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IT'S TRANSPORTATION FOR ALL OF US

Insights and Guidance on Creating Requirements Specifications for Accessible Projects

University of Washington

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ITS Joint Program Office (JPO)

ITS4US UW Project AOR

Webinar Agenda

- ## Purpose of this Webinar
  - To share insights about Making Digital Transportation Projects Accessible & Building Team Capacity in Accessible Digital Product Development

- ## Webinar Content
  - ITS4US Deployment Program Overview (*Kate Hartman*)
  - Insights and Guidance on Creating Requirements Specifications for Accessible Projects (*Anat Caspi*)
  - Stakeholder Q&A (*Anat Caspi*)
  - How to Stay Connected (*Kate Hartman*)

- ## Webinar Protocol
  - Please mute your phone during the entire webinar
  - You are welcome to ask questions via chatbox at the Q&A Section
  - The webinar recording and the presentation material will be posted on the ITS4US website
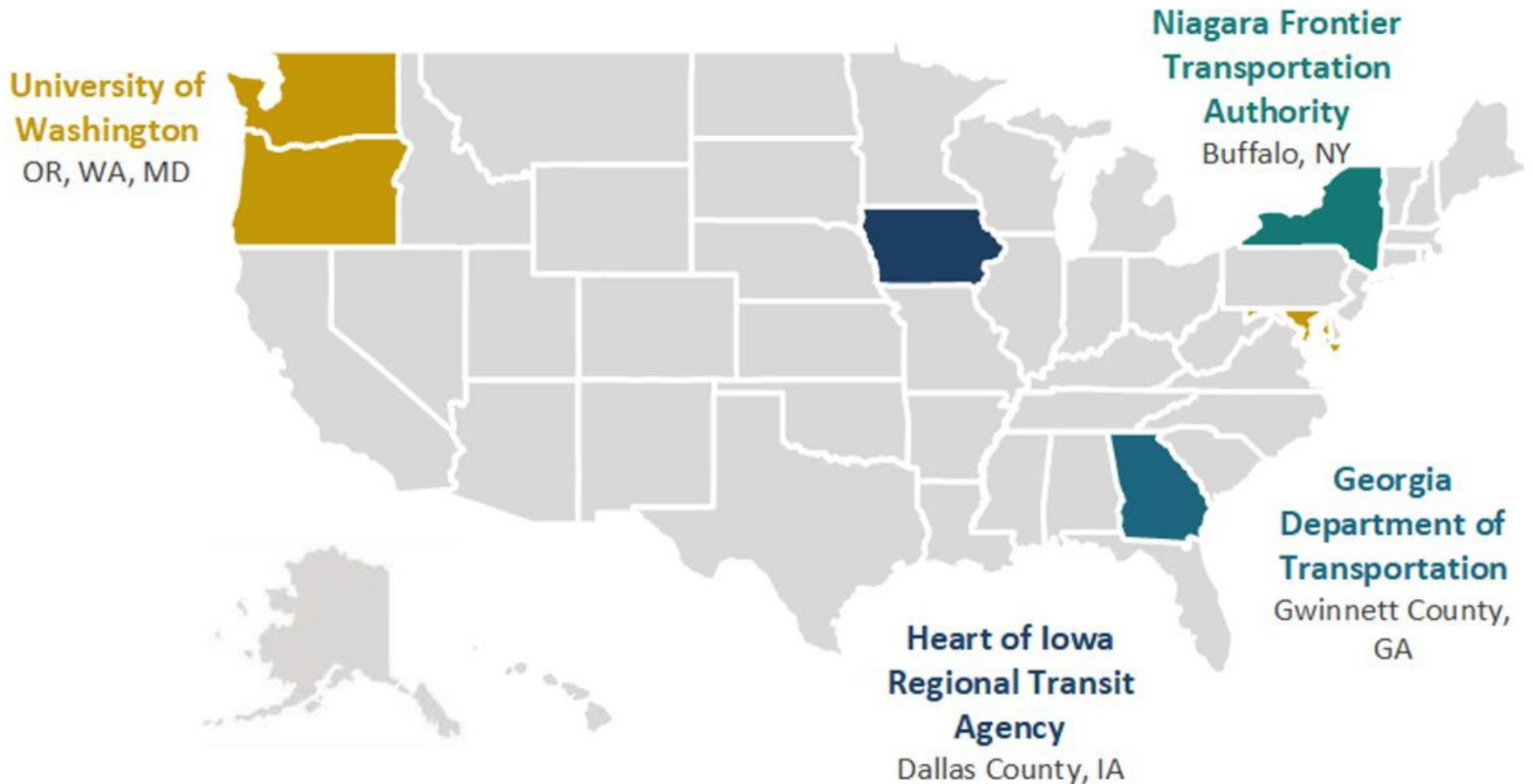
ITS4US Program Overview

