

Supply Chain Risk, Resilience and Capacity -Conference

Collaborative Construction Procurement Training Hub

Please Participate!



Due to the size of the audience today cameras have been turned off and microphones have been muted

HOWEVER If you have **QUESTIONS**, feel free to write them in the Q&A





Join in with our interactive voting polls!

SLIDES will be distributed afterwards

AGENDA

SCH OL Welcome

SCHOL

Supply Chain Risk, Resilience and Capacity

Mellita D'silva

Embedding Supply Chain Resilience: A Procurement and Supply Chain Perspective

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NOTTINGHAM





Collaborative Construction Procurement



The importance of Procurement Reform Stakeholder &

Jywoodraeth Cymru Nelain Convernment







Welcome



Helen Carter

Lead Consultant Action Sustainability/Supply Chain Sustainability School



Alasdair Reiner

Chief Executive CECA



Mellita D'silva

Sustainable Procurement Consultant Action Sustainability/Supply Chain Sustainability School



Carl Thomas

Procurement Reform -Stakeholder & Policy Lead Welsh Government



Emmanuel Manu

Associate Professor NTU





LEARNING OUTCOMES



Procurement & Supply Chains Understand the importance of a good procurement and supply chain process



Business Resilience Planning

Understand the mechanism for business resilience planning and how to undertake this in your organisation

Tools for Adaptation

Understand the tools suitable for your organisation, when developing and managing your supply chain risks



Action Planning

Takeaway useful examples that can provide inspiration for your approach to resilience



SUPPLY CHAIN SUSTAINABILITY

Supply Chain Risk, Resilience and Capacity

Mellita D'silva

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Current Picture...recent past?























Are you serious?



And some more – 'extensive and debilitating supply chain disruptions'





Why Supply Chains?



'The competitions is no longer between individual organizations but now between supply chains'

Difference between Procurement & Supply Chain Management

Procurement

Procurement is the process of acquiring goods works and services covering both acquisition from third parties and from inhouse providers

CIPS – Chartered Institute of Procurement & Supply

Supply Chain Management

Supply chain management is the process of overseeing the flow of goods from one point of the supply chain to another

CIPS – Chartered Institute of Procurement & Supply

<u>All organisations need</u> systems for both

Advantages of Procurement & Supply Chain strategies for small businesses

- Reduced cost
- Increased Efficiency
- Increased Output
- Increased Profit
- Potential for growth & diversification



Your Business Response

Our Response:



https://resources.ecovadis.com/home/four-phases-covid-19-supplychain-response-infographic

In the reaction stage:



Reaction

Ensure safety of employees, minimize supply chain disruptions, and focus on critical needs - for your business and for society

Q1-Q22020

- Utilising stock reserves
- Buying from anywhere
- Stopping work
- Furloughing staff
- Readjusting operational procedures
- Looking after the welfare of your staff

Resilience & Beyond

Now is the time for Resilience & beyond



What is resilience?

Supply Chain Resilience is an organisation's ability to proactively plan and design the supply chain network in a way that they anticipate unexpected disruptive (negative) events, can understand the financial impact, and respond adaptively to these disruptions whilst maintaining control over the process, desired outcomes and any legislative obligations in place.

the quality of being able to return quickly to a previous good condition after problems

Cambridge Business English Dictionary

CIPS



Resilience planning & adapting to the new normal

Consider:

- Cash & Materials Planning
- Operational Review
- Supply Chain Sources
- Relationship management
- Digitalization
- Scenario planning & Risk & Opportunity Planning



What would supply chains of the future look like?



Top Actions

- Undertake your scenario planning what happens if we are faced with another similar situation again
- Review what worked in lockdown, can it be applied again?
- Consider your supply chain strategy

 where are the weaknesses in your supply
- Talk to you clients and learn
- Look after yourself and your people



Continue your learning



Relevant resources

Within the School



Building Supply Chain Resilience

International Transport Forum: Building Supply Chain ...



