Soldier with 2nd Battalion, 35th Infantry Regiment, 3rd Brigade Combat Team, 25th Infantry Division, secures truck to deck of USAV *General Brehon B. Somervell* before setting sail on October 17, 2021, at Waipio Point, Hawaii (U.S. Army/Rachel Christensen)

The Surface Deployment and Distribution Command

Operating Within the Larger Sustainment Enterprise

By Fred Teeter

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As the Army Service Component Command of U.S. Transportation Command (USTRANSCOM) and a major subordinate command to Army Materiel Command, the Military Surface Deployment and Distribution Command (SDDC) is the global intermodal surface connector. It

exists to move, deploy, and sustain the Armed Forces to deliver readiness on time, on target, every time. The organization executes this mission as a key member of the Joint Deployment and Distribution Enterprise (JDDE), which is committed to integrating, synchronizing, and providing global deployment and distribution capabilities to deliver and sustain the U.S. military in support of the Nation's objectives.

Balanced Logistics Planning

Often customers do not realize the scope of effort that goes into the deployment planning process, only understanding that they "need it quickly" or "need to move a lot of equipment." As a key integrator for the joint force, SDDC translates those joint force customer requirements into transportation solutions, using a mix of organic and commercial industry assets.

When planning for large moves or contingencies, SDDC is the connective tissue that turns movement planning into reality. By understanding there are many more factors involved than just time and volume, the scope of the move increases with multiple nodes and modes that become available to support the warfighter. Figure 1 helps explain the connection that SDDC provides between the joint force (the customer) and commercial industry.

This figure depicts a balanced model identifying several key factors that impact movement planning and help determine which modes and nodes materiel will travel. In an ideal situation, the model is balanced with accurate, customer-provided requirements that include a specific time of need and available funding that supports the transportation method. When this information is in balance, SDDC and USTRANSCOM's other component commands can better interpret the data to find the most effective means available to deliver goods on time. Working with accurate requirements, SDDC can coordinate with industry partners in a timely manner to ensure capacity, availability, and infrastructure that can support the movement. It is this exchange of timely information that helps build a robust connection between the government and industry partners.

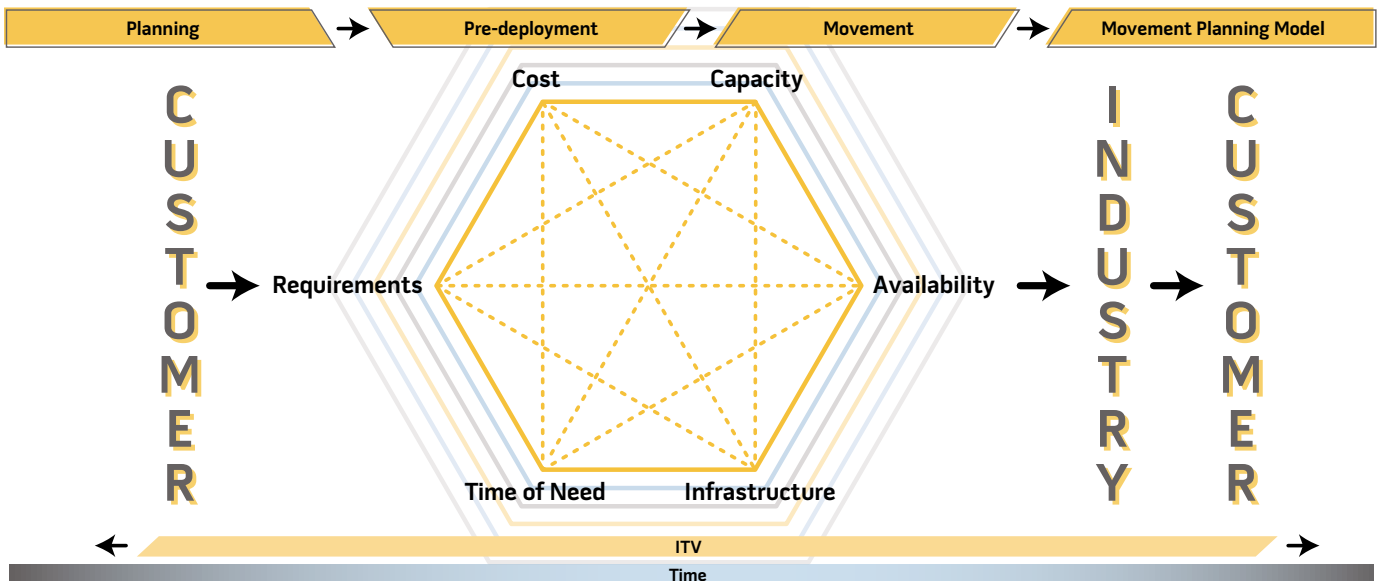
When customers fail to accurately plan or establish clear requirements, this model becomes unbalanced. Short notice of a move requirement is likely to decrease transportation asset availability and increase cost. While the network is resilient, there are negative tradeoffs for any situation in which requirements are not clearly articulated to USTRANSCOM, SDDC, or other partners within the JDDE. The goal is to have clear and accurate forecasts that help ensure that commercial industry can respond to and effectively facilitate movements.

