices may not yet have been fullyfelt by the construction supply chain due to its length and lead times. 97% of builders are facing material price rises, with 77% having been forced to raise their prices in the past quarter. *Fluctuating costs creating difficulties for firms to tender for government contracts. Unable to calculate cost of projects with longer lead-in times. For existing contracts, material prices and starting to impact profitability on key	Firms expect to start to feel the impact of increased energy costs for energy-intensive products like steel.	93% of builders are expecting material price rises to continue into Q4.	Contractors have so far been trying to cope with shortages by planning and orderingin advance. Contractors communicating the cumulative effect of rising costs to clients and explaining the impact on current / future projects.

	Christmas with increased competition fromretail and hospitality. 60% of builders have delayed jobs due to a lack of skilled tradespeople, and 12% have been forced to cancel. Examples - 37% can't hire plasterers - 47% struggling to hire carpenters/joiners - 45% are struggling to hire bricklayers Other UKCA marking is an issue for construction products - lack of testing capacity is affecting approval of products such as radiators and boilers.	public sector works, with emerging evidence of members reporting projects to be loss making.			
Health & social care Input gathered from Trade Associations including: • ABPI • British Generic Manufacturers Association	Logistics Distribution difficulties due to delays at Felixstowe. Raw materials/components Scarce provision of disposable materials (e.g. packaging), ingredients and raw materials	Logistics/distribution costs Non reported, however, logistics and distribution are often outsourced, so reporting of additional costs may be delayed. Labour	Managed via business continuity plans.	Difficult to forecast how long shortages will last for. There is no obvious end to this situation at present.	Corporate business continuity plans, and contingency arrangements introduced where required.

	equired for the	Having to pay more to			
providers	production and batch	agency/temporary			
• CDITAINELWOIK	elease of biotech	workers.			
calls	products.				
cans		The mandating of			
Dog vetice: ANADED	abour	vaccinations in parts of			
Rag rating: AMBER	General shortages of HGV	the sector is expected			
10	orries and drivers is	to have an impact on			
Employs: 2.3m	lowing down deliveries of	staffing availability and			
	medical equipment.	competition in some			
		areas so further pay			
9	Shortages of staff across	inflation would be			
	the health/care sector	required to attract and			
	nursing, care and	retain staff.			
·	dentistry) is driving up the	retain stan.			
	sector's reliance on				
	agency and temporary				
	workers, who are				
	hemselves hard to				
S	source.				
	Care homes particularly				
	mpacted by labour				
S	shortages. Finding care				
S	staff moving to other				
a	areas within the NHS for				
a	alternative health-related				
v	vork.				
Hospitality/Leisure/T F	Raw	Raw materials	75% of firms	Expectation that	Closing premises
ourism	materials/components	Food and drink	saying that they	these challenges	for days of the
	All hospitality firms are	inflation running at 5-	will have to pass	will last well in	week, restricting
	acing supply disruption –	8% but most	on price increases	2022, firms will	covers in
input gathereu iroin	L in 5 products are missing	businesses being	to consumers.	need a big focus on	restaurants and
Trade Associations f	rom every delivery and	quoted 8-11%		financial resilience.	
including:	I OIII E VEI V UEIIVEI V AIIU — I			i illialiciali esillelice.	sale of beds in

