Introduction to Standards and Standards Academy

Future City Fellowship

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Agenda

1. Welcome and Introduction
2. Setting the stage
3. Standards 101
   - What are safety standards and why are they important?
   - How are safety standards developed?
4. Mini Check – Q&A
5. Standards Academy Website
6. How to consider standards for your project
7. Q&A

What is safety?

Welcome and Intros

- Name
- School
- Major
- Meet the ULRI / ULSE Team

Have you ever used one of these?

There’s a safety standard for that!

Do you or your family have a drawer or box like this?

Electronic waste

There’s a safety standard for that!

You may not realize it, but there are codes, regulations, safety standards, and protocols for many things that we take for granted.

Standards 101

What are Standards and *Why* are they Important?

Caitlin D’Onofrio & Leslie Malaki
March 24, 2026

Over **1,700** standards and documents published

400 technical committees with over **4,000** technical members

100+ dedicated staff located in 8 countries


Standards enable
innovation to thrive.
Standards &
Engagement

Why Do We Do What We Do?

1. Our standards provide **requirements** to ensure the **safety and sustainability** of a wide range of products.
2. Safety requirements for products address the construction, safe performance during operation and **required safety markings and instructions**.
3. Sustainability requirements address the **life-cycle of products, their manufacture, use and end-of-service environmental impacts**.
4. UL Standards & Engagement is an **accredited** Standards Developer in the **US, Canada, and Mexico**. Our standards also are incorporated into international standards, including **IEC and ISO Standards**.

