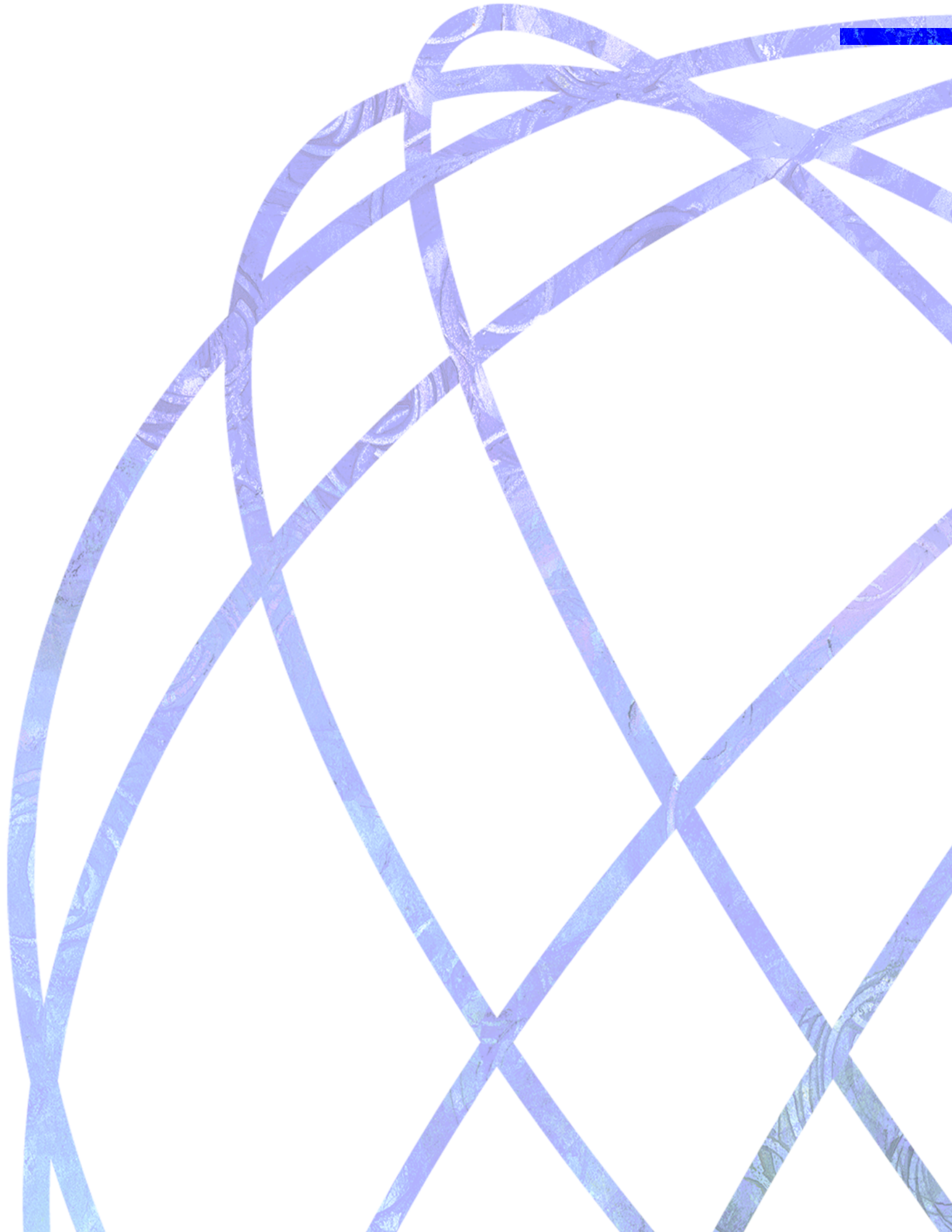
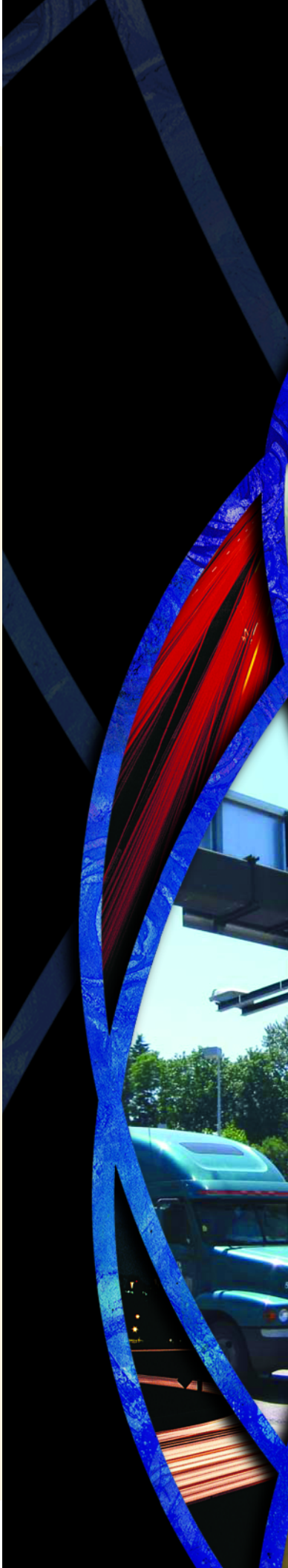


APEC	Asia Pacific Economic Cooperation
BEST	Bangkok Efficient and Secure Trade
CBP	Customs and Border Control
CEO	chief executive officer
CSD	container security device
C-TPAT	Customs-Trade Partnership Against Terrorism
CVISN	Commercial Vehicle Information System Networks
DHS	Department of Homeland Security
DOD	Department of Defense
DOE	Department of Energy
DOT	Department of Transportation
DTTS	Defense Transportation Tracking System
EDI	electronic data interchange
EFM	electronic freight manifest
ESCM	electronic supply chain manifest
e-seals	electronic seals
FHWA	Federal Highway Administration
FIH	freight information highway
FIRST	Freight Information Real-Time System for Transport
FMCSA	Federal Motor Carrier Safety Administration
FOT	field operational test
GDP	gross domestic product
GPS	global positioning system
IT	information technology
JPO	Joint Program Office
LTL	less than truckload
NAFTA	North American Free Trade Agreement
OSC	Operation Safe Commerce
RFID	radio frequency identification
ROI	return on investment
SST	Smart and Secure Tradelanes
TCOS	Trade Corridor Operating Systems
TRANSCOM	DOE's Transportation Tracking and Communications System
TSA	Transportation Security Administration
TSD	trailer security device
TWIC	Transportation Worker Identity Card



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16. Abstract

The U.S. Department of Transportation's (DOT's) Federal Highway Administration (FHWA) and the Joint Program Office (JPO) work collaboratively with private industry to identify technologies that improve efficiency and productivity, increase global connectivity, and enhance freight system performance. FHWA and JPO also support their testing and evaluation in the field. Independent evaluation of technology performance, costs, and benefits is a key part of DOT's efforts.

This report shares information about the state of the art and the adoption of intelligent freight technologies by industries and their customers. Specifically, the report discusses the innovation and implementation processes for intelligent freight technologies, triggers for and barriers to deployment, the types of intelligent freight technologies and their benefits, and field operational test results.

Today, intelligent freight technologies are used to improve freight system efficiency and productivity, increase global connectivity, and enhance freight system security against common threats and terrorism. These technologies are currently deployed in several areas: 1) asset tracking, 2) on-board status monitoring, 3) gateway facilitation, 4) freight status information, and 5) network status information.

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