States, and the Supply Chain

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Wait, What? Circle Back
Asking for a Friend

BANISHED WORDS 2022
for Misuse, Overuse, and Uselessness
A Tradition Since 1976

New Normal
Supply Chain

Deep Dive
At the End of the Day

LAKE SUPERIOR STATE UNIVERSITY

NASPO®
National Association of State Procurement Officials

NCUSBELLLEGISLATIVE SUMMIT
DENVER • 2022

ASU
School of Business
Arizona State University
Supply Chain Issues

• Disruptions
  • Many supply systems at their “tipping point”
  • 2\textsuperscript{nd}, 3\textsuperscript{rd} tier shutdowns; labor shortages; world events

• Price Inflation
  • Influence of oil & common commodities
  • “Shrinkflation”
Influence of Procurement & Contracting

- Federal Government
  - 4 in 10 employees working for government are contractors (Light, 2017)*
  - $665 billion

- State Governments
  - Around 40% of expenditures**

- Satisfaction with government
  - 60% lower avg satisfaction than private***

- Legislative budget approval is just the beginning.

* [https://www.volckeralliance.org/resources/true-size-government-1](https://www.volckeralliance.org/resources/true-size-government-1)
** [https://state-local-finance-data.taxpolicycenter.org/pages.cfm](https://state-local-finance-data.taxpolicycenter.org/pages.cfm)
*** Baig, Dua, and Riefberg (2013) McKinsey Study
Excellence Requires Professionals

- American Bar Association (ABA) Model Procurement Code
  - Necessary, but not sufficient
  - Proceduralism approach
    - Analogous to peanut butter and jelly sandwich
- Procurement Professionals
  - Associations – NASPO, NIGP, NCMA
  - Education – ASU, GWU, MSU, etc.
What do Procurement Professionals do?

**Satisfy Needs**
Supply exists to satisfy demand
Professionals take extreme care to understand demand, now and in future
Professionals monitor demand satisfaction and dissatisfaction
• Unleash contractor performance measures

**Provide Capabilities**
Research to generate best competition among contracts
Innovations and efficiencies of private sector for citizen benefit
Supplier relationships help go above and beyond expectations

**Share Resources**
Collaboration through NASPO – ValuePoint and other cooperative purchasing
Share best practices

[Logos and badges: NASPO, NCCL Legislative Summit, ASU W.P. Carey School of Business]
NASPO & COVID: What did these professional do?

- Academic Research Report
  - Rapid collaboration within states
- Regional collaboration across states
- Post-2020 Learning
- Tabletop Exercises (TTX): State, Federal, and Local Professionals
Procurement During & After the Pandemic
During the Pandemic: Finding Reliable Sources for Alternative Legitimate Goods

- Purchasing is an expert in “sourcing” and should have a seat at the table
- Challenge: finding legitimate suppliers, inability of states to pre-pay (for good reason)
- Use of onsite visits, FaceTime and satellite maps (“proof” of legitimacy

- Federal (technical) resources to establish specifications and expose fraudulent goods.
- Samples required prior to placing large orders
  - Coordinated with in-state experts (Health Department) to confirm quality/compliance with specifications prior to payment
POST PANDEMIC
Supply Chain and Price Volatility

What can we do?

- Increase supplier relationships/engagement
- Include a requirement to identify/map the supply chain in each RFP
- Monitor risks related to specific commodities
- Include a requirement for a supply chain mitigation strategy in each RFP
LESSONS FROM THE PANDEMIC EOC

• Procurement as a vital function in the EOC
• Fraudulent Goods
  • NASPO Strategic Partners and Federal Guidance/Resources (NIST)
• Orders
  • Pre-Payment (not an option)
  • Partial Orders
  • Aggregating/Coordinating Orders
  • Ordering Strategies in terms of timing/volume
• Importance of:
  Existing Contracts and Supplier Relationships
Procurement Support – 24/7/365
PROCUREMENT RESOURCES

• NASPO is working with ProcurementIQ to run a quarterly “Commodity Risk Report”
  • Providing a comprehensive outlook for common primary commodities AND the impact on secondary commodities
    • Oil, lumber, plastic, steel, wheat and semiconductors (among others)
    • Tires, plastic components, cell phones, computers, vehicles, heavy equipment and food
      • Impact: Facilities, Transportation, Public Safety, Veteran’s Homes, Schools, Corrections, State Hospitals

• All state procurement offices have access to ProcurementIQ as a member benefit with NASPO, and the customized Commodity Risk Report is shared with all state Chief Procurement Officials
### B. Plastic

#### Forecast CAGRs:
- 6 Month: 5.2%
- 1 Year: 2.2%
- 2 Year: 2.2%
- 3 Year: 2.3%

Analytic Propane, a derivative of crude oil, is used to make ethylene and propylene, which are the foundational building blocks of plastic manufacturing. The Russian invasion of Ukraine has caused the world price of oil to rise rapidly, placing upward pressure on plastic prices early in the forecast period. As oil prices decline over the next three years, these effects should diminish and move further into the outlook period.