UL Research Institutes

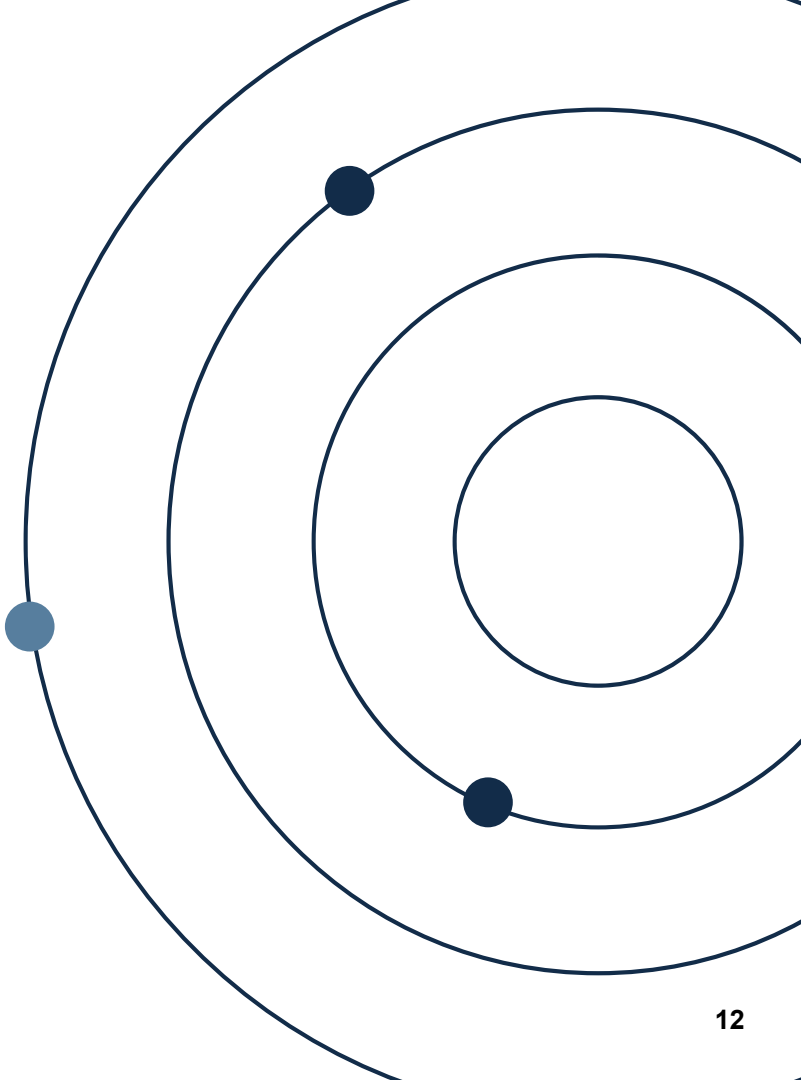
UL Standards & Engagement

Why are Standards Important?
Real-life Case Studies

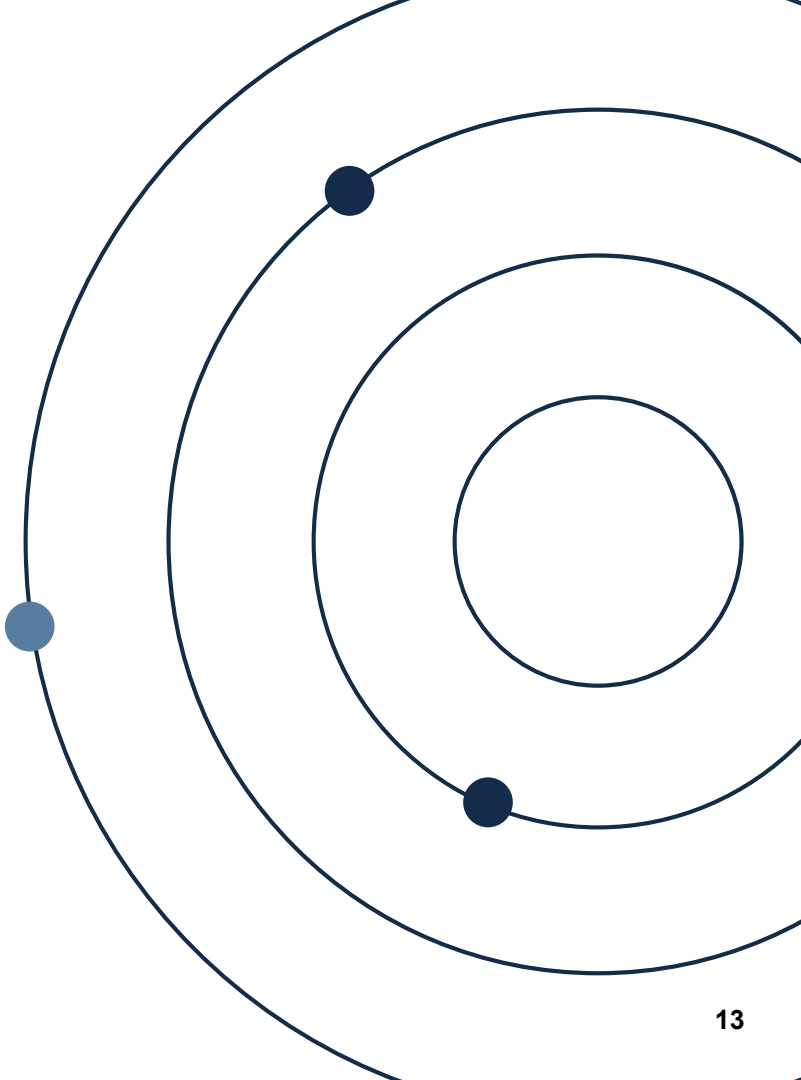
- Imperial Sugar Refinery Explosion
  - 2008 Feb explosion at a sugar refinery due to sugar dust build up in an enclosed area with over-heated conveyor belt
  - **UL 1203** *Standard for Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations*

- Reese's Law
  - 16 month-old baby Reese accidentally swallowed a cell battery from a TV remote control
  - **UL 4200A** *Standard for Safety for Products Incorporating Button Batteries or Coin Cell Batteries*

- Greenwashing
  - Environmental stewardship without data or facts?
  - **UL 3600** *Measuring and Reporting Circular Economy Aspects of Products, Sites and Organizations*