As we have seen in the past year, there are often factors that can bring this model out of balance. In today's dynamic environment, it is important for the military and commercial industry partners to share forecasts and accurate estimates. By maximizing prioritization and coordination, imbalances can be overcome. As the flow of information increases, the network is strengthened in ways that provide both availability and infrastructure forecasts, optimized for required capacity during both peacetime and contingency operations.

Modeling Large-Scale Operations

Moving cargo by truck, rail, barge, and vessel through ports around the world daily, SDDC planners require an agile, adaptive, and resilient model that they can draw upon to make effective transportation sourcing decisions. SDDC is responsible for all aspects of movement coordination, including ordering and scheduling trucks, trains, and vessels and communicating with supported units to ensure that unit deployment lists are validated and that Joint Operation Planning and Execution System (JOPES) data are accurate. This coordination ensures units have execution

Figure 1.



Soldiers conduct rail load operations at Fort Drum, New York, January 24, 2019, to prepare for deployment to Joint Readiness Training Center at Fort Polk, Louisiana (U.S. Army/Keegan Costello)

instructions via a port call order to successfully move to the port of embarkation. SDDC's Plans and Policy Directorate ensures port labor contracts are current, plans how equipment will be stowed on vessels, and coordinates with elements in the receiving theater for actions at the port of debarkation. Port call orders are generated within SDDC's Surface Tasking Order system, which provides visibility of these movements and ensures the JDDE is informed during the entire process.

The larger the scale of the movement, the more robust the process becomes. SDDC planners coordinate with USTRANSCOM to select sealift vessel types, including whether to use liners, charters, or activations. Coordination is then made to select the optimal seaport for force closure. They also coordinate with joint force elements on end-to-end surface movements, starting at the point of origin and continuing beyond seaport of debarkation.

Requirements with the Logistics Network

It is important to look at the genesis of requirements and how they flow through the JDDE from strategic planning, through refinement, predeployment activities, movement execution, and then reception, staging, onward movement, and integration (RSOI) on the other end. As shown in figure 2, requirements are generated to support strategic goals as outlined in the National Defense Strategy, campaign plans, country plans, and theater posture plans. From this overarching framework, movement requirements begin to take shape in the form of exercises, rotations, and deployments, and then the sustainment requirements begin to formulate from the movement requirements.

From the initial requirements generation process, orders begin to take shape, and units are identified to support strategic requirements. This is typically when commercial industry partners first begin to play a role in the process, as movement requirements are entered into JOPES and forecast to provide advance notice, which is especially critical in today's environment of constrained global supply chains with high-resource demands.

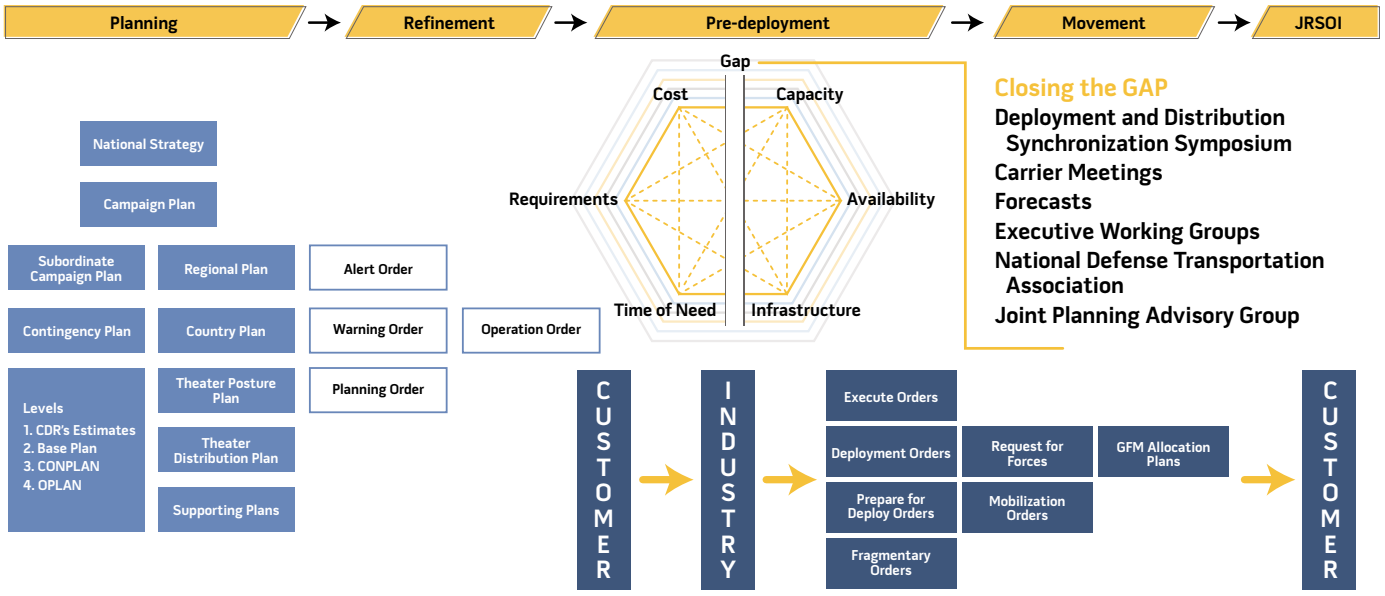
The next stage is refinement and predeployment, where personnel across the JDDE work behind the scenes to refine plans and prepare to execute port-planning working groups to determine port pairs, contract development and solicitation to support movement, development of movement plans, and cargo preparation with predeployment checks at the installations. The single most critical event that happens at this stage is data validation, which sets wheels in motion that lead to cargo movement and eventually "rounds downrange" to begin RSOI.