Supply Chain Resilience: What it Means and why it is Important

Cope with the threats through investments targeting ...

- a) <u>Resilience: What it Means and why it is Important</u>
- b) Building Supply Chain Resilience



Embedding Supply Chain Resilience: A Procurement and Supply Chain Perspective

Emmanuel Manu Department of Construction Management Nottingham Trent University Email: <u>emmanuel.manu@ntu.ac.uk</u> Tel: 01158486064



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Supply Chain Resilience Cycle









Supply Chain Readiness: Evaluating Threats and Catastrophes



Potential threats and catastrophes

A checklist for evaluating these periodically

Impact on work pipeline and ability to deliver

Periodic evaluations of potential threats that affect the demand pipeline and delivery

Business impact

Periodic evaluations of short-term and long-term business impact





Evaluating Threats and Catastrophes: A Standard Checklist?

Threats can range from small-scale disruptive events to large-scale catastrophic events

- Health crisis
- Labour and skills crisis
- Climate crisis
- Commodity crisis
- Accidents
- Cyber-security threats
- War and terrorist acts
- Economic and financial crisis
- Political and civil unrest



Health Crisis

- Global disease outbreaks?
- Epidemics that pose a threat to construction activity?
- Eminent pandemic that poses a threat to construction activity?
Labour and Skills Crisis

- Acute shortage of skilled workers?
- Trade union actions affecting access to labour?
- Regulatory changes that affect construction labour market?

Climate Crisis

- Extreme weather events (e.g., storm, floods, winds etc.)?
- Impact on critical infrastructure?
- Impact on production?



Commodity Crisis

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- High fluctuations in supply of key commodities?
- Prices volatilities of key commodities?
- Global event affecting any specific commodity e.g., energy supply?

Accidents

- Transportation accidents that can affect construction activity?
- Industrial accidents that can affect construction activity?

Cyber Security Threats

and the second

- Any eminent cyber-security threats that can disrupt financial transactions?
- Any reports about cyber-security incidents affecting businesses?

Wars and Terrorist Acts

- Cyber terrorism incidents?
- Attack on infrastructure?
- Biological, chemical and nuclear terrorism
- Eminent or on-going war?

Economic and Financial Crisis

- Rising inflation?
- Rising interest rates?
- Surge in commodity prices?
- Decline in construction output?
- Rising insolvency levels?

Political and Civil Unrest

- Political unrest that can affect construction activity?
- Civil unrest that can affect construction activity?

Business Impact

Strategies for Embedding Resilience

- Need for increased visibility and knowledge sharing across supply chain network: stock levels, labour shortages, work pipeline, cyber-security alerts etc.
- Early engagement and collaboration with supply chain partners.
- Supply chain flexibility enabled by multi-sourcing arrangements i.e., duplicated pool of competent contractors, suppliers and subcontractors
- Strategic focus on local and regional supply networks rather than overdependence on global and far distant supply chains.
- Innovative solutions e.g. evaluating design and material specification alternatives that deliver against client requirements and can be sourced easily.

Contents

- Context
- Why do we want to manage volatility?
- Who should bear inflation risk?
- Working with customers
- Working with supply chain

Alasdair Reisner Chief Executive

Context

Ukraine

Why do we want to manage volatility?

- Risk to productivity
- Risk to behaviours
- Risk to viability of live projects
- Risk to projects in development
- Risk to viability of companies

Who should bear inflation risk

- Inflation risk should be first understood
- Risk mitigation should be put in place
- Risk should be managed by the party best able to do so
- Additional factors to consider:
 - Length of contract
 - Size of contract
 - Complexity of the contract
 - Inflationary environment
- Changes in these factors may change who can bear risk

Working with customers - Pre-contract

- Collaboration & consultation
- Planning for inflation risk
- Designing out inflation risk
- Setting up contracts to manage inflation
- Discussing options
- Know what your signing up to in terms of risk