ULSE Standards Development Process



How Standards are Developed

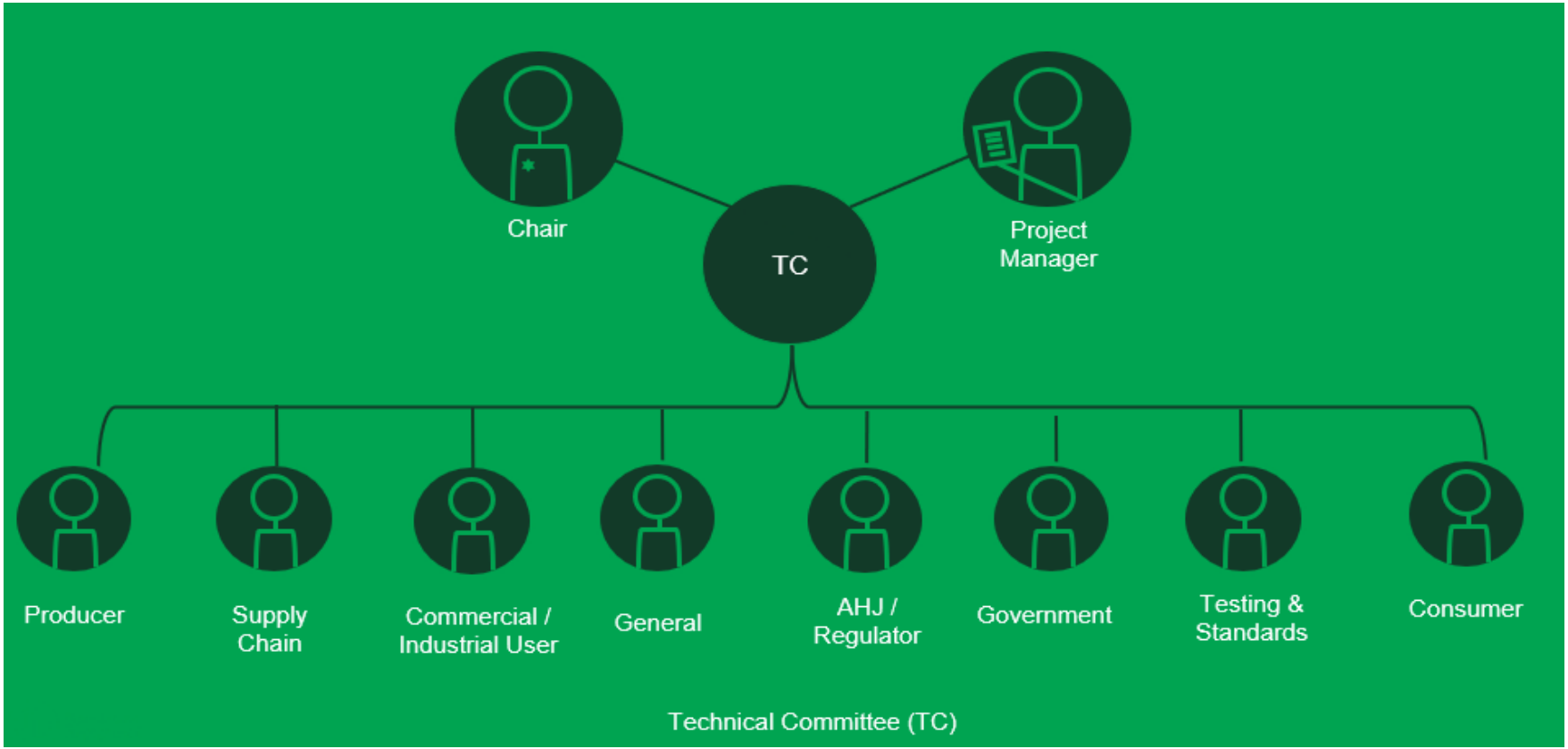
Proposal submitted via our Collaborative Standards Development System (CSDS)

Proposal undergoes review and refinement by the Technical Committee (TC)

