Advancements in transportation technology have seemingly collapsed the world’s vast distances. In this century we have witnessed the first commercially operated 500-kilometer-per-hour (km/h) magnetic levitation trains and the first privately owned space transport shuttle. In the future we may see a “hyperloop,” a partial vacuum tube that carries passengers in
capsules at speeds up to 1,220 km/h.\textsuperscript{3} But such technological change does not eliminate geography as an important factor either in commercial or in military strategy and operations.\textsuperscript{4}

Geographic characteristics are often constraining. Nations and significant players on the world stage compete in the domains of land, sea, air, space, and cyber, and ungoverned areas in these domains invite bad actors.\textsuperscript{5} Weak and failed states often lack critical transportation infrastructure that would help them overcome their geographic limitations and support their populace during super typhoons, floods, tsunamis, and other natural or manmade disasters. These states frequently lack good governance of their geographical area and have porous borders allowing groups to train, transit, or provide logistics to carry out transnational threats. Strong states may possess the critical transportation infrastructure required for humanitarian assistance/disaster relief operations. However, even strong states have waged war in the realm of geography and about geography.

To meet its international security commitments and protect its national interests, the U.S. military must remain rapidly mobile and expeditionary, supplying and resupplying itself once it is committed. U.S. Transportation Command (USTRANSCOM) provides the rapid positioning of expeditionary forces. Even with distances collapsed by technology, geography matters for our strategy and operations. We have to span the globe and surmount geographical constraints to execute both peacetime and wartime missions and be more responsive to those we support.

Maintaining our global mobility capability in a fiscally constrained environment has required the command to engage in the most comprehensive and collaborative strategic planning endeavor in its 26-year history. The result of our “journey of discovery” is a new strategic plan recommitting us to our ends, ways, and means. We at USTRANSCOM have determined that the “ends” are rapidly projecting power and sustaining it, “ways” are achieving and maintaining global mobility, and “means” are assured access and a well-developed and synchronized distribution network.

**Ends**

In *Joint Force of 2020*, the Department of Defense (DOD) values global agility, with a premium placed on swift and adaptable military responses.\textsuperscript{6} In this context, the United States will seek to mitigate conflict escalation or achieve deterrence by focusing on the decisive
and quick employment of essential and relevant forces. These forces may be positioned forward, partnered with capable allies, or based in the United States. In each case, strategic mobility is the key element for power projection.

USTRANSCOM has recognized that the ends—superior support to warfighters to \textit{project power and sustain operations}\—must not and will not change. Most important, we recognized the need to develop and implement bold and innovative ways to adapt to the future operating environment. At the same time, we realized that our means—fiscal, materiel, and personnel—will experience increased pressure for more efficiency for the foreseeable future. During development of USTRANSCOM’s strategic plan, we focused on developing processes, adapting structures, and reinforcing an enabling culture.

The command will deliver the transportation and enabling capabilities that make America a global power by preserving our readiness capability, achieving information technology management excellence, aligning our resources and processes for mission success, and developing customer-focused professionals. The vision is to become the transportation and enabling capability provider of choice.\textsuperscript{7}

**Ways**

Global mobility supports the future joint force and globally integrated operations as described in \textit{Joint Force 2020} by providing adequate transportation and distribution capabilities and capacities.\textsuperscript{8} In addition to readily deployable joint forces and sufficient lift, there must be a supporting global network.

The foundation of DOD’s global mobility capacity is the organic capabilities provided by USTRANSCOM’s Army, Navy, and Air Force component commands using Active-duty and Reserve component forces. However, integral to the global mobility capacity needed by the Nation are the additional capabilities gained through our commercial transportation providers. The assets and networks of our commercial partners are absolutely critical in fulfilling global demands, especially during surge operations. Through this optimal balance of Total Force organic and commercial lift, we can quickly pivot transportation resources wherever and whenever needed.

Improving strategic mobility will also require decreasing lift and sustainment requirements and making intelligent use of prepositioned equipment in coordination with the Services and the Defense Logistics Agency.\textsuperscript{9}

Acting in our role as the Mobility Joint Force Provider (see figure), USTRANSCOM advises and guides mobility force sourcing solutions to best effect for the supported geographic combatant command.\textsuperscript{10} This enables us to quickly reallocate mobility capabilities where they are needed while mobilization of surge capacity of both organic and commercial partners occurs. We can also rapidly open aerial and seaports in or near the joint operational area.

Maintaining global mobility is the way to project power rapidly and sustain operations. It is also achieved and maintained through freedom of action from assured access to the global commons, a viable global distribution network, and the ability to rapidly transition from steady state to contingency or crisis response operations. All of these capabilities mitigate the time and distance constraints imposed by geography on USTRANSCOM’s worldwide mission.