- A USDOT Multimodal Deployment effort, led by ITS JPO and supported by OST, FHWA and FTA
- Supports multiple large-scale replicable deployments to address the challenges of planning and executing all segments of a complete trip
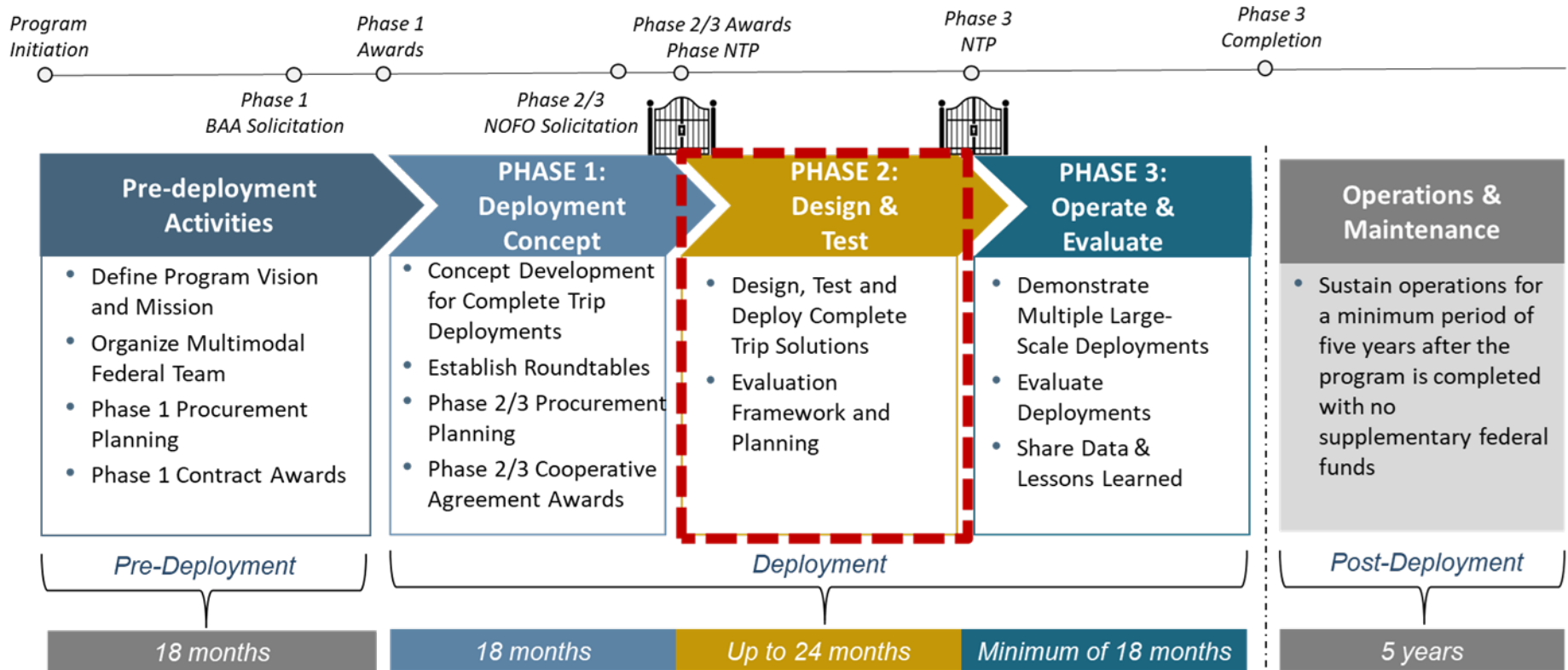