It is important to keep several factors in mind during the decisionmaking process for sourcing lift for movement requirements. The six factors represented—cost, requirements, time of need, infrastructure, availability, and capacity—are among the most important from a surface perspective. None of these factors exists in a vacuum; each is connected to the other five, and stress on one factor will have rippling effects on the others.

On average, one in five unit moves has excess railcars ordered each year. Last year, there were 76 excess railcars ordered, potentially totaling $3.7 million in excess cost to the government annually. Beyond the cost factor, a shortage of railcar availability could be created at other locations, impacting lift capacity and availability and causing a late delivery if there are not enough transportation assets readily available to absorb the requirements. On a larger scale, it may require the transportation provider to change port pairs or shift more cargo from one mode to another, therefore impacting the transportation infrastructure.

The shockwaves of such changes through the model can be significant, and the closer they occur to execution, the less agile, adaptive, and resilient the

Figure 2.



network becomes, and changes that occur along the continuum have a greater chance to be catastrophic. That is why detailed preparation is critical during the planning, refinement, and predeployment phases. We, as a community, need to put in the effort up front to develop plans that are as precise as possible. As the saying goes, measure twice, cut once.

SDDC is the third-party Department of Defense (DOD) logistics integrator. As an asset-light organization that relies almost entirely on commercial industry to provide transportation services, the command ensures that commercial partners are involved early and often in the planning process. SDDC personnel advise industry on transportation policy changes, legal developments, regulation updates, and more on a regular basis. Transportation programs are developed with commercial industry in mind because the more commercial-like SDDC and the customers can become, the easier it will be to obtain capacity at competitive rates, both in peacetime and during contingency.

In addition to unit movements and deployments, SDDC continues to push sustainment stocks through the JDDE daily. In any given month, SDDC moves 6,000 to 7,000 containers of sustainment cargo internationally. These movements are vital to sustaining U.S. forces globally with Defense Commissary Agency, Defense Logistics Agency, Naval Exchange Service Command, and Army and Air Force Exchange Service stocks and supplies. While these are often overlooked in the overall process of moving the joint force forward, these requirements are even more critical during contingencies.

The joint force requires significantly more transportation support during contingencies than in peacetime. For large-scale contingency operations, DOD could use as many as 22,000 railcar loads with 2,900 commercial and 1,300 Defense Freight Railway Interchange Fleet flatcars, with each railcar projected to make five trips over the course of deploying the entire force, with a maximum velocity of four armored brigade combat teams moving simultaneously. In addition to rail, a total of 20,000 truckloads from 400 points of origin are projected, requiring over 5,000 trucks on peak operational days. For vessels, a total of 250 missions are projected, using nearly a dozen seaports and peaking at the use of nearly 20 berths simultaneously. While this is a massive increase in DOD requirements from current usage, it does not account for concurrent commercial activity. This stresses the importance of working closely with commercial partners to ensure as much information is prepared in advance to support movement requirements in the event of America's worst day.

Conclusion

Communication and coordination are key, now more than ever. Both have been more difficult to accomplish effectively over the past 2 years due to restrictions caused by the COVID-19 pandemic, but SDDC and DOD have persevered and adapted. As a result, relationships are stronger than ever. Across the continuum, the logistics community must collaborate effectively in the planning, refinement, predeployment, movement and RSOI phases, if we are to succeed and if our network is to remain resilient. While contingencies shorten the military's window to inform industry of large movements, planning and communicating the scope and scale of these moves can help offset the impact. Cost is tied to multiple factors, and we can actively work to offset the imbalance by effectively communicating requirements.

This relationship may experience bumps along the way; however, it is our partnership that ensures we have a strong network that guarantees the joint force is supported at all points of need. The bottom line is that, despite our best efforts, we will never be 100 percent accurate or precise. There will be changes, some minor and some major, and our model needs to be agile, adaptive, and resilient to absorb these changes with minimal impact on the warfighter. By communicating with industry across the continuum, we can fill gaps, make the model less rigid, and ensure the continued success of the Joint Deployment and Distribution Enterprise. JFQ