**Means**

Global mobility for rapid power projection requires \textit{assured access} to the global commons (relevant maritime, air, and space domains outside any country’s national jurisdiction), as well as access to a viable distribution network and cyberspace. Assured access often requires multiple paths to preclude a single point of failure, which is true not only for our physical networks but also for operations in the contested cyber domain. The global commons are part of USTRANSCOM’s end-to-end distribution network, which includes ports of embarkation, en-route nodes, and ports of debarkation. DOD relies on friendly nations and allies for the use of en-route and destination infrastructure to facilitate the global surface and air corridors that comprise the distribution network. Conversely, allies depend on U.S. mobility capabilities for combined operations. DOD must be free to
operate across the entire distribution network with surety. This was true in the past, is true today, and will be true in the future.

World War II’s historic airlift operation over “the hump” of the Himalayas kept China in the fight against Japan and contributed significantly to the U.S. victory in the Pacific. In the China-Burma-India theater of operations, harsh weather, severe terrain, the enemy, and host nation sovereignty were all challenges that airlift had to overcome, especially while waiting on construction of the Burma road. Similarly, the Hindu Kush, the lack of seaports in land-locked Afghanistan, the limited number of useful roads and airfields, and other nations’ sovereignties are challenges the command must overcome today when delivering, sustaining, and redeploying forces for Operation Enduring Freedom.

Initially USTRANSCOM airlifted troops, their combat equipment, and their sustainment materiel until ground lines of communication could be established. Assured freedom of action and global mobility allowed the command to quickly deploy and employ mobility forces seamlessly. Our commercial partners played a critical role by providing extended “reach” within their broader network of capabilities and trade relationships. This extended reach gave the command flexibility and access it did not otherwise possess.

Access to the cyber domain is critical for global mobility. We execute logistics, transportation in particular, through information systems operating largely on unclassified but protected networks and include participation of our commercial partners and others through their information technology systems. Adversaries understand that transportation activities can signal operational intent, so our information networks provide a lucrative target and a vulnerability we must address. In addition our decisive and reliable command and control of strategic mobility operations is a capability our adversaries would like to acquire. Protecting, defending, and mitigating adverse operations in cyber space is a key focus area for USTRANSCOM along with its component commands and commercial partners.

The Global Distribution Network (GDN) is the foundation of our Global Campaign Plan for Distribution (GCP-D). The health of the network is integral to strategic readiness and rapid projection of power for many combatant commands and their operational plans. Through it we provide responsive and agile support through DOD and commercial partners.

As USTRANSCOM commander, my primary objective for engaging leaders within and outside DOD is helping set the conditions for the GCP-D. We are meeting with key leaders in geographic combatant command areas of responsibility to discuss existing diplomatic agreements, sustain partner-nation relationships, secure conditions for retrograde operations in Afghanistan, and explore infrastructure improvements that can serve our strategic requirements. At each stop we engage with U.S. country teams and host nation ministers of defense, foreign affairs, and transportation. Economic development is often discussed. Partner nations view being part of the GDN as a source of revenue for their countries, and they frequently invest money and political capital to further this objective.

Many of our partner nations have plans to develop transportation-related infrastructure that will improve their capabilities. These plans are frequently unsynchronized and focus on a single node such as airfield construction, but without an associated road network. As the responsible agent for the GDN, the command collaborates with partners to coach them in the development of a comprehensive vision for their transportation networks. An infrastructure plan that is comprehensive, prioritized, and phased will achieve far greater success, and this approach aligns well with our global transportation and commercial network objectives.

We will continue to foster these partnerships to maintain the readiness of the GDN and its ability to respond to future requirements. For example, the viability of the Northern Distribution Network (NDN) infrastructure—sea and aerial port facilities and road and rail networks—will remain vital after the conclusion of Enduring Freedom. Learning from NDN’s successful support of deployed forces when ground lines of communication through Pakistan were interrupted, we are already partnering with U.S. Pacific Command (USPACOM) to lay the foundation for a Pacific Distribution Network as well as with U.S. Africa Command. The Pacific Rim is one part of a complex network of bilateral and multilateral relationships.
that spans vast distances with minimal basing. Intratheater movement in the
USPACOM area of responsibility is
similar to intertheater movement globally
and is often referred to as the “tyranny of
distance.” We must be smart and efficient
about the way we use our scarce resources
to achieve readiness for the Pacific
Distribution Network. As a baseline we
will nest our efforts within USPACOM’s
strategy to ensure we remain responsive
and ready to perform them. The African
continent has equally daunting distance
and access challenges.