Working with customers - In contract

- What the likely impacts are that will affect your ability to deliver the requirements of your contract
- What contractual measures are in place to address cost overruns?
- What contractual mechanisms are in place to address delay?
- Whether there are inflation recovery measures in place in your contracts. If so, confirm;
 - How are they applied?
 - Will they fully recover any cost impacts?
- Notification -raise any concerns early

Use of indexation

- Inflation adjustment clauses can help to manage inflation risk
- However important to use the right indexation...
- ... and the right frequency

Fluctuation provisions

- ► JCT Design & Build Contracts
 - optional fluctuation provisions for inflation
 - reimburse for price changes to specified items
 - Only apply if included in contract
- NEC4 Engineering and Construction Contracts
 - Secondary Option X1 offers price adjustment mechanism
 - Linked to index, adjusted from base date
 - Only applies if chosen

Construction Leadership Council

CLC Product Availability/ Brexit Movement of Goods & Materials Group

- Set up by the Construction Leadership Council and jointly chaired by the BMF and CPA
- Meets every month online
 - Brings together senior representatives from Merchants (top 4 Nationals, top 3 biggest Buying Groups plus largest Independent Merchant), Manufacturers, Contractors, large Housebuilders and small Housebuilders
- Confidential information on existing stocks and supplies fed directly in to Government by Merchants, Contractors and Manufacturers weekly
- Master spread sheet produced by BEIS and monitored by the Group
 - Objective of the Group is to build confidence, dispel rumours and minimise supply and demand constraints
- The Group is able to identify key supply issues and pinch points (eg plaster and plaster board) and focus resource and attention on resolving those issues quickly and efficiently

View the roadmap www.constructionleadershipcouncil.co.uk Contact us

Product Availability/Brexit Movement of Goods & Materials Working Group Members

Construction Leadership

Council

Product	Reason
Timber	Much improved situation with good stock levels at UK builders merchants at the start of 2022. Prices have dropped 15-30% from their 2021 peak. Chipboard remains an issue. Looking forward, some concern that strong global market and reduced log volumes from Russia may affect imports in the Spring.
Bagged Cement	Though demand remains high, there are no current problems with stock levels. But the issues arising last year have not been fully resolved and longer lead times may return as the volume of demand increases later in the year. Furthermore, higher gas prices and increased, labour and haulage costs are impacting product pricing.
Roof Tiles	Demand remains strong. Lead times for concrete tiles average 24 weeks, and as high as 41 weeks for some profiles. Challenges around transport and raw material price increases. Rising energy costs are also affecting pricing of clay tiles.
Bricks	Demand outstripping UK brick manufacturing capacity and will continue to do so until new facilities come onstream in 2023 and 2024. Imported bricks are being used to make up the shortfall, but customers must expect reduced product selection. Brick production also affected by higher energy prices feeding through into pricing.
Aircrete Blocks	Consistently high demand over the past 18 months made it difficult for aircrete block manufacturers to build the level of stocks required to maintain regular supply throughout the year. However, decision by the largest manufacturer to manage supply via traditional seasonal/phased approach is now presenting more certainty with supply and deliveries, enabling merchants and builders to plan their schedules.
Boilers / electrical systems	A global shortage means that semi-conductors are on allocation constraining the availability of boilers. Due to the size of their orders, there is a natural bias in the system towards automotive and electronics firms, which may cause issues for manufacturers of other building related electrical systems including Air Source Heat Pumps, lighting and fire protection and white goods. War in Ukraine presents a further issue for semi-conductors as neon used in their manufacture primarily comes from Russia and Ukraine.

