26	24	102	Board member classification	Individual board member poll		
THEME / TOPIC	**Key Recommendation**	**Enabling Recommendation**	**Categorization (1, 2, or 3)**	**Accept**	**Reject**	**Accept with revisions**
Establishing a National IoT Strategy						
	Key Recommendation 1.1: The IoTAB recommends a strategic national approach for taking full advantage of the opportunity presented by the IoT.					
		Enabling Recommendation 1.1.1: IoT must be added back to the critical and emerging technology list.				
		Enabling Recommendation 1.1.2: Congress should further improve and elevate inter-agency coordination.				
		Enabling Recommendation 1.1.3: Congress should monitor and track the progress toward the implementation of the IoT national strategy.				
Modernizing IoT Infrastructure						
Equitable and Responsible Data Sharing						
	Key Recommendation 2.1: The government should foster policies that encourage responsible and equitable sharing of IoT data, and thereby drive economic growth.					
		Enabling Recommendation 2.1.1: The government should establish templates or best practices for clear and robust corporate policies regarding data sharing, usage, and licensing among parties in the IoT ecosystem.				
		Enabling Recommendation 2.1.2: The government should partner with industry and collaborate with international allies to develop and support comprehensive data sharing policies that stimulate economic growth.				
		Enabling Recommendation 2.1.3: The government should establish data repositories for privately collected data.				
Consistent and Resilient Interoperability						
	Key Recommendation 2.3: The government should establish methods to foster interoperability for IoT technology, including through the use of consistent models, protocols, application interfaces, and schemas.					
		Enabling Recommendation 2.3.1: The government should work with various organizations to facilitate interoperability through the development of a consistent data taxonomy for the sharing and exchange of traffic and other data collected from IoT and non-IoT sources.				
		Enabling Recommendation 2.3.2: The government should support research and industry-led standards in areas such as telematics and sensor technologies for autonomous vehicles.				
		Enabling Recommendation 2.3.3: The government should promote and adopt industry led standards, guidelines, and protocols for minimum baseline interoperability for smart transportation technologies and corresponding transportation infrastructure (i.e., sensors in roads, cameras at intersections).				
		Enabling Recommendation 2.3.4: The government should facilitate and support the adoption of smart city and sustainable infrastructure standards.				
		Enabling recommendation 2.3.5: The government should promote development and adoption procedures that accelerate and streamline planning, permitting, and interconnection aspects related to energy efficient technologies within the broader electric grid.				
Promoting Existing Methods						
	Key Recommendation 2.4: The government should promote collaborative development across industries to adopt existing industry standards and protocols.					
		Enabling Recommendation 2.4.1: The government should promote the collaborative development and adoption of existing industry standards activities with respect to energy efficient, clean, and renewable energy technologies that are used in sustainable infrastructure.				
		Enabling Recommendation 2.4.2: The government should advocate for the implementation and adoption of interoperable data standards for public safety IoT.				
		Enabling Recommendation 2.4.3: The government should promote and, if necessary, develop a protocol for data exchange standards for IoMT (Internet of Medical Things) for interoperability, and promote the adoption of these standards.				
		Enabling Recommendation 2.4.4: The government should promote the development and use of standards for supply chain logistics, traceability, and assurance.				
		Enabling Recommendation 2.4.5: The government should promote standards and protocols for IoT technology in supply chain management to provide assurance of interoperability, reliability, and security across various IoT systems and devices.				
	Key Recommendation 2.5: The federal government should expand and improve programs that ensure availability, reliable and sufficient connectivity among and between IoT devices in all areas of the country.					
		Enabling Recommendation 2.5.1: To promote continued U.S. leadership on spectrum policy, the government should continue to make licensed and unlicensed spectrum available, such as through spectrum sharing and repurposing underutilized federal spectrum.				
		Enabling Recommendation 2.5.2: The government should consider increasing funding and accelerating implementation of broadband deployment across rural America.				
		Enabling Recommendation 2.5.3: The government should actively promote and support the adoption of satellite narrowband IoT systems for agricultural IoT, with the aim of improving connectivity, data collection, and decision-making in rural and remote agricultural areas, resulting in economic growth.				
Establish Trust in IoT						
Cybersecurity Improvement						
	Key Recommendation 3.1: The Federal Government should provide specific and consistent cybersecurity guidance for IoT providers and adopters to ensure secure operations in a whole-of-government approach.					