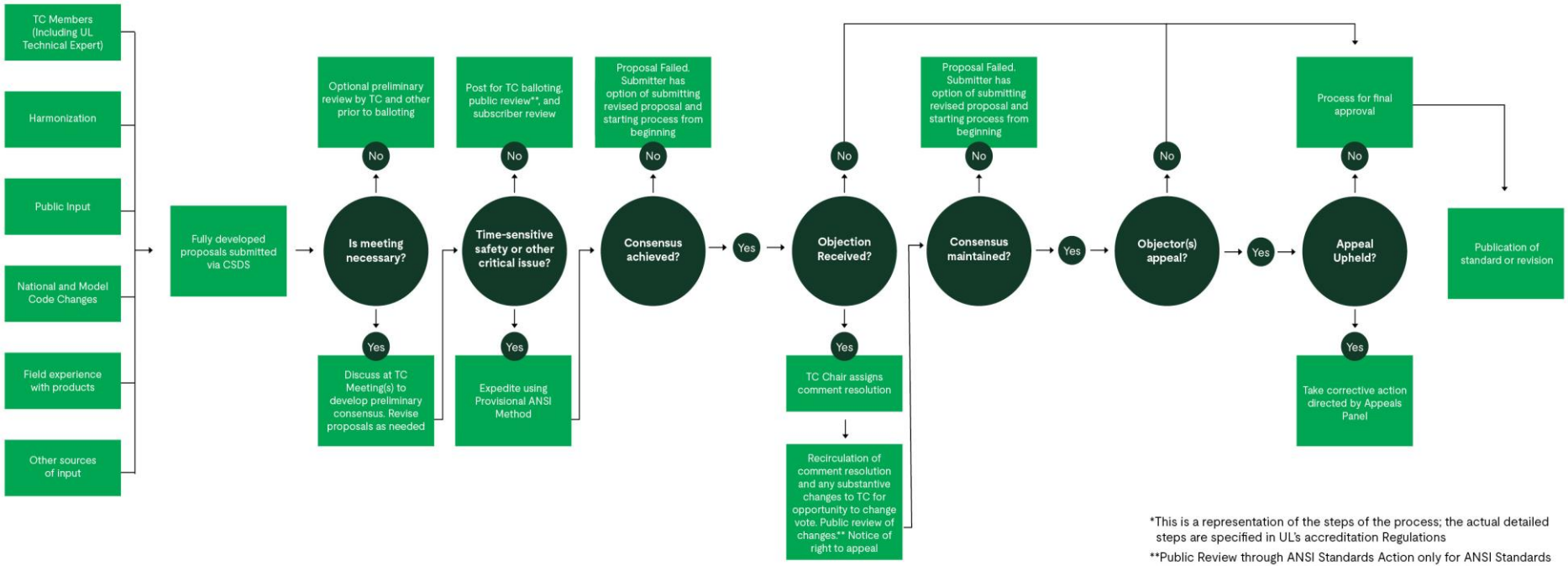
Consensus among TC members determines adoption or rejection of proposed standard

Successful proposal results in new/revised standard that is published for global stakeholders

UL Standards Technical Committee (TC)



