



U.S. Department of Transportation

Office of the Chief Information Officer (OCIO)

Privacy Threshold Assessment (PTA)

National Highway Traffic Safety Administration
Office of Vehicle Safety Research (OVSR)

Occupant Anthropometry and Seating





Privacy Threshold Assessment (PTA)

The Privacy Threshold Assessment (PTA) is an analytical tool used to determine the scope of privacy risk management activities that must be executed to ensure that the Department's initiatives do not create undue privacy risks for individuals.

The Privacy Threshold Assessment (PTA) is a privacy risk management tool used by the Department of Transportation (DOT) Chief Privacy Officer (CPO). The PTA determines whether a Department system¹ creates privacy risk for individuals that must be further analyzed, documented, or mitigated, and determines the need for additional privacy compliance documentation. Additional documentation can include Privacy Impact Assessments (PIAs), System of Records notices (SORNs), and Privacy Act Exemption Rules (Exemption Rules).

The majority of the Department's privacy risk emanates from its direct collection, use, storage, and sharing of Personally Identifiable Information (PII),² and the IT systems used to support those processes. However, privacy risk can also be created in the Department's use of paper records or other technologies. The Department may also create privacy risk for individuals through its rulemakings and information collection requirements that require other entities to collect, use, store or share PII, or deploy technologies that create privacy risk for members of the public.

To ensure that the Department appropriately identifies those activities that may create privacy risk, a PTA is required for all IT systems, technologies, proposed rulemakings, and information collections at the Department. Additionally, the PTA is used to alert other information management stakeholders of potential risks, including information security, records management and information collection management programs. It is also used by the Department's Chief Information Officer (CIO) and Associate CIO for IT Policy and Governance (Associate CIO) to support efforts to ensure compliance with other information asset requirements including, but not limited to, the Federal Records Act (FRA), the Paperwork Reduction Act (PRA), the Federal Information Security Management Act (FISMA), the Federal Information Technology Acquisition Reform Act (FITARA) and applicable Office of Management and Budget (OMB) guidance.

Each Component establishes and follows its own processes for developing, reviewing, and verifying the PTA prior to its submission to the DOT CPO. At a minimum the PTA must be reviewed by the Component business owner, information system security

¹ For the purposes of the PTA the term "system" is used throughout document but is not limited to traditional IT systems. It can and does refer to business activity and processes, IT systems, information collection, a project, program and/or technology, and proposed rulemaking as appropriate for the context of the assessment.

² The term "personally identifiable information" refers to information which can be used to distinguish or trace an individual's identity, such as their name, social security number, biometric records, etc. alone, or when combined with other personal or identifying information which is linked or linkable to a specific individual, such as date and place of birth, mother's maiden name, etc.



manager, general counsel, records officers, and privacy officer. After the Component review is completed, the Component Privacy Office will forward the PTA to the DOT Privacy Office for final adjudication. Only PTAs watermarked “adjudicated” and electronically signed by the DOT CPO are considered final. Do NOT send the PTA directly to the DOT PO; PTAs received by the DOT CPO directly from program/business owners will not be reviewed.

If you have questions or require assistance to complete the PTA please contact your [Component Privacy Officer](#) or the DOT Privacy Office at privacy@dot.gov. Explanatory guidance for completing the PTA can be found in the PTA Development Guide found on the DOT Privacy Program website, www.dot.gov/privacy.

DOT CPO Adjudicated 10/01/2022



PROGRAM MANAGEMENT

SYSTEM name: Occupant Anthropometry and Seating

Cyber Security Assessment and Management (CSAM) ID: N/A

SYSTEM MANAGER CONTACT Information:

Name: Elizabeth Lafferty

Email: Elizabeth.lafferty@dot.gov

Phone Number: 202-336-6222

Is this a NEW system?

☒ **Yes** (Proceed to Section 1)

☐ **No**

☐ **Renewal**

☐ **Modification**

Is there a PREVIOUSLY ADJUDICATED PTA for this system?