26	24	102	Board member classification	Individual board member poll		
THEME / TOPIC	**Key Recommendation**	**Enabling Recommendation**	**Categorization (1, 2, or 3)**	**Accept**	**Reject**	**Accept with revisions**
		Enabling Recommendation 3.1.1: The government should strengthen cybersecurity measures focused on IoT across supply chain networks to address concerns around data privacy, security, confidentiality, trust, and potential risks associated with increased connectivity and interdependence of IoT systems.				
		Enabling Recommendation 3.1.2: The government should consider additional ways to highlight those vulnerabilities most likely to be applicable to IoT product developers.				
		Enabling Recommendation 3.1.3: The government should accelerate the promotion and adoption of procedures and methods to make the electric grid enabled by IoT more reliable and resilient.				
		Enabling Recommendation 3.1.4: Congress and regulatory agencies should support domestic IoT cybersecurity labeling initiatives by establishing incentives for manufacturers to participate.				
		Enabling Recommendation 3.1.4A (to be renumbered): Congress must ensure adequate and continuing funding for the Cyber Trust Mark consumer education campaign.				
		Enabling Recommendation 3.1.5: The government should establish appropriate U.S. representation regarding international harmonization of IoT cybersecurity programs and requirements as such programs are established for domestic market sectors.				
		Enabling Recommendation 3.1.6: The government should recognize and promote existing standards, and conformity assessment schemes that facilitate cybersecurity in industrial IoT applications.				
Data Privacy Regulation						
	Key Recommendation 3.2: Congress should pass comprehensive federal privacy legislation.					
		Enabling Recommendation 3.2.1: Congress should include IoT in proposed comprehensive privacy legislation.				
Data and Privacy Policy						
	Key Recommendation 3.3: The White House and Congress should facilitate/support the development of a Data and Privacy Policy Framework.					
		Enabling Recommendation 3.3.1: The government should promote "Privacy by Design" in IoT device development, deployment, and implementation.				
		Enabling Recommendation 3.3.2: The government should establish clear policies for third-party data sharing and IoT device data use				
Privacy Protections and Transparency for IoT		Enabling Recommendation 3.3.3: The government should encourage the use of plain language in IoT privacy policies.				
		Enabling Recommendation 3.3.4: The government should develop and implement privacy transparency mechanisms.				
		Enabling Recommendation 3.3.5: The government should endorse universal opt-out signals for IoT devices and companion apps.				
		Enabling Recommendation 3.3.6: The government should include IoT Privacy information on new car automobile “Monroney Stickers”.				
		Enabling Recommendation 3.3.7: The government should add "Location Tracking Enabled" notice to U.S. E-labeled IoT devices.				
		Enabling Recommendation 3.3.8: The government should promote the use, development, and implementation of Privacy-Enhancing Technologies (PETs) in IoT systems.				
		Enabling Recommendation 3.3.9: The government should follow NIST sanitization standards for government automobiles before resale, and should encourage NIST sanitization standards for automobiles before resale.				
Connected IoT-based Supply Chain Logistics						
	Key Recommendation 4.1: The government should monitor and evaluate progress of IoT adoption for supply chain logistics.					
Public and Private Partnership						
	Key Recommendation 4.2: The government should help establish and foster public-private partnerships (PPPs) focused on IoT adoption to facilitate collaboration and knowledge sharing between government agencies, businesses, technology providers, and academia.					
		Enabling Recommendation 4.2.1 The government should foster orchestrated Public-Private Partnerships (PPPs) promoting network effects among connected enterprises and across supply chains.				
		Enabling Recommendation 4.2.2: The government should subsidize initiatives for digital infrastructure supporting the digital transformation of enterprise business processes including design, production, procurement, distribution.				
		Enabling Recommendation 4.2.3: The government should promote the enablement and use of trusted digital threads, trusted digital marketplaces and platform-based business ecosystems.				
		Enabling Recommendation 4.2.4: The government should promote trusted AI-IoT platforms across circular supply chains and ecosystems to improve transparency and sustainability and drive economic growth.				
	Key Recommendation 4.3: The government should support trusted architectures and conduct a limited pilot to assess the value of trusted digital threads for provenance and traceability across the supply chain.					
		Enabling Recommendation 4.3.1: The government should incentivize multi-stakeholder alliances and collaboration for trusted end-to-end solutions across supply chains.				