#### Secondary Commodities:
- Medical Equipment
  - Plastic is a key input for medical equipment and is used in vials, beakers, implant, and medical instruments. Demand for plastic medical equipment is projected to increase as plastic materials offer buyers a more cost-effective solution than alternatives such as metals, glass, and ceramics.
- Disposables and Polystyrene Foam
  - Disposables bottles and bags are reliant on plastic, so increases in prices of plastic directly impact prices for these goods. Polystyrene foam is also a plastic-based product that is used in packaging as well as automobile parts.
- PVC Pipes
  - PVC pipes are plastic-based products that are often used for sewage pipes and in water mains for irrigation.
- Consumer Electronics
  - Smartphones and other consumer electronics use a wide variety of plastic products, including Polycarbonate (PC), Acrylonitrile Butadiene Styrene (ABS), and Polymethyl Methacrylate (PMMA). These plastics are used for display frames, haptic feedback cushioning, and mounting frames, among other purposes.

#### Substitute Commodities:
- Paper & Paperboard
- Bioplastics
- Glass
- Platinum Silicone
- Ceramics

#### Upstream Supply Chains:
- Petrochemical Manufacturers

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#### B. Plastic

- Petroleum Refiners
- Industrial Machinery & Equipment Wholesalers
  - Steel Manufacturers
  - Iron Manufacturers
- Inorganic & Organic Chemical Manufacturers
  - Steel Manufacturers
- Resin Producers
- Coal Miners

**Analysis:** In late 2021, a southern ice storm in the United States lowered production levels of resins, a key input for plastic manufacturing, causing price increases of 30% to 50%. Petrochemicals such as ethylene and propylene are key inputs for plastic manufacturing and are produced from propane and butane, both of which derive from crude oil refining. Thus, increases in oil prices in 2021 have pressured prices upwards for plastics manufacturers, prompting some suppliers in this market to lower production due to increasing costs.

**Downstream Supply Chains:**
- Plastic Bottle Manufacturers
- Plastic Film, Sheet & Bag Manufacturers
- Plastic Pipe & Part Manufacturers
- Urethane Foam Manufacturers
- Plastic Product Wholesalers
- Plastic Toys
- Adhesive Manufacturers

**Analysis:** Rising costs in resin and oil, and thus plastic, have pushed prices higher for plastic-based products, including plastic containers, bags and bottles. The price of polyolefins, which are used in a wide variety of products, including clothing, carpet and roofing materials, is also rising.
Understand the key elements to include in your RFP:

- Require bidders to address supply chain questions in their bid submittal along with mitigation strategies
- Address price increases and decreases as well as supply shortages
- Ensure due diligence (CPI, PPI, and industry documentation related to raw material pricing, shipping, etc.)
- Procurement plays a lead role in negotiating amendments, including price increase/surcharge requests during contract administration
STRATEGIES AND BEST PRACTICES IN TIMES OF UNCERTAINTY AND PRICE VOLATILITY

• Develop and support a procurement office with well-trained, experienced, creative and innovative purchasing professionals

• Recognize the value of coordination, collaboration, and communication, including the use of cooperatives

• Build relationships with other states

   AND your suppliers
STRATEGIES AND BEST PRACTICES
IN TIMES OF UNCERTAINTY
AND PRICE VOLATILITY

• Understand the Supply Chain, where risk is prevalent and how to mitigate

• Increase inventory strategically and work with your suppliers on ordering strategies

• Utilize market research via an RFI, industry meetings and commodity risk reports to inform RFP development as well as contract negotiations and administration

• Utilize resources available through NASPO
  • Network, Research/Strategic Partners, Training, Templates
HELPFUL LINKS

NASPO Market Research Resources:
https://www.naspo.org/content-library/market-research/

NASPO Procurement U
https://www.naspo.org/procurement-u/

Consumer Price Index (CPI):
https://www.bls.gov/news.release/cpi.nr0.htm

Producer Price Index (PPI):
https://www.bls.gov/ppi/
What Legislators Can Do

- Demand procurement professionals and smart regulation
  - Best practices
  - Requirements planning, market analysis, solicitation strategies
  - Contracting methods (e.g., standing contracts)
  - Contract management and Category Strategies (e.g., commodity risk reports)
- Demand professionalism
  - Evidence of demand satisfaction (release contractor performance)
  - Leverage resources like NASPO – ValuePoint
  - Supply base capabilities ← Excessive regulation shrinks supply
Sunshine on contracting

• ASU & NASPO working to improve contracting results to citizens

• Happy citizens through better contracting