 UK Hospitality 	reduced deliveries from 3	2022 and anticipate	Increases before	demand to supply,
 CBITA Network 	to 1x a week.	that food and drink	April likely –	foregoing event
calls		price inflation will peak	many firms	and forward
cans	Labour	at 13%.	adjusted for VAT	bookings,
December DED	There is growing concern	Wages and/or benefits	in October and	restricting menus
Rag rating: RED	in the sector about the 10-	Wage rate inflation in	are planning	and activities.
	day self-isolation for	hospitality itself 11-	pre/post-	
Employs:	confirmed contacts of	13% - labour is 52% of	Christmas	
3.1m	Covid Omicron cases,	operating costs so this	increases, and	
	irrespective of vaccination	has a huge impact, and	again in April with	
	status.	most wages will	the NLW/NIC	
	○ 1 in 5 staff in the	increase by 6% in	increase.	
	hospitality sector had	hospitality due to NLW		
	to self-isolate during	increase and impact on		
	the summer	differentials		
	'Pingdemic'.			
	 Any recurrence could 	Energy		
	seriously disrupt	Energy costs rising 50-		
	business operations	100% at point of		
	and operating	renegotiation for		
	capacity in the run-up	supply from April 2022		
	to Christmas.	onwards.		
	Hospitality has 10%			
	vacancy rate – esp. chefs,			
	senior mgmt. 25%			
	businesses saying that			
	they have had to close for			
	at least 1 day a week.			
	,			
	Energy			
	Not seeing disruption to			
	supply other than in CO2.			
	Other			

	Cost of doing business going up by around 13% and margin eroded by a third. Impact on cashflow – esp. as govt support tapers at the same time re VAT, business rate relief and furlough.				
Input gathered from Trade Associations including:	Energy Gas industry particularly impacted by cost increases and the sector issues should be looked at twofold: 1. cost of gas and 2. the retail sector (caused from point 1 but has distinct consequences).	Expecting to see more energy suppliers go out of business this winter due to sustained high energy prices. Once costs from the SOLAR process (taking on new customers from lost suppliers) has been neutralised across customers, estimated costs will be significant causing a further rise in consumer bills.	Increased costs of materials like steel expected to have an impact on development and maintenance of Offshore Wind farms. Further supply chain issues will materialise but industry unable to look at these due to cost pressures.	Gas prices are coming down slightly from their peak but are expected to remain high until Summer 2023. Expect prices to go up again in April 2022 when the domestic price cap is reset. Final costs should be lower than they are currently, but significantly higher than 2015-19.	Larger retail providers taking on customers from collapsed suppliers (SOLAR)
Housing, residential property & commercial property Input gathered from	Raw materials/components Constraints on development pipelines due to labour and	Rental costs The shortage of logistics space is putting upward pressure on rents in the sector.	Shortage of logistics space is having a knock-on consequence with occupiers not getting the	Concern logistics space will remain in very short supply into 2022 and possibly beyond. Land-use planning	At large end of development sector construction material shortages are being managed through supply

Trade Associations including:	construction material shortages. Labour Shortage of warehouse operators to accommodate increase in	Overall costs Most acute for firms developing housing because of the volume/diversity of materials and trades	optimal space for their operations, either in terms of configuration, or location, creating negative impacts on productivity.	has not adapted to the greater need for logistics space.	chain management, for example booking construction materials further in advance, typically doubling the lead
Association CBITA Network calls	demand for warehouse facilities, such as e-commerce and firms looking to hold greater quantities of stock.	involved in finishing a home and fitting it out. Materials and labour shortages creating cost	Delays and inflexibility in planning process means acquisition		times that would have previously been used. Skills shortages has
Rag rating: AMBER Employs: 580k		inflation for the industry.	of land for warehousing space is slow and not meeting demand.		accelerated adoption of modern methods of construction.
					Larger development sites establishing training facilities so developers can draw on the local workforce for filling vacancies.
Aerospace / Defence / Security and Space	Mixed impacts across sectors: Aerospace civil side: Is still	Inputs costs Cost of inputs have continued to rise, as	Concern that the extended lull in demand for civil	Civil Aerospace In short term, Dubai air show and a strong end to 2021	Building in for time delays around moving goods.
Input gathered from Trade Associations including: ADS	experiencing a downturn in demand from the pandemic, so the impacts haven't been felt as strongly so far given	energy prices rise, disruptions continue, and key components like aluminium, steel, copper and semiconductors see	aerospace some downstream firms will struggle to return to full scale when needed.	are expected for aircraft orders. Yet with international travel	Working to identify the potential new skills required as technologies develop.
Rag rating: AMBER	relatively weak order	increased costs. This is		still not fully	