		Enabling Recommendation 4.3.2: Support collaborative IoT platforms that align stakeholder business incentives.				
		Enabling Recommendation 4.3.3: The government should encourage the use of digital threads for connected supply chains.				

26	24	102	Board member classification	Individual board member poll		
THEME / TOPIC	**Key Recommendation**	**Enabling Recommendation**	**Categorization (1, 2, or 3)**	**Accept**	**Reject**	**Accept with revisions**
		Enabling Recommendation 4.3.4: The government should facilitate the creation of business ecosystems that enable new business models and revenue streams				
		Enabling Recommendation 4.3.5: The government should promote consistent levels of IoT device hardware and software identity documentation information included in trusted digital threads for Software IoT supply chains.				
IoT Leadership / Government capabilities						
Establish Government Capabilities						
	Key Recommendation 5.1: The federal government should consider incorporating secure and updated IoT applications and systems into its own facilities, assets, and operations.					
		Enabling Recommendation 5.1.1: The government should consider upgrading legacy federal owned or operated buildings that have inadequate security in their connected systems.				
		Enabling Recommendation 5.1.2: The government should consider the development of Smart City and Sustainability Extension Partnerships (SCSEP).				
		Enabling Recommendation 5.1.3: The government should fully fund existing IoT research, development, deployment and demonstrations.				
Leading by Example: Improved Use of IoT in Federally Funded Projects						
	Key Recommendation 5.2: The government should lead by example by promoting and enabling the use of IoT in those projects that are funded in full, or partially, by federal offices.					
		Enabling Recommendation 5.2.1: The government should specify and utilize energy efficient and sustainable technologies into infrastructure and other projects that are funded in full, or partially, with federal funding.				
		Enabling Recommendation 5.2.2: The government should consider the specification and utilization of IoT and “smart” technologies into infrastructure and other projects that are funded in full, or partially, with federal funding.				
Leverage Federal Grants And Programs To Improve IoT Technology Use						
	Key Recommendation 5.3: The government should consider new financial models for sustaining and supporting programs when considering IoT project feasibility.					
		Enabling Recommendation 5.3.1: The government should encourage other models to help select adopting organizations sustain and support in evaluating IoT project feasibility.				
		Enabling Recommendation 5.3.2: The government should consider “student loan forgiveness” programs in exchange for providing critical emerging technology (IoT, data science, cybersecurity, etc.) skills to municipalities and agencies.				
		Enabling Recommendation 5.3.3: The government should consider developing programs and grants to allow underserved and less developed communities as well as rural areas to adopt smart transportation technologies.				
Leading the Way for IoT Adoption in Agriculture						
	Key Recommendation 5.4: The federal government should implement sector-specific actions to further promote IoT adoption in the Agriculture sector.					
		Enabling Recommendation 5.4.1: The government should develop a comprehensive strategy for agricultural IoT.				
		Enabling Recommendation 5.4.2: The government should consider fully funding the deployment of a “farm of the future” setup in every land grant university nationwide. This nationwide test-farm IoT network should span different forms of agriculture, including, but not limited to broadacre, horticulture, livestock, and aquaculture.				
		Enabling Recommendation 5.4.3: The government should actively promote and support the adoption of Generative AI applications for agricultural IoT, with the aim of improving decision-making, optimizing resource utilization, and enhancing productivity in the agricultural sector through innovative and data-driven solutions.				
		Enabling Recommendation 5.4.4: The government should provide overarching regulatory guidance for the drone industry. The Federal Government should also provide funding for the drone industry for additional research in order that existing technical obstacles can be overcome.				
		Enabling Recommendation 5.4.5: The government should facilitate development of connectivity policies and programs.				
		Enabling Recommendation 5.4.6: The government should support and promote industry and SDO efforts to address interoperability of agricultural systems and machinery.				
		Enabling Recommendation 5.4.7: The government should facilitate small farm/ranch adoption of IoT technologies.				
		Enabling Recommendation 5.4.8: The government should support enactment of federal “right to repair” legislation to address the inability of agricultural producers to service their smart equipment.				
		Enabling Recommendation 5.4.9: The government should facilitate the development of IoT data confidentiality guidelines for agricultural IoT systems, and manufacturers of “smart” and IoT-enabled agricultural machinery and systems.				