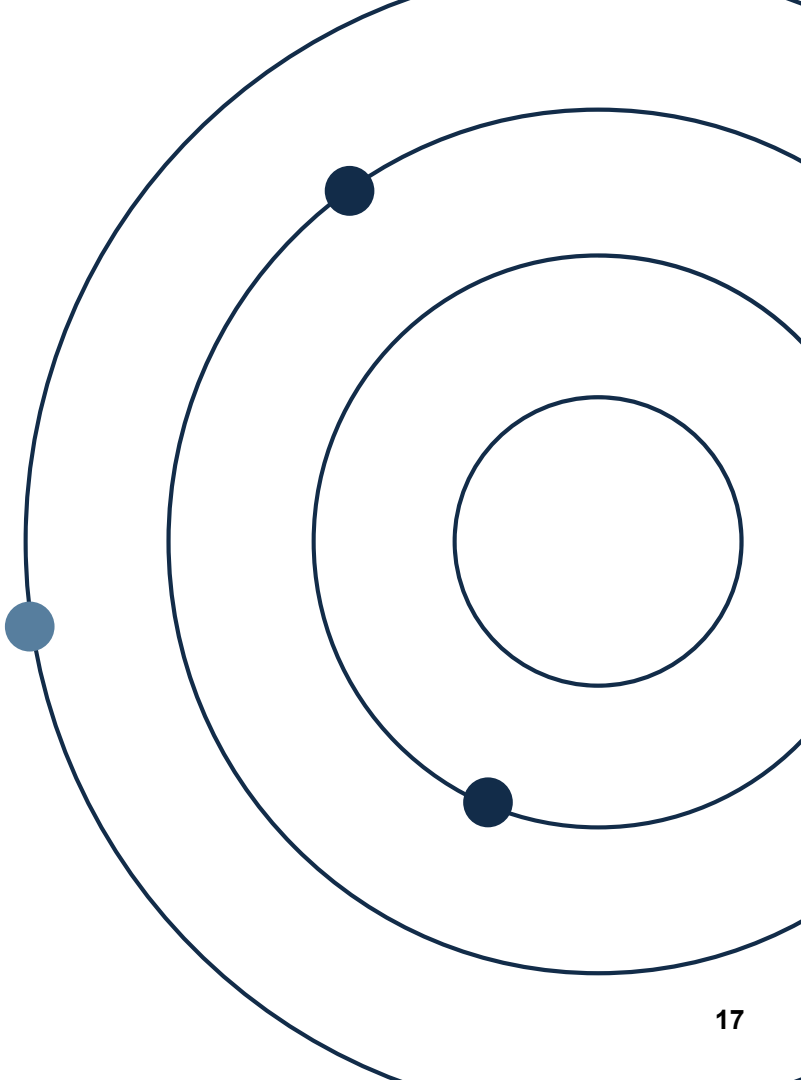
Standards Development Process Pathways

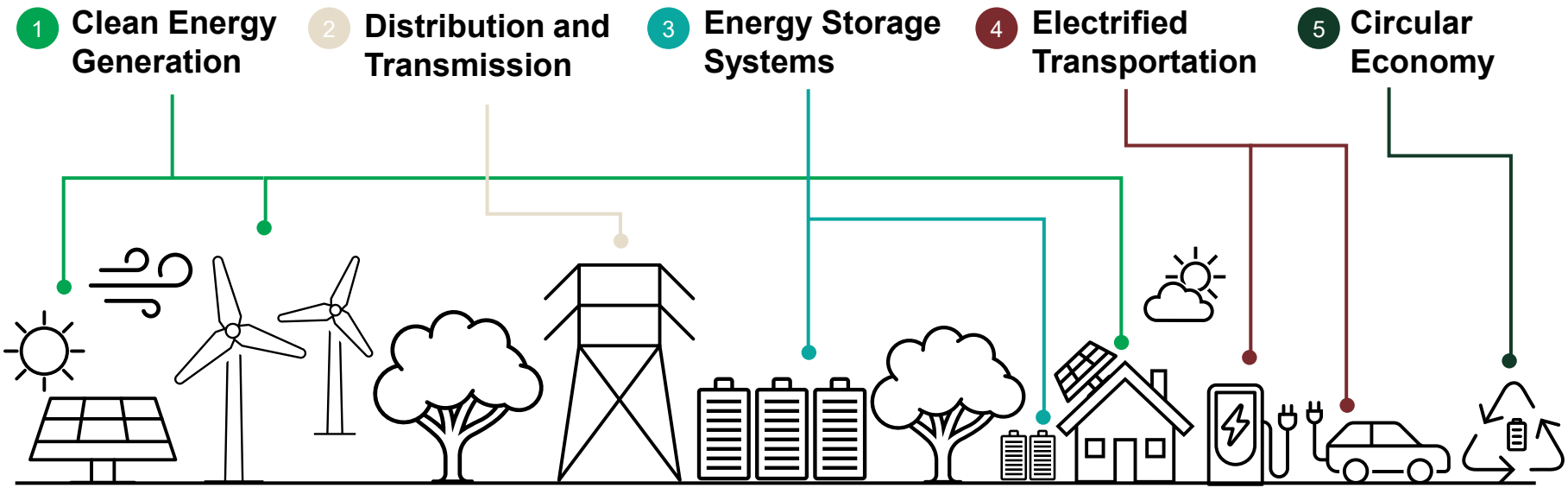


*This is a representation of the steps of the process; the actual detailed steps are specified in UL's accreditation Regulations