	books and lower demand	causing an increase in	recovered, industry	
Employs 385k directly	for parts.	delays to orders.	not expecting a full	
			return to aerospace	
	Defence and security	Logistics/distribution	manufacturing until	
	sector: some reports of	costs	2024 with only	
	impacts of chip shortage	Logistics costs have	marginal uptick in	
	and concerns to the supply	been on the increase	the rate of	
	chain.	since the end of the	production until	
		Brexit transition period	then.	
	Logistics: Businesses	as new requirements		
	building in additional time	have come into place.	Defence and	
	in logistics owing to large		security	
	freight forwarders warning		Cost pressures	
	of delays.		expected to remain	
			a concern in the	
			short term and long	
			term.	

[•] RAG ratings in this table are based on anecdotal evidence and survey data gathered from CBI Trade Association members and direct business input from the CBI's cross-economy membership base.

[•] Insights marked with an asterisk (*) come from individual members.

ANNEX

CBI INTERNATIONAL SUPPLY CHAIN HEATMAP

Country	Supply side constraints	Cost pressures	Downstream effects/risks	Immediate (Q4), short-medium (Q1-Q2 2022) and medium-long (Q3 '22 – Q4 '22) expectations	Actions businesses are taking	Action governments are taking
China Input gathered from: Input gathered from: Input gathered from: CBI Beijing Office	Energy Expectation that the worst of China's energy crisis is over. Coal supply has risen, and prices fallen since mid-October 2021. China's largest grid operator confirmed supply and demand have returned to balanced levels in its coverage area. Power supply Have been extensive power supply issues in due to extreme flooding, a coal production deficit & increased global demand of manufactured and poor management (including pricing) of the country's electricity power grid.	*Real estate consultancies, designers, architectural firms are feeling the pinch with many ongoing property/construction projects either on hold or looking increasingly unviable due to economic growth slowdown	Unprecedented blackouts led to certain power-intensive industries limiting work and production for a few weeks, causing delays on products. Concernremain energy rationing may be brought back in should supply issues worsen during winter months. But good levels of communication between officials and FIEs in China. Risks Extreme weather continues could	Immediate December normally peak for energy /electricity consumption usage. Expectation of continuing zero- tolerance covid strategy and closed borders (impacting retail/leisure/hospitality) into 2022	Previously paused production when necessary to preserve limited energy provisions following September energy crisis. Regular dialogue between local authorities and foreign companies to update on when there may need to be a slowdown of activities.	

	T	T	
	continue to have an		
Coal shortages Coal shortages	impact on supply. Has		
created by the recent	been heavy snowfalls		
power cuts	in Beijing in early		
	November. 3-4 weeks		
*Some companies in	earlier than usual.		
manufacturing and			
chemical/gases	With the zero COVID-		
production have been told	19 cases at ports		
which days that they can	policy, this is creating		
operate on or have been	additional paperwork		
told to expect power cuts	and COVID checks on		
through to the end of	ships entering		
2021.	Chinese ports,		
	slowing down		
Logistics	turnaround times for		
Zero COVID-19 ports	cargo.		
policy means a single			
positive case in a port or			
neighbouring area shuts			
down the whole port and			
infrastructure.			
The congestion and delays			
caused by the pandemic			
and strong global demand			
will continue well into Q1			
2022 and are unlikely to			
ease until Chinese New			
Year (end of Jan 2022)			
Port productivity			
(efficiency) has been			
suffering throughout 2021			
and a lack of warehousing			