Vision: Innovative and integrated complete trip deployments to support seamless travel for all users across all modes, regardless of location, income, or disability

ITS4US Deployment Sites

University of Washington
OR, WA, MD

Niagara Frontier Transportation Authority
Buffalo, NY

Georgia Department of Transportation
Gwinnett County, GA

Heart of Iowa Regional Transit Agency
Dallas County, IA

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Deployment Phases

Program Initiation

Phase 1 BAA Solicitation

Phase 1 Awards

Phase 2/3 NOFO Solicitation

Phase 2/3 Awards / Phase NTP

Phase 3 NTP

Phase 3 Completion

Pre-deployment Activities	PHASE 1: Deployment Concept	PHASE 2: Design & Test	PHASE 3: Operate & Evaluate	Operations & Maintenance
• Define Program Vision and Mission • Organize Multimodal Federal Team • Phase 1 Procurement Planning • Phase 1 Contract Awards	• Concept Development for Complete Trip Deployments • Establish Roundtables • Phase 2/3 Procurement Planning • Phase 2/3 Cooperative Agreement Awards	• Design, Test and Deploy Complete Trip Solutions • Evaluation Framework and Planning	• Demonstrate Multiple Large-Scale Deployments • Evaluate Deployments • Share Data & Lessons Learned	• Sustain operations for a minimum period of five years after the program is completed with no supplementary federal funds

Pre-Deployment — 18 months

Deployment — 18 months / Up to 24 months / Minimum of 18 months

Post-Deployment — 5 years

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Making Digital Transportation Projects Accessible & Building Team Capacity in Accessible Digital Product Development

Anat Caspi, PhD
University of Washington

TCAT The Taskar Center for Accessible Technology

© TaskarCenter

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Who are we?

OpenSidewalks

Opensidewalks.com

Pedestrian-centered approach, data specification and tools to share accessibility information about urban street environments
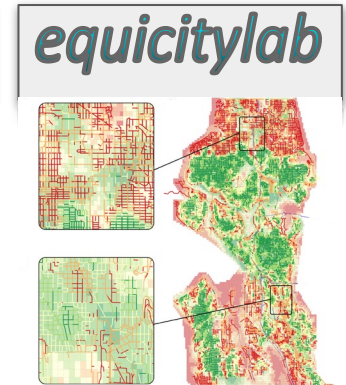
Director, Taskar Center for Accessible Technology
Dev Lead, Transportation Data Equity Initiative

The Taskar Center for Accessible Technology
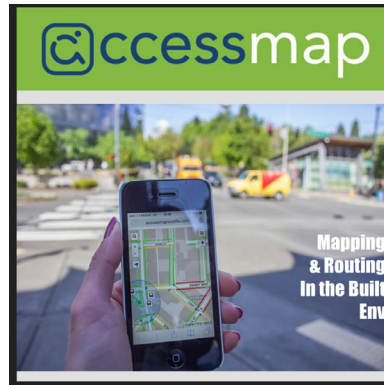
Accessmap.io- automated custom routing for personal mobility profiles

image source: Taskar Center for Accessible Technology, AccessMap.io

TactileMaptile- 3D printed pedestrian-centered cartograph

image source: Taskar Center for Accessible Technology, Jessica Hamiltony

EquicityLab- Urban analytic dashboards for equitable urban planning

image source: Taskar Center for Accessible Technology, publication: https://tinyurl.com/SidewalkScore21

The goal of this talk is Threefold

1

Surface and highlight business justifications for incorporating digital a11y into your business process