**Public Review through ANSI Standards Action only for ANSI Standards

ULSE Standards Example – Clean Energy Value Chain





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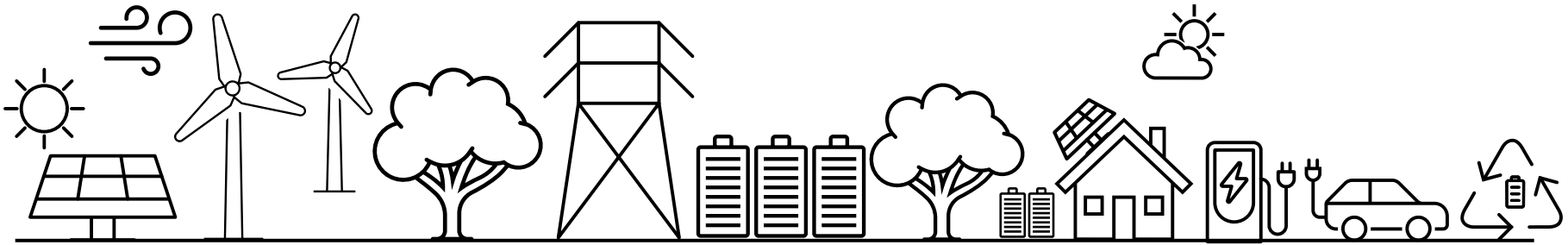

1 Clean Energy Generation

Solar Photovoltaic
- UL 3703
- UL 3730
- UL 3741
- UL 4730
- UL 61215 Series
- UL 61724 Series
- UL 62093
- UL 62109 Series

Wind
- UL 4143
- UL 6141
- UL 6142
- UL 6143

2 Distribution and Transmission

Energy Interconnection
- UL 1741
- UL 3001
- UL 3005
- UL 3010

3 Energy Storage Systems

Storage and Batteries
- UL 9540
- UL 9540A
- UL 1973

4 Electrified Transportation

EV Batteries
- UL 2271
- UL 2580
- UL 2596

EV Charging Systems
- UL 2202
- UL 2231-1 & 2
- UL 2251
- UL 2594
- UL 2750
- UL 2871
- UL 9741

Personal E-Mobility
- UL 2272

5 Circular Economy

Battery Repurposing
- UL 1974
- UL 3601

Resource Links

Standards Development

- Get Involved in a Technical Committee | UL Standards & Engagement
- UL/ULC Standards Accreditation Manual
- CSDS – Dashboard
- ANSI Standards Action
- Notices of Intent | Standards Council of Canada
- Digital View (free) UL Standards Online | UL Standards & Engagement

Codes & Other

- NFPA- Codes and Standards Help Protect Lives and Property
- The Proposed NFPA 800, Battery Safety Code
- Canada - 2025 National Model Codes now available
- The Relationship Between Codes and Standards - UL Standards & Engagement
- ICC - United States
- Insights & Data | UL Standards & Engagement

Questions?