Leading the Way for IoT Adoption Through Smart Cities						
	Key Recommendation 5.9: Preliminary Text: The government should implement specific actions to further promote IoT adoption through smart cities.]					
		Enabling Recommendation 5.9.1: The government should facilitate and support the development and use of smart city and sustainable infrastructure reference models.				

26	24	102	Board member classification	Individual board member poll		
THEME / TOPIC	**Key Recommendation**	**Enabling Recommendation**	**Categorization (1, 2, or 3)**	**Accept**	**Reject**	**Accept with revisions**
		Enabling Recommendation 5.9.2: The government should facilitate opportunities for adoption and equity of benefits of IoT and smart city technologies for local governments (cities, counties), regional entities (water districts, sanitation districts, air quality districts, etc.) and utility companies.				
		Enabling Recommendation 5.9.3: The government should facilitate smart community opportunities and adoption of IoT for those rural communities that have broadband infrastructure, have received broadband infrastructure funding or have completed broadband infrastructure build-outs.				
		Enabling Recommendation 5.9.4: The government should facilitate federal adoption of IoT and smart city technologies within its facilities, including government buildings, military bases, campuses and other facilities. [For Board Review - Proposed by Benson] [This could also go in 5.2]				
		Enabling Recommendation 5.9.5: The government should support and promote industry and SDO efforts to address interoperability of smart cities (including smart buildings, energy and utilities, traffic, etc.). [For Board Review - Proposed by Benson]				
		Enabling Recommendation 5.9.6: The government should facilitate small to medium city adoption of smart city technologies. [For Board Review - Proposed by Benson]				
		Enabling Recommendation 5.9.7: The government should facilitate cybersecurity in IoT in smart cities.				
		Enabling Recommendation 5.9.8: The government should facilitate equity in realization of smart city benefits.				
Leading the Way for IoT Adoption for Public Safety						
	Key Recommendation 5.10: The government should implement specific actions to promote IoT adoption that will improve public safety.					
		Enabling Recommendation 5.10.1: The government should create a stockpile of public safety IoT devices that is available for immediate access.				
Leading the Way for IoT Adoption for Health Care						
	Key Recommendation 5.10: The government should implement specific actions to promote IoT adoption in the health care industry.]					
		Enabling Recommendation 5.10.1: The government should promote IoMT as an enterprise priority, including to healthcare facilities' leadership teams.				
		Enabling Recommendation 5.10.2: The government should enact HIPAA-like protection for users' medical data in mobile applications and IoT devices.				
		Recommendation HC1: Support and promote industry and SDO efforts to address interoperability of medical and healthcare devices and systems.				
		Recommendation HC2: Facilitate cybersecurity in IoT in smart medical devices and equipment, including wearables, in-home devices, community IoMT systems, and in-clinic systems				
		Recommendation HC3: Facilitate U.S. government adoption and use of medical and healthcare IoT technologies.				
		Recommendation HC4: Facilitate the resolution of privacy concerns in healthcare and medical IoT				
		Recommendation HC5: Facilitate and support the use and adoption of healthcare IoT in rural communities.				
		Recommendation HC6- Facilitate adoption of IoT among small physician practices (< 50 physicians)				
		Recommendation HC7: Facilitate policies and programs that support the key education and digital skills development for the current and future healthcare workforce.				
		Recommendation HC8: Facilitate the adoption of AI in IoT in healthcare through improved AI research, development and workforce improvement.				
Sustainability / Environmental Monitoring						
	Key Recommendation 5.11: The government should implement specific actions to promote IoT adoption that will improve sustainability and environmental monitoring.					
		Enabling Recommendation 5.11.1: The government should establish or encourage IoT environmental data repositories in support of open, available data.				
		Enabling Recommendation 5.11.2: The government should facilitate and support the research, development and deployment of low cost Air Quality sensors. (Could we expand to additional types of monitoring?)				
		Enabling Recommendation 5.11.3: The government should facilitate the expansion of wireless connectivity to support remote monitoring and sensing in areas not serviced by traditional connectivity.				
		Enabling Recommendation 5.11.4: The government should consider establishing stockpile reserves of IoT monitoring equipment for quick short-term deployment during emergency and catastrophic event scenarios				
		Enabling Recommendation 5.11.5: The government should implement a nationwide IoT-based Water Monitoring Infrastructure) to expand the nationwide water monitoring system, including water treatment facilities.				