2

Identify the challenges and open problems in building accessibility into digital projects

3

Help establish internal mechanisms and external processes for building accessibility into projects from the start
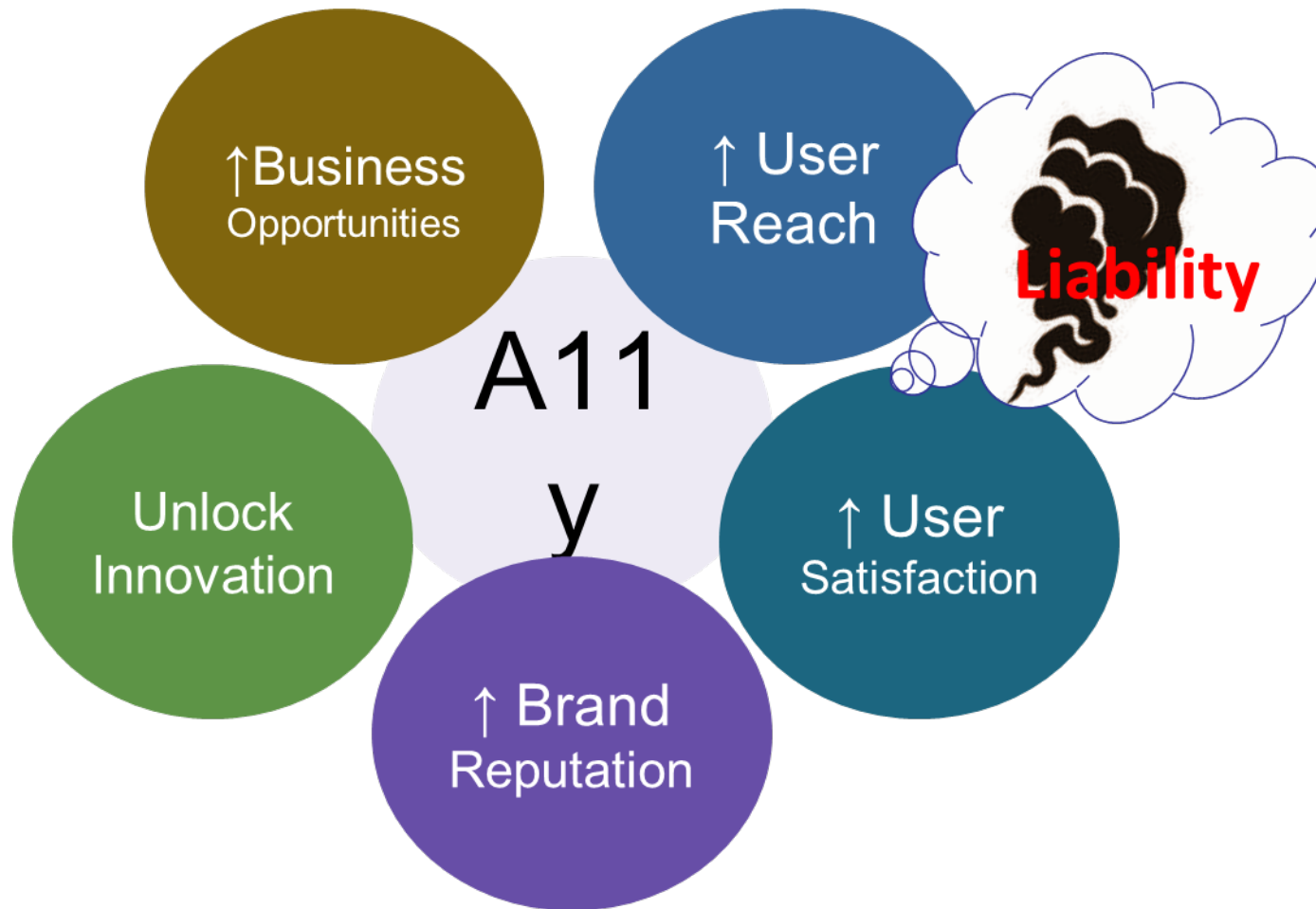
A11y: Digital Accessibility

video credit: AbilityNet

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Agenda

- Introduction: capacity building in accessible product development

- **Business justification for building capacity in accessibility**

- **Key challenges**

- **What are the skills?**

- **Who does the work? (building and acquiring expertise)**

- **When do we call it done? (Accessibility criteria)**

- **Closing Discussion**

Business Case: Why invest in A11y?