Product	Reason
Steel	High global demand but some easing in availability. Steel lintels remain in short supply, along with cable trays and other products made of steel. Production also affected by higher energy prices feeding through into pricing. May also be affected by reduced access to raw materials from Russia - pig iron, iron ore and coking coal
PVC/Plastic products	Raw material supply for plastic products stabilised during Q4 2021 leading to improvement in product supply. Order backlogs for plastic drainage are not growing but are unlikely to be cleared until the second quarter of this year.
Paints & Coatings Sealants & Chemical products	Ongoing shortage of chemical based raw materials i.e. pigments, polymers, pulp and tin cans for packaging. Other issues around REACH.
Insulation Boards	Has become tighter with PIR hard to obtain and contractors actively seeking alternative.
Hand/Power Tools Screws/Fixings Sanitaryware Other Chinese imports	Delays and volatile prices for global shipping look set to continue at least until Q3 2022. China is home to seven of the top 10 container ports, which have a sustained 'zero' policy with regard to Covid outbreaks, leading to shutdowns and delays that have worsened global bottlenecks. Factory closures in 64 northern Chinese cities to improve air quality for the Winter Olympics almost certainly affected some construction products, which will have a knock-on effect of levels of inventory later in 2022. Shipping rates still 8-9 times higher than pre-Covid levels. Air cargo rates 7x higher.
Haulage	Issues with road haulage have eased. DfT engaging with freight sector and hauliers to find short term fix and longer term solution. The continuing relaxation of driver hours has helped.
Russian invasion of Ukraine	Effect on UK building material supply still to be determined. Imports from region account for only 1.25% of UK building products, but likely to be higher level of direct and indirect exposure to product components and raw materials – aluminium, copper, bitumen, pig-iron, iron ore, nickel (used in lithium-ion batteries) and neon (used in semi-conductors).

These figures represent freight rates from **China/East Asia to North Europe**. The source is Freightos Ltd – one of the main sources for international freight prices and trends, alongside Fitch Ratings and Bloomberg.

Rates peaked to their highest on 28th January 2022 (\$14,999) before easing slightly during February and into March. However, rates have remained consistently above \$13,585.

2nd Apr 2021: \$7,373 7th May 2021: \$8,151 4th Jun 2021: \$10,492 2nd Jul 2021: \$11,359 6th Aug 2021: \$13,819 3rd Sept 2021: \$13,869 1st Oct 2021: \$14,703 1st Nov 2021: \$14,255 3rd Dec 2021: \$14,345 **28th Jan 2022: \$14,999** 4th Mar 2022: \$13,585

Year-on-year, rates over the first quarter of 2022 remain significantly higher than the same period in 2021.

Freight rates in February 2022 are 71% higher than February 2021.

What Can We Do?

- Where products are in short supply, any allocation systems should be as transparent as possible so all customers can be seen to be treated fairly.
- The accuracy and timeliness of communications will reduce current frustrations. For example, customers should not over-order unnecessarily, while manufacturers should not promise delivery dates that cannot be achieved, only to cancel at short notice.
- Where relevant, the production for major projects which is typically scheduled well in advance should not be seen to adversely affect volumes available for smaller, regular customers.

19

Leading Transformation Across The Construction Industry

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March 2022

Construction Product Availability Statement

Statement from John Newcomb, CEO Builders Merchants Federation and Peter Caplehorn, CEO Construction Products Association, co-chairs of CLC Product Availability work group. Demand for construction

Read more

Llywodraeth Cymru Welsh Government

The importance of Supply Chain Resilience

Carl Thomas MCIPS Procurement Reform Stakeholder & Policy Lead

2002-03 SARS	2008 Glo Fina Cri	3-10 bal ncial sis	20 East t Earthe	11 Japan quake		2016 Brexit	20 Covi	20 d-19	Beyond 2022
2003 Bird	3-05 I Flu	20 Icela Volc	10 Indic ano	20 Eb	14 ola	20 US-C Trade	18 China e war	20 War i Ukra	22 n the aine

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Supply Chain Risk and Resilience

A CIPS introduction to good practice

Leading global excellence in procurement and supply


As we know, there are **known knowns**; there are things we know we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns—the ones we don't know we don't know. And if one looks throughout the history of our country and other free countries, it is the latter category that tends to be the difficult ones.





Known Unknowns	Known Knowns
Unknown Unknowns	Unknown Knowns











Please share your feedback

https://forms.office.com/r/36VQvDt9HF





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