☐ **Yes:**

Date:

☐ **No**

1 SUMMARY INFORMATION

1.1 System TYPE

☐ **Information Technology and/or Information System**

Unique Investment Identifier (UII): [Click here to enter text.](#)

Cyber Security Assessment and Management (CSAM) ID: [Click here to enter text.](#)

☐ **Paper Based:** [Click here to enter text.](#)

☐ **Rulemaking**

Rulemaking Identification Number (RIN): <<Provide RIN assigned by OMB's electronic docketing system>>

Rulemaking Stage:

☐ **Notice of Proposed Rulemaking (NPRM)**

☐ **Supplemental NPRM (SNPRM):**

☐ **Final Rule:**

Federal Register (FR) Notice: [Click here to enter text.](#)



- ☒ **Information Collection Request (ICR)³**
 - ☒ **New Collection**
 - ☐ **Approved Collection or Collection Renewal**
 - ☐ **OMB Control Number:** [Click here to enter text.](#)
 - ☐ **Control Number Expiration Date:** [Click here to enter text.](#)
 - ☐ **Other:** [Click here to enter text.](#)

1.2 *System OVERVIEW:*

The National Highway Traffic Safety Administration (NHTSA) was established to reduce deaths, injuries, and economic losses resulting from motor vehicle crashes on the Nation's highways. As part of this statutory mandate, NHTSA is authorized to conduct research and collect data related to new and emerging technologies that impact or may impact motor vehicle safety. See 49 U.S.C. § 30182.

NHTSA has a long history and objective to develop anthropomorphic test devices (ATDs), e.g., test dummies, to help understand and measure the human body's movement during a crash, and see how it fares with various vehicle safety features. ATD development has evolved through original dummy development, 3D modeling, and the current THOR dummies through extensive research. Additional development has led to parametric human body modeling, in which human body models (HBMs) are morphed to represent people with widely varying size and shape.

Concurrent with the development of parametric HBMs, crash injury data analyses have highlighted the potential benefits of these new tools. In particular, the field data indicate that female occupants experience higher risks of some injuries in certain types of crashes. Crash injury data also show that individuals with high body mass are at higher risks of some injuries, possibly due to differences in the interaction with the restraint systems.

NHTSA will collect information from licensed drivers to determine:

1. their eligibility to participate in a data collection of occupant anthropometry, seating, and in-vehicle foot placement, and
2. their anthropometric measurements, seated anthropometric measurements, seatbelt fit, and in-vehicle foot placement.

The objective of this study is to gather a new database of information on adult body size, shape, posture, and motion to support advancement in safety applications. This study will add to the body of the knowledge on motor vehicle anthropometry, will support crash safety, and equitable occupant protection through the development of HBMs and anthropomorphic test devices (ATDs). Findings from the data collection effort will be compiled in a deidentified final report as well as incorporated into a realistic human body shape modeler based on real deidentified measurement data.

³See 44 USC 3501-3521; 5 CFR Part 1320



NHTSA has contracted with the UMTRI; contract # 693JJ923F000284 to conduct the experimental data collection of in-lab and in-vehicle occupant anthropometry.

Eligibility of candidates

Candidates will be male and female licensed drivers, ages 18+, in the Ann Arbor, MI region and willing to travel to the UMTRI. Efforts will be made to enroll male and female participants across a range of ages, stature by sex, and body mass index (BMI). An age between 30 and 60 years will be targeted for roughly 70% of the total participants. Their participation will be voluntary.

Candidates are recruited using University of Michigan's Health Research portal, <https://umhealthresearch.org/>. Prospective candidates will respond to the U-M Health Research posting by completing a screening questionnaire on a Google Form.

Candidates who screen eligible will be contacted by phone to confirm the survey responses and, if eligible, to schedule an appointment. Eligible candidates are those whose answers to the Google Form questions are consistent with the inclusion and exclusion criteria.

Eligibility requirements include the ability to read and speak English, ability to drive for two hours continuously, hold a current and unrestricted U.S. driver's license, have been a licensed driver for at least one year, drive a car daily for an average of at least 15 minutes, and comfortable driving on the highway and local roads. Exclusion criteria include individuals with musculoskeletal ailments impeding the ability to walk or sit comfortably or musculoskeletal deformities such as scoliosis or amputations.

