Connected Health:
The Smarter Way to Age In Place

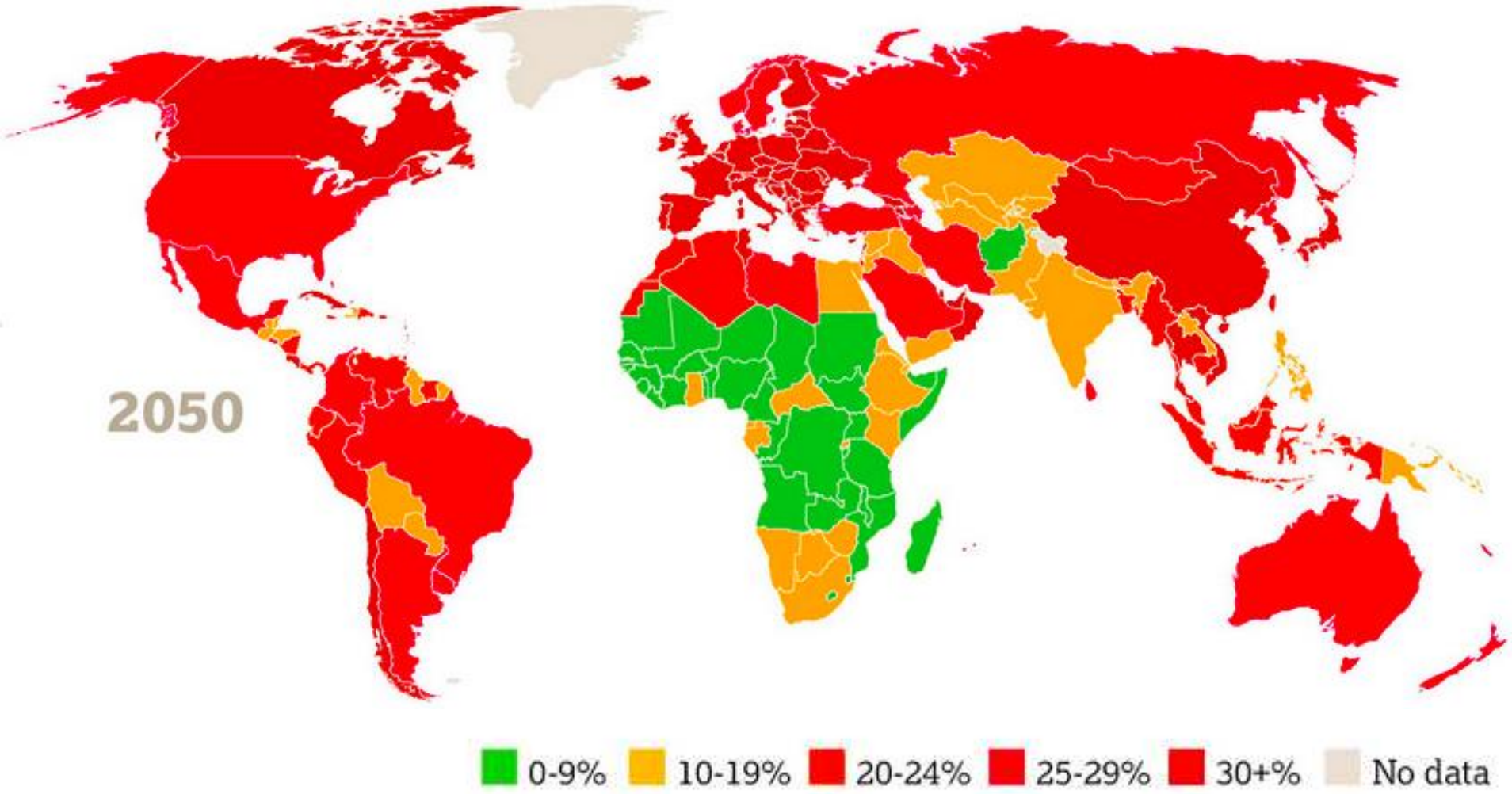
Shaun Owens

College of Social Work

SmartHOME Center for Economic Excellence

University of South Carolina

Our aging society



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Aging-in-Place
Health Decision Making
Human-Robot Interaction
USC SmartHOME
Management of Chronic Disease
Technology Acceptance
Health Communications
Tele-Health

Healthy Aging Research and Technology (HART) Lab

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Our mission is to become a leader in **community-driven, transdisciplinary** research towards the development of **innovative technologies** for health communication, health decision making, health management, and healthy aging. The laboratory emphasizes both home and clinical translation of it's end products.