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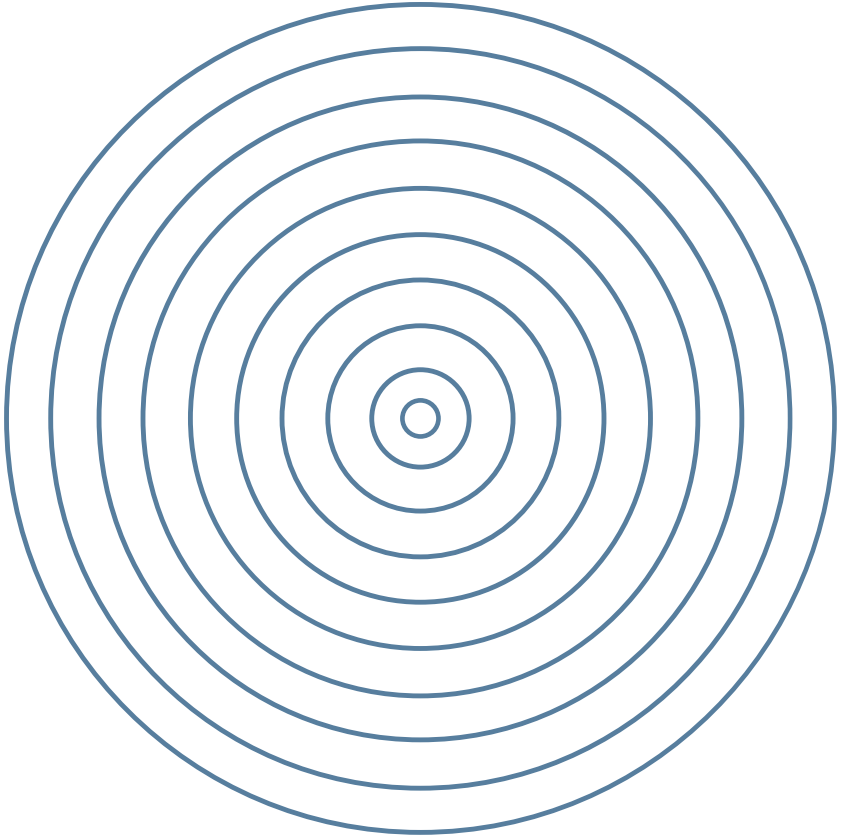
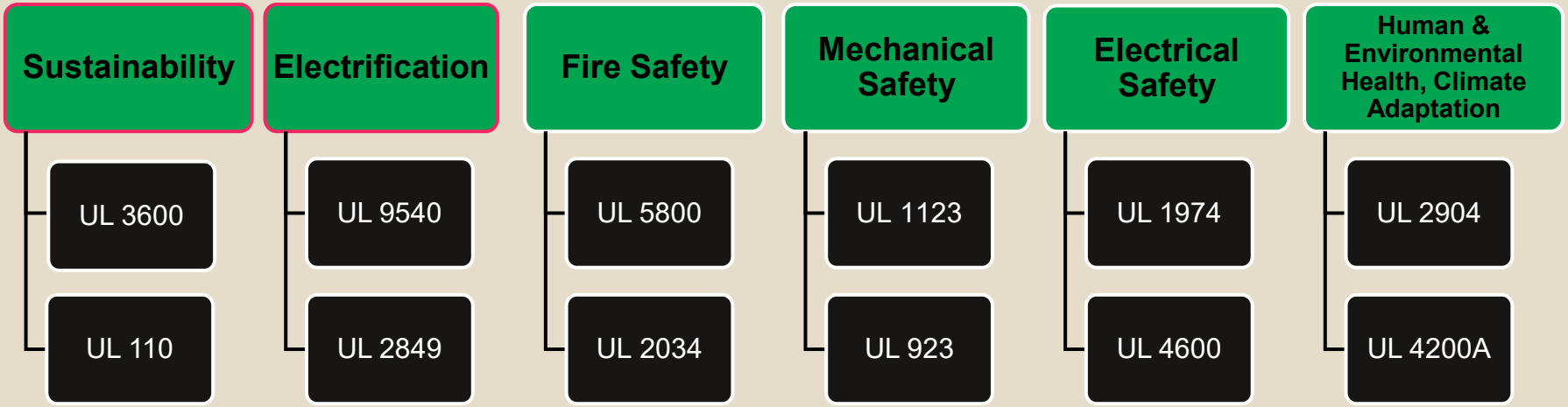
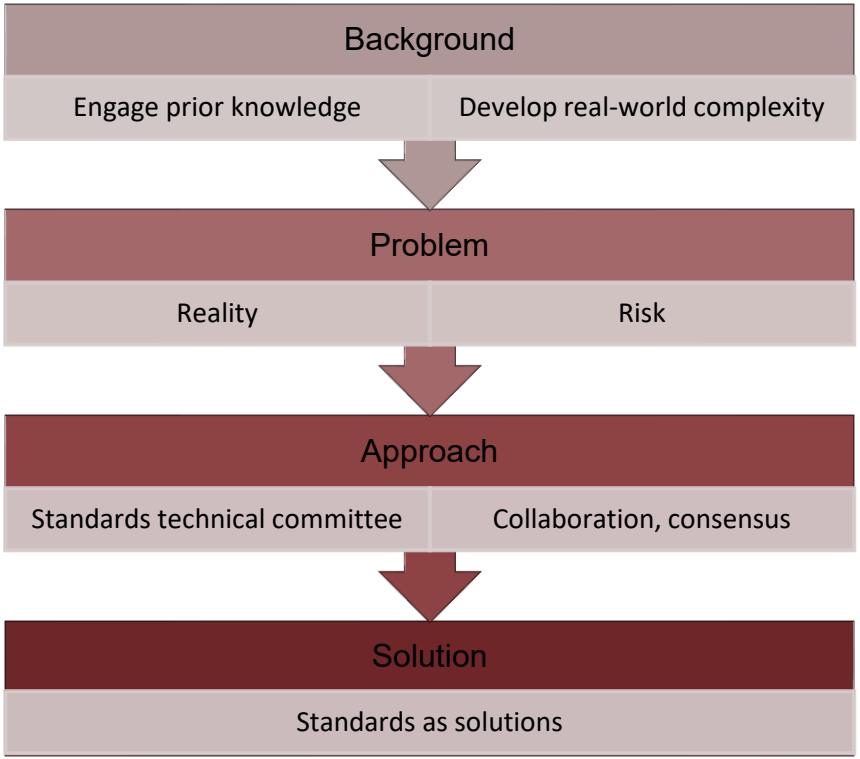
What is the Standards Academy?