The study will ask the candidates:

1. First and Last name
2. Emails
3. Phone Number
4. Valid driver license
5. Sex
6. Race and ethnic background
7. English speaking
8. Age, height, and weight
9. Driving habits
10. Health questions (musculoskeletal ailments and deformities)

This research will be conducted over two studies and involves five information collection components, including a screening questionnaire, an eligibility phone call, an informed consent for in-lab data collection, a pre-drive in-vehicle questionnaire, and an informed consent for the in-vehicle data collection. We estimate that 2000 screening questionnaires will be filled out to obtain the needed number of eligible candidates. We estimate that up to 600 individuals that completed the screening questionnaires will need to be contacted to obtain the needed number of 300 subjects for the lab study. 100 individuals from the in-lab study will be invited to participate in the in-vehicle study.



Study

Individuals who have expressed interest in study participation through the University of Michigan's Health Research portal and meet the eligibility criteria based on their Google Form will be contacted by phone. The investigators identify individuals who may be eligible based on their responses on the screening questionnaire, confirm eligibility and continued interest, and set up a time for in-lab consent and data collection. No new information is obtained during this call. At the study visit, the participants will be escorted to a private room upon arrival at UMTRI for the consent process. Each version of the consent is set up electronically. Participants will undergo the consent process with a member of the research team using a desktop computer or tablet. After electronically signing the consent document, the participant will be able to download or be emailed a copy of the signed form. After consent, participants will undergo a series of anthropometric measurements to include: (1) standard manual anthropometric measurements; (2) seated measurements in a hard seat with a portable coordinate measuring machine (FARO Arm); (3) additional landmark measurements in seating mockups using the FARO Arm; (4) a 3D surface scan in the seating mockup using a 3D scanner; and (5) whole body scanning in the VITUS XXL whole body laser scanner.

A subset of the in-lab respondents will be selected for the in-vehicle study. These 100 participants will be asked to complete an electronic questionnaire to capture additional information about footwear. Upon arrival for the in-vehicle study, participants will undergo the consent process with a member of the research team. After consent, participants will be trained on the vehicle-specific safety and Advance Driver-Assistance System (ADAS) features (we plan to select vehicles with adaptive cruise control; other ADAS systems may also be present). Posture, belt fit, and position of selected vehicle components will be recorded using a FARO Arm coordinate measurement system and the vehicle Driver-Assistance System. Naturalistic driving data collection will occur during the driving session.

NHTSA plans to provide monetary compensation for both in-lab and in-vehicle study participation through UMTRI. SSN will not be collected.

Data will be stored on password protected UMTRI servers accessible only to the study team. The identifiable data that will be retained at UMTRI beyond the end of the study will consist of photos and videos of the participants' faces during driving. Retention of these data is needed to facilitate future analyses.

All results in the report will be presented to NHTSA in an aggregated, deidentified form, and no personal identifiable information will be shared in the report. NHTSA will receive a report deliverable describing the methods and results of the study from the contractor, which will then be published in the National Transportation Library.

Data from study will be shared publicly in a manner that does not include any personal identifiable information. Statistical blurring methods will be used to scramble facial features of 3D scans. All deidentified data may be shared, including questionnaire responses, body dimensions, three-dimensional body models, and other data, but no personal identifying information, including identifiable face images, will



be shared outside of the study team. Data may be shared via a UMTRI website or by other means.

2 INFORMATION MANGEMENT

2.1 *SUBJECTS of Collection*

Identify the subject population(s) for whom the system collects, maintains, or disseminates PII. (Check all that apply)

☒ **Members of the public:**

☒ **Citizens or Legal Permanent Residents (LPR)**

☐ **Visitors**

☐ **Members of the DOT Federal workforce**

☐ **Members of the DOT Contract workforce**

☐ **System Does Not Collect PII.** If the system does not collect PII, proceed directly to question 2.3.

2.2 *What INFORMATION ABOUT INDIVIDUALS will be collected, used, retained, or generated?*

Screening questionnaires will ask about the following to ensure that respondents meet inclusion criteria:

- 1 Name
- 2 Age, height, & weight
- 3 Cell phone
- 4 Email
- 5 Sex
- 6 Race and ethnic background
- 7 Musculoskeletal ailments and deformities

In-lab and in-vehicle data collections will also include:

- 1 Standard manual anthropometric measurements
- 2 Seated anthropometric measurements with a portable coordinate measuring machine
- 3 Additional anthropometric landmark measurements in seating mockups
- 4 Photos and videos of the participants' faces during driving
- 5 3D surface scan in the seating mockup using a 3D scanner
- 6 Whole body scanning in a whole-body laser scanner
- 7 Video data to study occupant driving posture



2.3 Does the system *RELATE* to or provide information about individuals?

☒ **Yes:** The information collection will gather information on adult's body size, shape, posture, and motion to support advancement in safety applications to support crash safety and equitable occupant protection.