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Healthy Aging Research and Technology (HART) Lab

Video Diary: A Video Ethnographic Approach to Assessments for Successful Aging in Place

Embodied Conversational Agents for Health Education

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Healthy Aging Research and Technology (HART) Lab

Video Diary: A Video Ethnographic Approach to Assessments for Successful Aging in Place

Key Findings

Video Diary is an effective means of studying aging in place, but training should be more intensive.

Older African-Americans have a number of health concerns that prohibit their ability to age in place indefinitely.

Most older African-Americans are open to using technology if they understand the added value and training is available.

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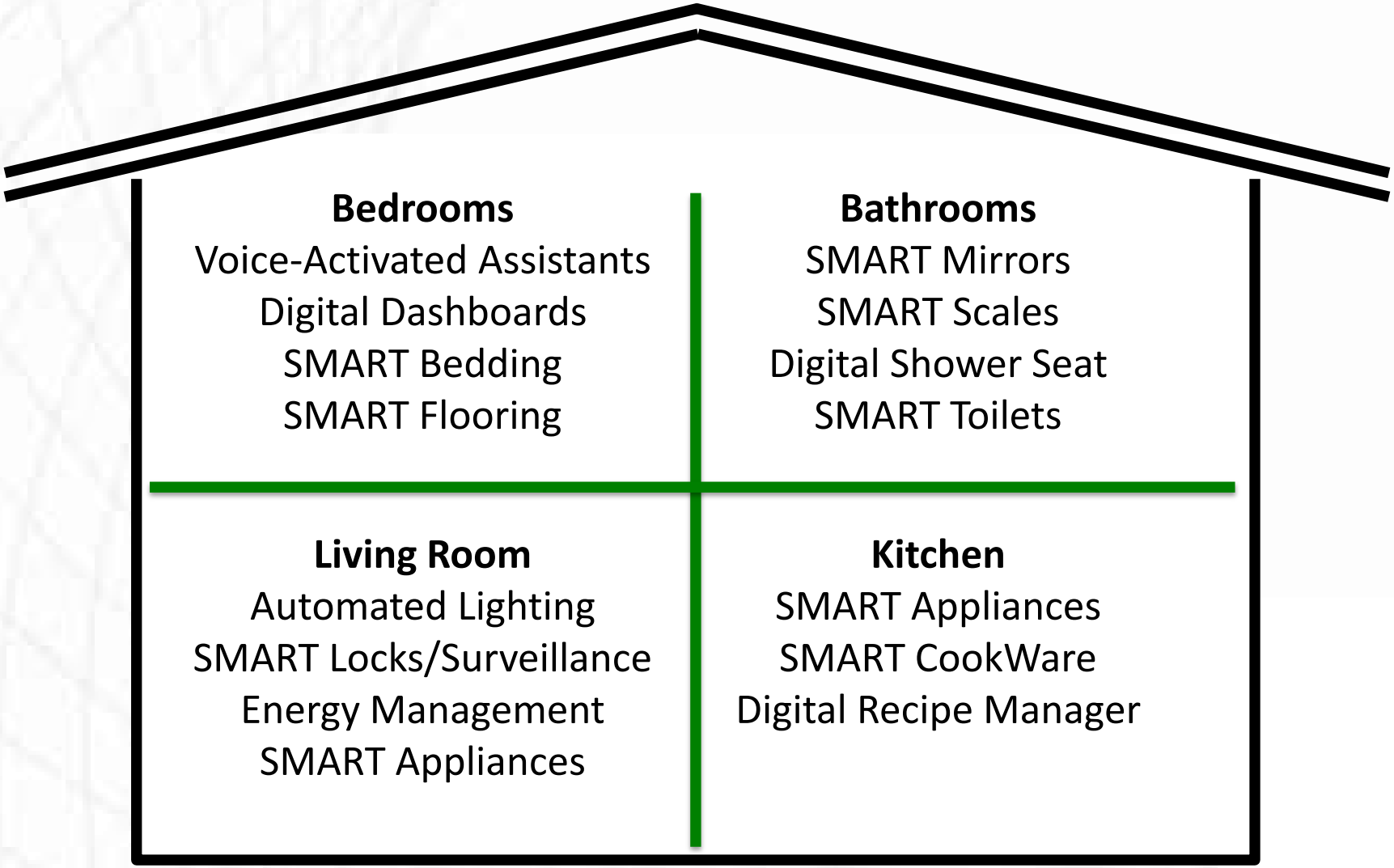
Connected Smart Home Technology