We also discuss aerial refueling interoperability during our engagements. Many
allied partners use the same platforms
we do. We have developed standardized
procedures, but there is a lack of synchro-
nized certifications. We will continue to
contribute to the DOD effort to improve
aerial refueling interoperability with our
partners. More must be done in this area
and lessons learned must be turned into
future solutions. In many cases, our part-
ners’ preparedness to support coalition
operations may hinge on this unique abil-
ity to fully employ their capabilities.

But assured access to the global com-
mons and a viable distribution network
are not enough. While it is clearly our
components and commercial partners
who successfully deliver the goods,
USTRANSCOM develops optimal
end-to-end distribution processes and
solutions across various transportation
modes and nodes. Our third means of rap-
solutions across various transportation
end-to-end distribution processes and
who successfully deliver the goods,
components and commercial partners
are not enough. While it is clearly our
mons and a viable distribution network
ability to fully employ their capabilities.

USTRANSCOM’s en-route infrastruc-
ture master plan is also synchronized
with combatant commands to ensure
capabilities exist at various ports, airfields,
and multimodal sites when required.

In particular, USTRANSCOM will
assess the GDN vis-a-vis the strategic
environment. The heart of the GCP-D is
developing all the requisite elements of
a “warm” network to operate anywhere
on the globe, so when the time comes
we can quickly respond to it to meet
the Nation’s needs. Synchronization
of the efforts to set the conditions for
future distribution operations is where
USTRANSCOM, with the help of oth-
ers, ensures that efforts are mutually
supporting and achieve the desired objec-
tives for strategic mobility.

Lastly, in the past, USTRANSCOM
operated in the individual land, sea, and
air segments of transportation. However,
through our years of experience in our
Distribution Process Owner role (see fig-
ure), we realized we could move combat
equipment via surface land/ocean and air
routes through multimodal hubs and not
only meet required delivery dates, but
also be more cost-effective. Multimodal
is increasingly becoming our operational
norm as is the ability to coordinate and
synchronize movements end-to-end.

The ability to decisively engage
globally—literally overnight—hinges
on the mobility and transportation as-
sets USTRANSCOM coordinates and
synchronizes to rapidly project power
and sustain a global presence. Leaders
at all levels of government tell me that
USTRANSCOM makes mobility look
easy, knowing full well it is not.

Our command overcomes geographic
constraints and rapidly projects power
through global mobility, assured access,
via the GDN, and global synchronization
of distribution. The extraordinary ability
to rapidly project national power and
influence—anywhere, anytime—is unique
to the United States. Modern means of
transport alone cannot eliminate the stra-
tegic significance of terrain, environment,
and vast distance.

We must remember that the challenge
of geography is compounded by the twin
tyrannies of time and cost. By nature, crises
develop quickly, and we are pressured to
respond faster. Military personnel resources
are expensive, and the cost of transporting
them and their sustainment increases with
distance. When effectiveness and respon-
siveness are not paramount, warfighters
and customers need more cost-conscious
transportation solutions, preferably a range
of costed options.

All strategy must contend with geog-
raphy even when it is not about contested
geography.

Together we are working
toward a more effective and efficient
strategy to influence the enemy’s behavior
whenever and wherever needed. Together
with our components, the Defense
Logistics Agency, and commercial part-
ners, U.S. Transportation Command
will continue to deliver the mobility and
transportation options that bolster our
nation’s power. Together, we deliver. JFQ

Notes

1 Colin S. Gray, Fighting Talk: Forty Mas-
 imins on War, Peace, and Strategy (Westport, CT:
2 See “Shanghai Maglev Train,” available
<http://cn.wikipedia.org/wiki/Shanghai
spacex.com/falcon9>.
3 See “Hyperloop,” available at <http://
spacex.com/hyperloop>.
4 Colin S. Gray, Modern Strategy (Oxford:
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5 Gray, Fighting Talk, 78, 80. Mankind does
not live at sea or in cyberspace. Most wars entail
where belligerents live, and therefore, land
matters most. Even though air and sea may
dominate the conduct of a war, conflict’s likely
objective is to influence the enemy’s behavior
on the ground and often requires that the final
blow be delivered by ground forces.
6 Capstone Concept for Joint Operations:
Joint Force 2020 (Washington, DC: The Joint
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7 See “Our Story: 2013 to 2017,” available
8 Capstone Concept for Joint Operations, 12.
9 Ibid., 1.
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ton, DC: The Joint Staff, April 6, 2011, with
11 William H. Tunner, Over the Hump:
Berlin Airlift 50th Anniversary Commemorative
and Museums program, 1998).
12 Joseph S. Nye, Jr., The Future of Power
13 Gray, Fighting Talk, 79.