A11y

- ↑Business Opportunities
- ↑ User Reach
- Liability
- Unlock Innovation
- ↑ User Satisfaction
- ↑ Brand Reputation

Capacity Building with Digital Product Teams

Core Competencies in Accessibility: Theory, Practice, Inclusive Design

Theory

    Core competency 1: Accessibility Regulations and Standards

    Core Competency 2: Content Accessibility Guidelines (WCAG)

    Core Competency 3: Documentation and Accessibility Guidelines

    Resource List

Practice

    Core Competency 4: Continuous Accessibility Monitoring

    Core Competency 5: Assistive Technologies

    Core Competency 6: Collaboration with Accessibility Experts

    Core Competency 7: Staying Current with Accessibility Training and Awareness

    Resource List

Inclusive Design

    Core Competency 8: Inclusive Design Principles

    Core Competency 9: User Research and Testing

    Core Competency 10: Collecting and Documenting Case Studies and Best Practices

    Resource list

Assistive Technologies: a place to start

Whose Job Is It Anyway?

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Implementation

1. Require developers to become familiar with and use accessible widget libraries, accessibility APIs and Frameworks.

2. Require designers to clearly document different pages and views, along with the variable states those pages and views allow, and require developers to turn pages and views back to designers if the designs are not compatible with assistive technologies.

3. Require testers to incrementally test pages and views as they are built, covering testing areas such as use with variable input and output modalities, text alternatives for non-text content, keyboard accessibility, color contrast, resizable text, accessible forms, and clear navigation.

Four Pillar Requirements

- **Interactive elements**: Any element that accepts user input on the page or app view is fully accessible to all **input devices** and accessible technologies.

- **Perceptible/viewable elements**: Any readable/viewable/audible/text content element on the page or app view is fully accessible to all **output devices** and accessible technologies

- **Document Structure**: The overall view or page content is structured in a hierarchical manner offering similar **navigation experience and content ordering** for all output devices and accessible technologies

- **Document Styling**: Any styling or responsive design elements display appropriately on **variable screens and devices**

Development Tools of the Trade

- [Development Tools for Web Content and Web Application Development](#)

- [Testing Tools for Web Content and Web Application Development](#)

- [Development Tools for Mobile App Development](#)