Connected Smart Home Technology

Bedroom

Connected Smart Home Technology

Living Room

Connected Smart Home Technology

Bathroom

Connected Smart Home Technology

Kitchen

SMARTHOMES for the Aging

Fall Prevention & Detection

Remote Health Monitoring/Diagnosis

Medication Management

Home Maintenance & Management

Accessibility

Safety & Surveillance

Social Connectedness

Fall Detection (Example)

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Fall Detection (Example)

SensFloor by FutureShape

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Health Monitoring (Example)

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Health Monitoring (Example)

Scanadu

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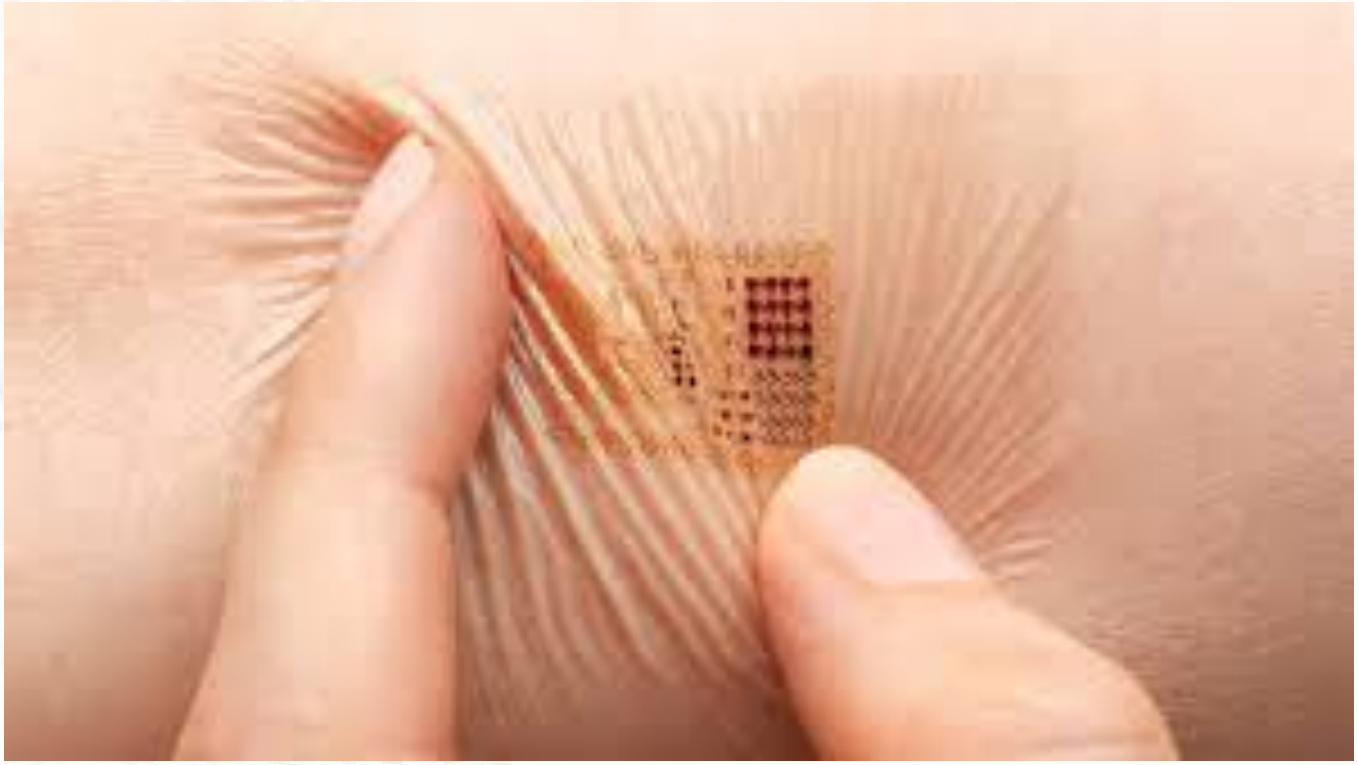
Health Monitoring/Diagnosis (Example)

MC10



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A Connected Health Scenerio

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Scenario: Ms. Clayton

Marie Clayton
Age: 67
Employment: Retired Florist
Marriage Status: Widowed
Lives Alone
Other: Avid gardener, has a chronic illness that limits mobility and causes periodic seizures