☐ **No**



If the answer to 2.1 is "*System Does Not Collect PII*" **and** the answer to 2.3 is "*No*", you may proceed to question 2.10.

If the system collects PII or relate to individual in any way, proceed to question 2.4.

2.4 Does the system use or collect *SOCIAL SECURITY NUMBERS (SSNs)*? (This includes truncated SSNs)

☐ **Yes:**

Authority:

Purpose: [Click here to enter text.](#)

☒ **No:** The system does not use or collect SSNs, including truncated SSNs. Proceed to 2.6.

2.5 Has an *SSN REDUCTION* plan been established for the system?

☐ **Yes:**

☐ **No:** [Click here to enter text.](#)

2.6 Does the system collect *PSEUDO-SSNs*?

☐ **Yes:**

☒ **No:** The system does not collect pseudo-SSNs, including truncated SSNs.



2.7 Will information about individuals be retrieved or accessed by a UNIQUE IDENTIFIER associated with or assigned to an individual?

☐ Yes

Is there an existing Privacy Act System of Records notice (SORN) for the records retrieved or accessed by a unique identifier?

☐ Yes:

SORN:

☐ No:

Explanation:

Expected Publication:

☒ **Not Applicable:** Proceed to question 2.9

2.8 Has a Privacy Act EXEMPTION RULE been published in support of any Exemptions claimed in the SORN?

☐ Yes

Exemption Rule:

☐ No

Explanation:

Expected Publication:

☒ **Not Applicable:** SORN does not claim Privacy Act exemptions.

2.9 Has a PRIVACY IMPACT ASSESSMENT (PIA) been published for this system?

☐ Yes:

PIA Name:

Publication date:

URL:

☒ **No:** New System

☐ **Not Applicable:** The most recently adjudicated PTA indicated no PIA was required for this system.

2.10 Does the system EXCHANGE (receive and/or send) DATA from another INTERNAL (DOT) or EXTERNAL (non-DOT) system or business activity?

☐ **Yes:** [Click here to enter text.](#)

☒ **No**

2.11 Does the system have a National Archives and Records Administration (NARA)-approved RECORDS DISPOSITION schedule for system records?

☐ Yes:



Schedule Identifier:

NARA schedule:
Schedule Number, Title and section:
URL:

Schedule Summary:

☐ **In Progress:**

☒ **No:** Records Officer (RO) has determined that a records schedule is needed. The RO is currently working the program office to complete the draft.

3 SYSTEM LIFECYCLE

The systems development life cycle (SDLC) is a process for planning, creating, testing, and deploying an information system. Privacy risk can change depending on where a system is in its lifecycle.

3.1 Was this system IN PLACE in an ELECTRONIC FORMAT prior to 2002?

[The E-Government Act of 2002](#) (EGov) establishes criteria for the types of systems that require additional privacy considerations. It applies to systems established in 2002 or later, or existing systems that were modified after 2002.

☐ **Yes:** <<Provide date was the system established as an electronic system.>>

☐ **No**

☒ **Not Applicable:** System is not currently an electronic system. Proceed to Section 4.

3.2 Has the system been MODIFIED in any way since 2002?

☐ **Yes:** The system has been modified since 2002.

☐ **Maintenance.**

☐ **Security.**

☐ **Changes Creating Privacy Risk:** [Click here to enter text.](#)

☐ **Other:** [Click here to enter text.](#)

☐ **No:** The system has not been modified in any way since 2002.

3.3 Is the system a CONTRACTOR-owned or -managed system?

☐ **Yes:** The system is owned or managed under contract.

Contract Number:

Contractor: [Click here to enter text.](#)

☐ **No:** The system is owned and managed by Federal employees.



3.4 *Has a system Security Risk CATEGORIZATION been completed?*

The DOT Privacy Risk Management policy requires that all PII be protected using controls consistent with Federal Information Processing Standard Publication 199 (FIPS 199) moderate confidentiality standards. The OA Privacy Officer should be engaged in the risk determination process and take data types into account.