	and containers are making a bad situation far worse. Feeder operators at ports in southern China are extending service suspensions by at least six weeks over the Lunar New Year holiday due to quarantine measures for shipping crews.			
European Union Input gathered from: • global CBI members • CBI Brussels Office	Supply-side constraints continue to bite across EU member states, with this cited as an area that could impact growth and/or recovery by 12/31 of BusinessEurope members. Labour shortages as an impediment to growth by 14/31 BusinessEurope members. Shortage of chips and some specific commodities, transport problems, delivery delays, rising prices of many commodities and energy, and the development of the coronavirus crisis are biting across Europe.	Cost increases 16/31 BusinessEurope members mentioned rising prices as a challenge, with 9 explicitly mentioning energy as the key driver. Energy Member state example – Bulgarian Industrial Association – Union of the Bulgarian Business (BIA): Key challenges for Bulgaria are electricity and gas prices that spiked significantly in 2021 – with 100% and 50% compared to 2020 levels. The industry is buying electricity on the Day-Ahead Market	Member state example - Croatia Employers Association: increase in prices is expected to cease in the first half of 2022 Member state examples - Cyprus Employers and Industrialists Federation (OEB): major challenges with inflationary pressures mainly caused by energy price increases and the rise in consumer prices and freight costs as Cyprus is an island that depends 95% on sea transport. - Poland: next year will bring fundamental change in polish taxation scheme – Polish Order –	Energy European Commission recently proposed a toolbox with short-term measures that member states can take to tackle energy prices (such as direct payments to vulnerable households, deferred payments, tax cuts, state aid for companies that are compatible with the EU state aid rules). On mid-term to long-term

I Name to the second	and the land of th			1	
Member state	•		to strengthen demand		measures, the
Belgium: Secto	I .		by increasing wages,		toolbox refers to
particularly hit			mostly at the expense of		a number of
chain disruption			increasing cost of labour		already planned
chemical, cons			for entrepreneurs.		EU initiatives
food and tech	<u>.</u>				(such as the
sectors.	examples –				announced
	Austria: reached the				revision of the
Denmark: For					gas/hydrogen
in industry and					market regulatory
respectively 33	•				framework or
24.2 pct. have					future guidance
output restrict	I				on how to
lack of employ					accelerate
	caused by energy price				permitting
Germany: Acc	•				process for
business surve	•				renewable
institute, 70%					energies) as well
manufacturing	· · · · ·				as new ideas
surveyed in Au	igust said that depends 95% on				(such as joint
that supply sho	ortages sea transport.				procurement
were hamperi	ng their				and/or joint
production-ir	the last 30				reserves of gas
years the peak	c value was				stocks).
20%.					
					Member state
					examples -
					Greece:
					increasing
					minimum wage
					due to inflation
					pressures and
					high economic
					growth.

						Romania – a gas price cap was imposed as industry is starting to feel the higher energy prices impact productivity.
India Input gathered from: Input gathered	Raw materials/components Shortages such as electronic components has impacted key industries like electronics and automobile manufacturers. Seen a double-digit drop in sales for some auto manufacturers in the last month. Supply shortage and long supply lead time of many electronic components (chips) from OEM's and steep increase in commodity costs continue to significantly impacted the production/manufacturing output. Logistics Impacted by international issues at ports. Port delays	Energy costs Oil and gas prices up by around 60%. Fuel costs Retail price of diesel has gone up by 17% over the last 12 months impacting logistics cost as India transports about 65% of freight and 80% passenger traffic by the roads Raw materials/components Increases in prices of commodities used in industrial production – steel, aluminium, copper and zinc and other alloying metals Average price of hot rolled coil (steel) rose 55% from ₹44,880 per tonne in November	Regular suppliers based in China shutting down due to local regulatory and energy supply issues, impacting supply chain Detention/demurrage charges on account of late clearances at ports and penalties for delayed customs duty payments on account of Indian Customs IT server connectivity issues are adding to the logistics costs for firms INR Currency Depreciation against USD and higher exchange rates being charged by different	Expecting container shortage to continue for the medium term.	Diverting operations to use Western ports, rather than Eastern ports to improve turnaround times. Firms actively looking to improve Just-in-Time supply-system to reduce the cost of production and keep cost of inventory down. Firms starting to focus on manufacturing investments and domestic value addition, enabled by policies like production linked	