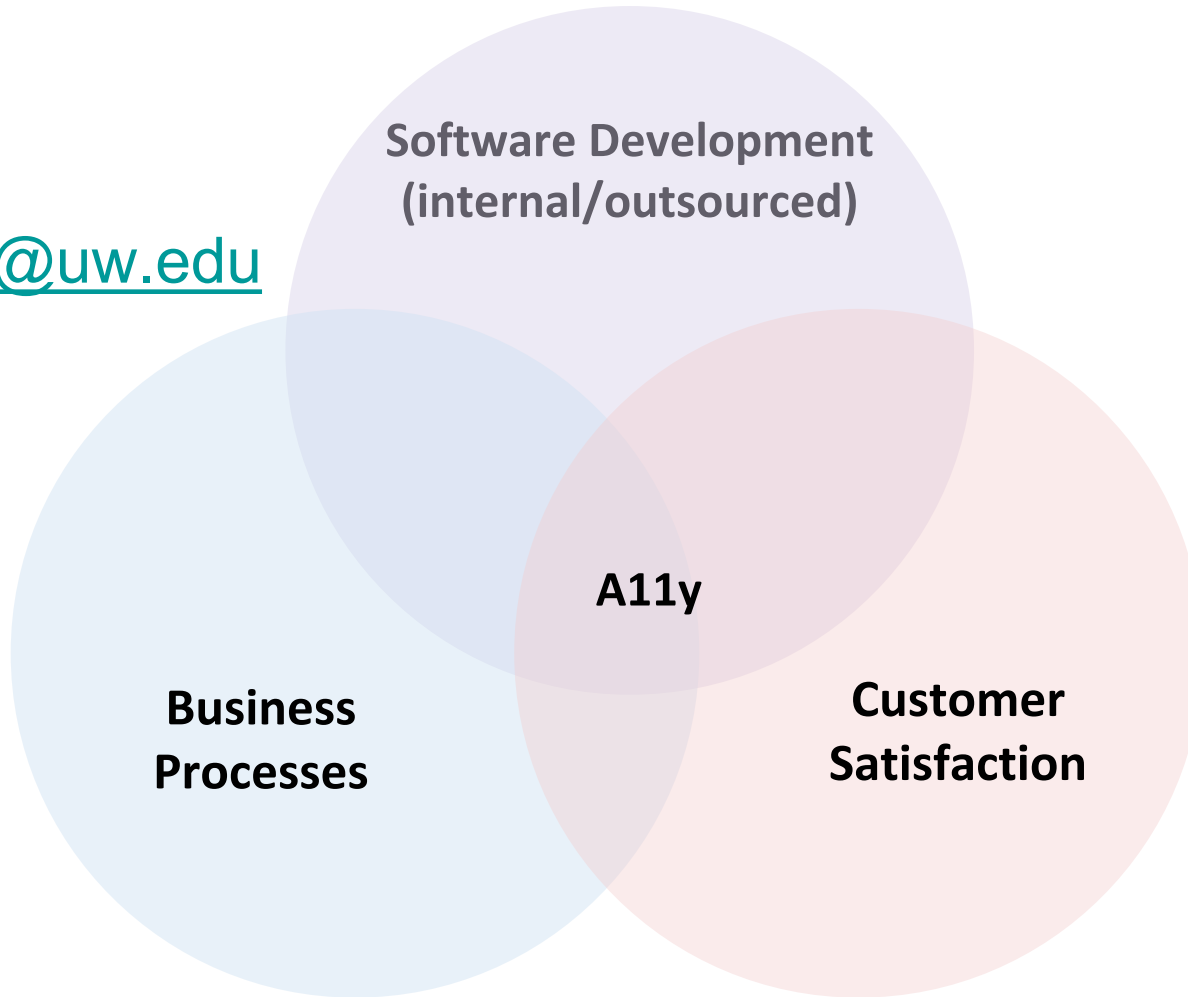- [Testing Tools for Mobile App Development](#)

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The List

Example:

- Interactive Elements Pillar Requirement: Any element that accepts user input in any given state of the page or app view is fully accessible to all **input devices** and accessible technologies.

    - ACT rule: 7677a9 [Device motion based changes to the content can also be created from the user interface](#) (Level A)

        - [2.5.4 Motion Actuation (Level A)](#)

    - ACT rule: c249d5 [Device motion based changes to the content can be disabled](#) (level A)

        - [2.5.4 Motion Actuation (Level A)](#)

    - ACT rule: 80af7b [Focusable element has no keyboard trap](#) (Level A)

        - [2.1.2 No Keyboard Trap (Level A)](#)

        - [WCAG Non-Interference](#)

        - [G21: Ensuring That Users Are Not Trapped In Content](#)

    - ACT rule: ffbc54 [No keyboard shortcut uses only printable characters](#) (Level A)

        - [2.1.4 Character Key Shortcuts (Level A)](#)

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Questions? Want more information?

uwtcat@uw.edu

Software Development
(internal/outsourced)

A11y

Business
Processes

Customer
Satisfaction

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Stay Connected

For more information please contact:

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Visit ITS4US Deployment Program Website and FAQs:
https://its.dot.gov/its4us/
https://www.its.dot.gov/its4us/its4us_faq.htm