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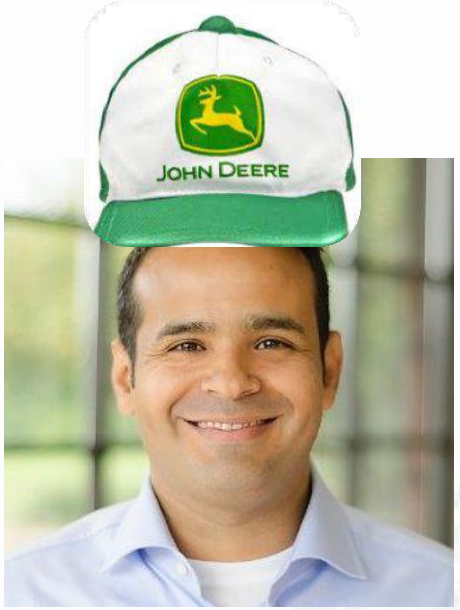
JOHN DEERE

SMART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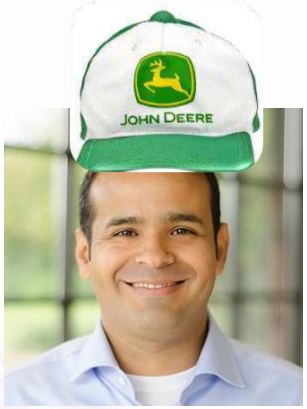
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JOHN DEERE

How do we get there?

- More products that adopt a universal language (compatibility)
- Community and Driven Design
- Enhancing marketing and education efforts about these products and how they can benefit the individual and relevant stakeholders
- **Assess opportunities for limiting cost to the consumer**
- Evaluate the infrastructure for supporting a given product in targeted communities
- Consider policy changes that are critical to support your innovation

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Building an Affordable SmartHOME for Older Adults

SC UpLift was established as a nonprofit corporation in South Carolina in February 2008 and operates as a tax-exempt community and affordable housing organization in South Carolina.

Mission: to provide quality affordable housing for low to moderate income residents

SC UPLIFT COMMUNITY OUTREACH

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Building an Affordable SmartHOME for Older Adults

Project Goal: To build a universally designed, affordable SmartHOME to enable an older adult to age in place.

My Role: To use the latest research in aging and technology in conjunction with standard aging in place design practices to inform home design.

Partners: Palmetto Health (healthcare technology), Richland County Community Development (funding), AARP (funding).

SC UPLIFT COMMUNITY OUTREACH

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Building an Affordable SmartHOME for Older Adults

Fall Prevention

Remote Health Monitoring

Accessibility

Safety & Surveillance

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Fall Prevention (Example)

Anti-slip flooring

Fall protective flooring

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Accessibility

No-step entry

Wide Doorways

Roll in Shower

Pull-Down Cabinets

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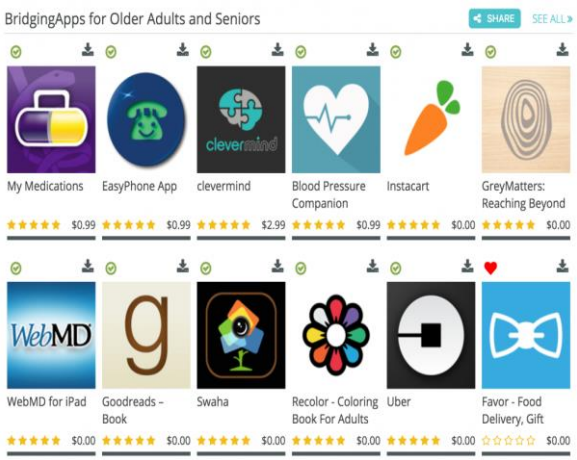
Remote Health Monitoring (TeleHealth)

Health Monitoring

Education



Access to other services

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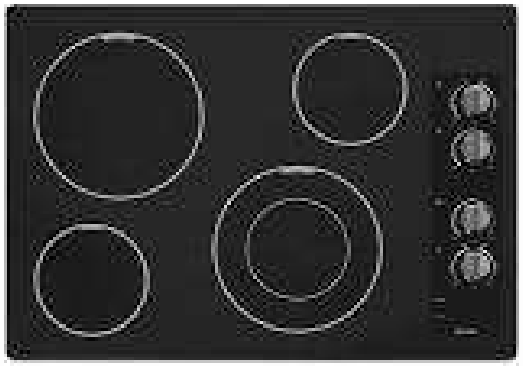
Safety and Security