		Enabling Recommendation 5.11.6: The government should utilize IoT Technologies to facilitate carbon transparency across economic sectors.				
		Enabling Recommendation 5.11.7: The government should facilitate and promote the use and integration of IoT technologies to complement and support wide area environmental situational awareness capabilities to monitor and inform on a variety of environmental conditions and hazards in environmentally sensitive areas.				
Smart Transportation						

26	24	102	Board member classification	Individual board member poll		
THEME / TOPIC	**Key Recommendation**	**Enabling Recommendation**	**Categorization (1, 2, or 3)**	**Accept**	**Reject**	**Accept with revisions**
	Key Recommendation 5.12: The government should implement specific actions to promote IoT adoption in Smart Transit and Transportation.					
		Enabling Recommendation 5.12.1: The government should promote the development and adoption of policies, procedures and funding methods that can accelerate the adoption of smart, connected, and electrified transportation technologies.				
		Enabling Recommendation 5.12.2: Road Safety and Ultra-Wideband (UWB)-the government should direct the FCC to revisit the regulation that prohibits the use of Ultra-Wideband (UWB) technology from outdoor fixed infrastructure.				
International Leadership						
	Key Recommendation 5.14: The government should lead international efforts related to the adoption, implementation, and promotion of IoT.					
		Enabling Recommendation 5.14.1: The government should promote international collaboration in IoT adoption across global supply chains to share knowledge, best practices, and resources between countries & regions, driving innovation & accelerating widespread adoption of IoT technologies in supply chain operations worldwide.				
		Enabling Recommendation 5.14.2: The government should create internationally compatible data minimization guidance related to IoT devices, aligning with the NIST Privacy Framework and NIST Cybersecurity Framework principles.				
Small Business Leadership						
	Key Recommendation 5.15: The government should accelerate IoT technology adoption as well as manufacturing for small businesses and startup organizations. This can be done via policies, procedures, and funding methods that specifically target them.					
		Enabling Recommendation 5.15.1: The government should accelerate the adoption of IoT technologies manufactured by small business and startup organizations through targeted Federal Government programs, policies, procedures, and funding methods.				
		Enabling Recommendation 5.15.2: The government should accelerate the adoption of IoT technologies manufactured by small business and startup organizations.				
Research to Support the Future State of IoT						
	Key Recommendation 5.16: [Preliminary Text: The government should consider research in the following areas to support the future state of IoT.					
		Enabling Recommendation 5.16.1: The government should research increased capabilities of IoT devices. [For Board Review - Proposed by Benson]				
		Enabling Recommendation 5.16.2: The government should research enabling robust infrastructure to support increasingly large number of IoT devices and systems. [For Board Review - Proposed by Benson]				
		Enabling Recommendation 5.16.3: The government should research methods to enable Usable AI for IoT. [For Board Review - Proposed by Benson]				
		Enabling Recommendation 5.16.4: The government should conduct research in the development of hyperconnected communications networks. [For Board Review - Proposed by Benson]				
		Enabling Recommendation 5.16.5: The government should research methods to enable the development of Human centric ambient IoT. [For Board Review - Proposed by Benson]				
Fostering an IoT-Ready Workforce						
	Key Recommendation 6.1: The government should invest in and promote IoT-related aspects of education and workforce.					
		Enabling Recommendation 6.1.1: The government promote continuing education, professional development, and vocational training for IoT integration in supply chain management.				
		Enabling Recommendation 6.1.2: The government should invest and promote education and workforce development in smart transportation technologies.				
		Enabling Recommendation 6.1.3: The government should develop educational initiatives that include IoT, targeting workforce development, and enhancing business, government, and consumer data privacy and trust.				

IoTAB Draft Recommendations
for Categorization

Categoratization	Definition
1	Recommendations that are strategic, bold, and will have the major impact and whose exclusion will cause someone to notice
2	Recommendations that are strategic “quick wins” – big impact, doable in the short term (existing infrastructure, etc.)
3	Recommendations that If we eliminate, no one will notice or care, or risks confusing or maksing the main recommendations ("forest for the trees")

Recommendation	Definition
Accept	This recommendation should be accepted into the final report (as is, or with very minor revisions)
Reject	This recommendation should NOT be accepted into the final report (as is or with minor revisions)
Accept with revisions	This recommendation should be accepted into the final report only if it was revised (major revisions)