☐ **Yes:** A risk categorization has been completed.

Based on the risk level definitions and classifications provided above, indicate the information categorization determinations for each of the following:

Confidentiality: ☐ Low ☐ Moderate ☐ High ☐ Undefined

Integrity: ☐ Low ☐ Moderate ☐ High ☐ Undefined

Availability: ☐ Low ☐ Moderate ☐ High ☐ Undefined

Based on the risk level definitions and classifications provided above, indicate the information system categorization determinations for each of the following:

Confidentiality: ☐ Low ☐ Moderate ☐ High ☐ Undefined

Integrity: ☐ Low ☐ Moderate ☐ High ☐ Undefined

Availability: ☐ Low ☐ Moderate ☐ High ☐ Undefined

☐ **No:** A risk categorization has not been completed. Provide date of anticipated completion. [Click here to enter text.](#)

3.5 *Has the system been issued an AUTHORITY TO OPERATE?*

☐ **Yes:**

Date of Initial Authority to Operate (ATO):

Anticipated Date of Updated ATO:

☐ **No:**

☐ **Not Applicable:** System is not covered by the Federal Information Security Act (FISMA).

4 COMPONENT PRIVACY OFFICER ANALYSIS

The Component Privacy Officer (PO) is responsible for ensuring that the PTA is as complete and accurate as possible before submitting to the DOT Privacy Office for review and adjudication.

COMPONENT PRIVACY OFFICER CONTACT Information



Name: Jose R. Delgado-Forastieri

Email: j.delgadoforastieri@dot.gov

Phone Number: 202-366-7491

COMPONENT PRIVACY OFFICER Analysis

The objective of this study is to gather information on adult's body size, shape, posture, and motion to support advancement in safety applications to support crash safety and equitable occupant protection.

Participants will be recruited through a UMTRI owned list of individuals and potential participants from the public based on a pre-screening questionnaire to determine their eligibility to participate in the study. Participants will be asked to sign the consent forms approved by an Independent Review Board (IRB) and by NHTSA's Counsel's Office.

The SSN from participants is not collected.

The OVSr already has a published PIA but it has to be updated for this kind of study.

Each participant will be assigned a test ID for use in all data collection forms, data analysis, and reporting to track the progress of the individual's participation throughout the study. After the study is concluded UMTRI will send NHTSA a copy of the deidentified aggregated report. The participant ID will not be included in the final report to NHTSA; and the records cannot be retrieved by a unique identifier; therefore, this collection does not meet the requirements of a systems of records.

Deidentified data may be shared, including questionnaire responses, body dimensions, three-dimensional body models, and other data, but no personal identifying information, including identifiable face images.

The privacy risk is high, because name, contact information, body size and facial video will be collected.

5 COMPONENT REVIEW

Prior to submitting the PTA for adjudication, it is critical that the oversight offices within the Component have reviewed the PTA for completeness, comprehension and accuracy.

Component Reviewer	Name	Review Date
Business Owner	Elizabeth Lafferty	8/8/2024
General Counsel	Andrew DiMarsico	9/12/2024
Information System Security Manager (ISSM)	Hadiyah Adams	8/22/2024
Privacy Officer	Jose R. Delgado-Forastieri	9/13/2024
Records Officer	LeErnest Wells	8/23/2024



Table 1 - Individuals who have reviewed the PTA and attest to its completeness, comprehension and accuracy.

DOT CPO Adjudicated 10/01/2024



Control #	Control Name	Primary PTA Question	Satisfied	Other than Satisfied	N/A	Component PO Assessment	DOT CPO Assessment
AP-1	Authority to Collect	1.2 - Overview		X		Title 49 USC 30182 POAM: PRA Package must be approved before collection.	Create AP-1 POA&M: PRA Package must be approved before collection. Substantive records are not retrieved by an identifier linked to and individual and the records are not about individuals and are therefore, not subject to the Privacy Act.
AP-2	Purpose Specification	1.2 - Overview	X			Purpose defined.	Concur
AR-1	Governance and Privacy Program	Common Control	X			Addressed by DOT CPO.	Concur
AR-2	Privacy Impact and Risk Assessment	Program Management		X		POAM: The Appendix B of existing PIA must be updated to include this study. Time: 180 days	Create AR-2 POA&M Issue: PIA required. Requirement: Update OSVR PIA with adding