	in China causing problems for freight. A container from a Chinese port to Mumbai previously took 15 to 18 days and now averagely takes up to 50 days. Indian ports not experiencing domestic issues with labour/skills shortages but backlog of clearing containers and shortages in accessing containers. Labour In the textile and garment industry, 25-30% of the staff have not returned to work after migrating to hometowns after the COVID-19 outbreak.	2020 to ₹69,600 a tonne in October 2021 International power outages impacting India's supply of coal creating prices increases. Increase in cost of forged parts and casting. Cost of forged parts and casting gone up significantly. Logistics Reports of increased logistics costs now adding 10% to manufacturing costs.	parties have Increased the total cost of Imports.		incentive schemes to derisk their supply chains. Plus a significant focus on alternate delivery models to reduce distribution footprint to optimize costs.	
USA Input gathered from: Input gathered from: Input gathered ga	Logistics Major shipping delays and backlogs at the Ports of Los Angeles and Long Beach. 40% of US maritime cargo arrives at these two ports. Port of LA continues to operate on reduced capacity, as over 115,000 empty containers remain		*Manufacturing firms concerned about some of their USA operations which are implementing "no jab, no job" policy. Some firms reporting 25% of staff vaccinated, which could cause issues in manufacturing output.	Logistics Florida reported a shortage of 3400 parking spaces for trucks in 2019. Due to population growth, the state predicts this will increase to 4900 by 2030. Annual driver retention for the biggest trucking	All 12 ports that make up the West Coast Terminal Operators Association have chosen to streamline or remove administrative fees upon arrival for carriers.	Four states are working together to build a long-distance truck parking network along the Interstate 10 highway. Arizona, California, New Mexico, and Texas are building a combined

ctationary at the nort	ı		firms in the U.S. is	Additionally, the	online tracking
stationary at the port, with nowhere to go. Most	Dani	orts of potential	currently hovering	CMA CGN	system for the
_	•	•			•
remain on trucks, adding		labour disruptions	around 10%, meaning	shipping	550 parking
to the backlog for new		ng the US West	that 9 in 10 workers will	company has	spaces along the
containers arriving off		st through Q1-Q2	quit after one year.	offered any	I-10 for truckers
ships.	2023	!2		importer who	to access, but
	l		Ports on the US West	unloads their	more work is
Across the US, truck driver		istics	Coast were operating on	containers from	needed to build
shortages causing		ery high US	extremely tight margins	the port within 8	new spaces.
containers to stack up on		sumer demand is	before 2020 and were	days between an	
docks with nowhere to		cerbating the	not prepared to react to	extra \$100-\$200	President Biden
unload new containers.		ation and causing	a major economic shock,	per container.	created a Supply
Container ships resorting	serio	ious bottlenecks	so not resilient to other		Chain Disruption
to waiting outside Ports.	with	n turnaround	shocks.	Some ports have	Task Force in June
Can bas many as two	dela	ays, airside issues,		implementeda	and negotiated
weeks.	lowe	er capacity and		fine system on	with the port
	cont	tainers being		unloaded	authorities and
Logistics problems first	stuc	ck in the wrong		containers not	local unions to
created by increased	plac	ce across the		removed by	strike a deal
consumer demand	glob	oe.		truck, as much as	allowing the Port
(notably home appliances				\$100 per day, per	of Los Angeles to
and electronics) outpacing	Labo	our		container.	run for 24 hours
industrial supply from key	Ther	re are several			every day and the
markets like China and	pote	ential strikes			Port of Long
Vietnam - strained	sche	eduled by the port			Beach to add
capacity of shipping firms	unio	ons for Jan/Feb,			extended hours.
to transit goods.	with	n Long Beach and			
	othe	er ports up the			
80,000 truck driving		stern seaboard			
shortage in the U.S.,	likel	ly to be affected.			
preventing West Coast		ıld become a			
ports from quickly	natio	ionwide issue if			
offloading shipping	notr	resolved quickly.			
containers and		. ,			
transportation.					