Home Security and Automation



Kitchen Safety

Energy Efficiency

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SC Uplift Legacy Home

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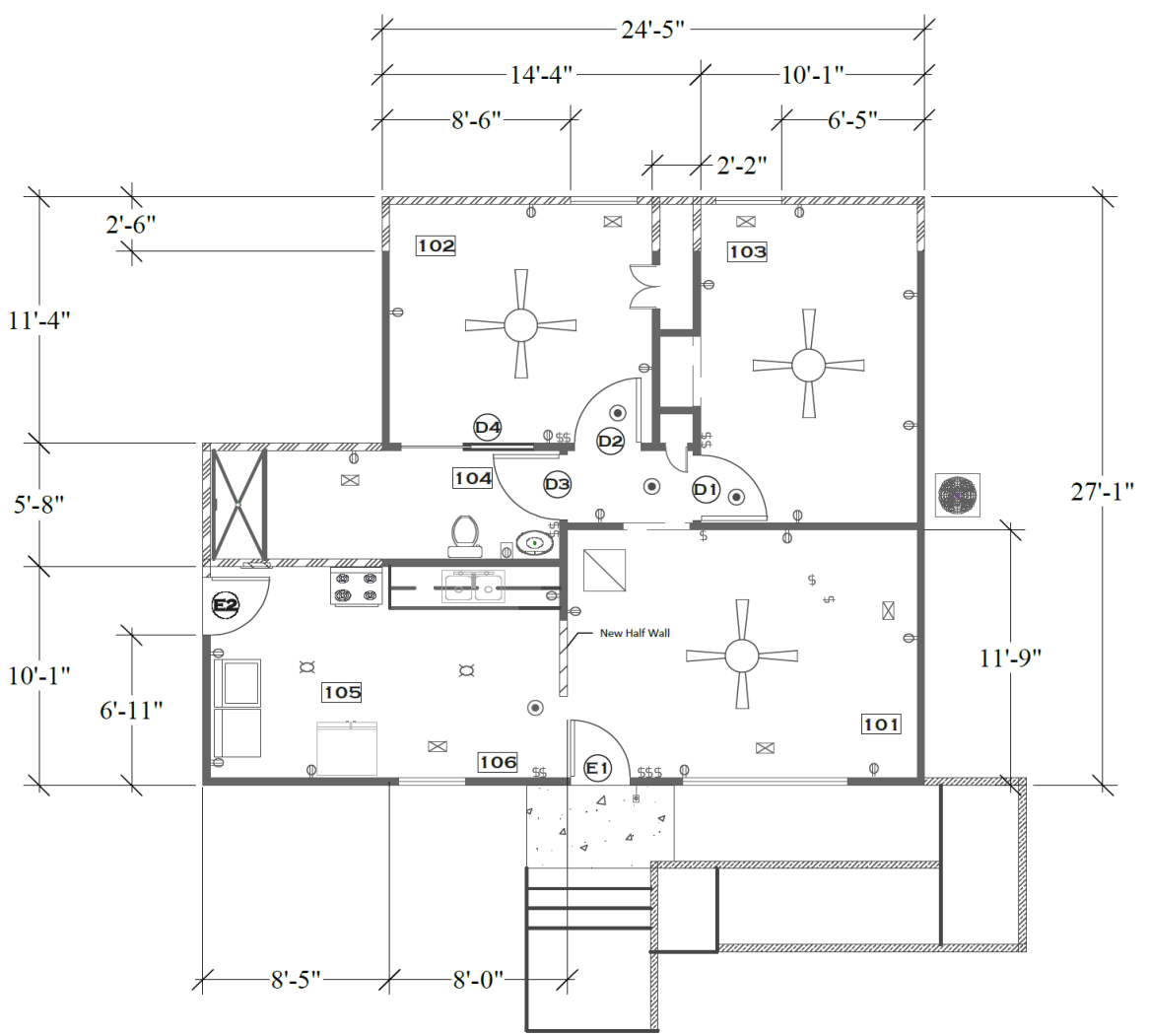

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I want to do this type of work! How do I get started?

- **Join a Coalition** (e.g., SC Aging in Place Coalition, Universal Design Coalition of Columbia)

- **Volunteer with an aging-focused community development cooperation**

- **Get Certified**

❖ Certified Aging in Place Specialist
  - Three course sequence over three days
  - Exams following each course
  - Certification renewal each year
  - Continuing education requirements

❖ Certified Environmental Access Consultants
  - Pre-requirements for this course
  - Online course modules
  - 125-item exam
  - Continuing education requirements

- **Network, Network, Network**

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Questions

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