Control #	Control Name	Primary PTA Question	Satisfied	Other than Satisfied	N/A	Component PO Assessment	DOT CPO Assessment
							Occupant Anthropometry and Seating Timeline: 90 days.
AR-3	Privacy Requirements for Contractors and Service Providers	3.3 - Contractor System	X			Not IT system under FISMA. UMTRI manages this system, and also ensure to review the contract clauses for accuracy.	Concur
AR-4	Privacy Monitoring and Auditing	Common Control	X			Addressed by DOT CPO.	Concur
AR-5	Privacy Awareness and Training	Common Control	X			Addressed by DOT CPO.	Concur
AR-6	Privacy Reporting	Common Control	X			Addressed by DOT CPO.	Concur
AR-7	Privacy-Enhanced System Design and Development	2.5 - SSN Reduction			X	All participants will receive financial compensation only if they qualify and actively participate in the study. SSN will not be collected.	Concur
AR-8	Accounting of Disclosures	2.7 - SORN			X	Control is N/A to the primary purposes and records of the system. Substantive records in the system do not include records protected by the Privacy Act.	Concur
DI-1	Data Quality	1.2 - System Overview			X	Control is N/A to the primary purposes and records of the	Concur



Control #	Control Name	Primary PTA Question	Satisfied	Other than Satisfied	N/A	Component PO Assessment	DOT CPO Assessment
						system. Substantive records in the system do not include records protected by the Privacy Act.	
DI-2	Data Integrity and Data Integrity Board	3.4 - Security Risk Categorization			X	Activity does not constitute sharing covered by the CMA.	Concur
DM-1	Minimization of PII	2.2 – Information About Individuals	X			Data collection consistent with purpose.	Concur
DM-2	Data Retention and Disposal	2.11 - Records Disposition Schedule				POAM: OVSR will work with the Records Officer to establish and submit to NARA a Retention Schedule for these records. Timeline: 180 days	Create DM-2 POA&M Issue: Records are stored on NHTSA share drive. Requirement: OVSR will work with the Records Officer to establish and submit to NARA a Retention Schedule for these records. Timeline: 180 days



Control #	Control Name	Primary PTA Question	Satisfied	Other than Satisfied	N/A	Component PO Assessment	DOT CPO Assessment
DM-3	Minimization of PII Used in Testing, Training, and Research	2.2 – Information About Individuals			X	System not used for testing, training, research.	Concur
IP-1	Consent	2.7 - SORN			X	Control is N/A to the primary purposes and records of the system. Substantive records in the system do not include records protected by the Privacy Act.	Satisfied - Consent mechanism established with IRB; information is collected directly from individuals.
IP-2	Individual Access	2.8 – Exemption Rule			X	Control is N/A to the primary purposes and records of the system. Substantive records in the system do not include records protected by the Privacy Act.	Concur
IP-3	Redress	2.7 - SORN			X	Control is N/A to the primary purposes and records of the system. Substantive records in the system do not include records protected by the Privacy Act.	Concur
IP-4	Complaint Management	Common Control	X			Addressed by DOT CPO.	Concur
SE-1	Inventory of PII	Common Control			X	Not IT system under FISMA.	Concur
SE-2	Privacy Incident Response	Common Control	X			Addressed by DOT CPO.	Concur



Control #	Control Name	Primary PTA Question	Satisfied	Other than Satisfied	N/A	Component PO Assessment	DOT CPO Assessment
TR-1	Privacy Notice	2.7 - SORN			X	Control is N/A to the primary purposes and records of the system. Substantive records in the system do not include records protected by the Privacy Act.	Concur
TR-2	System of Records Notices and Privacy Act Statements	2.7 - SORN			X	Control is N/A to the primary purposes and records of the system. Substantive records in the system do not include records protected by the Privacy Act.	Concur
TR-3	Dissemination of Privacy Program Information	Common Control			X	Addressed by DOT CPO.	Concur
UL-1	Internal Use	2.10 - Internal and External Use			X	No internal sharing.	Concur
UL-2	Information Sharing with Third Parties	2.10 - Internal and External Use			X	Deidentified data may be shared, including questionnaire responses, body dimensions, three-dimensional body models, and other data, but no PII including identifiable face images will be shared	Concur



DOT CPO Adjudicated 10/01/2024