Standards Academy Case Studies | UL Safety Science Ecosystem Themes

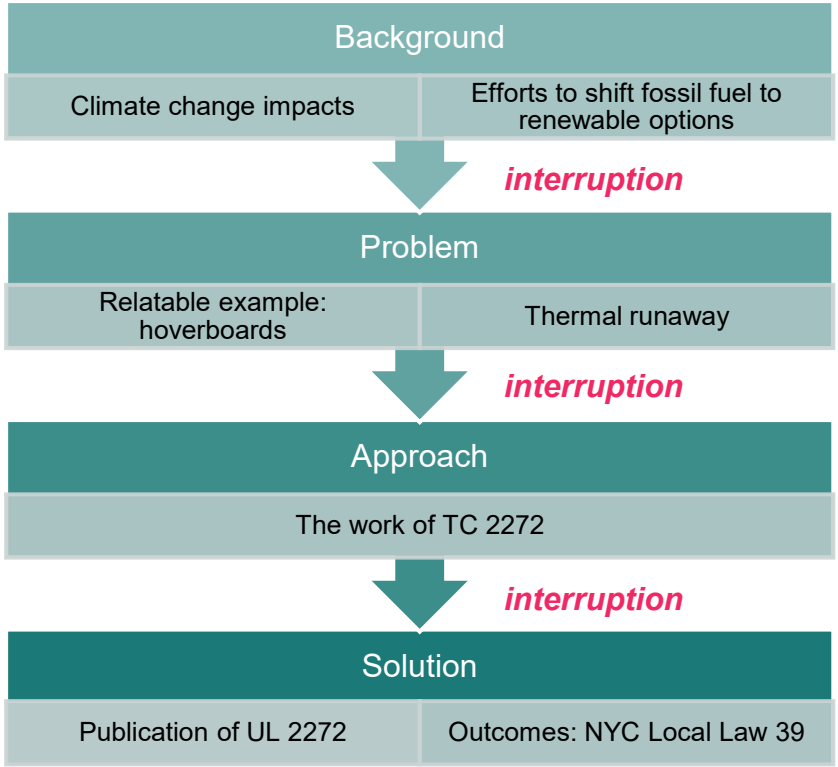


Structure & Story



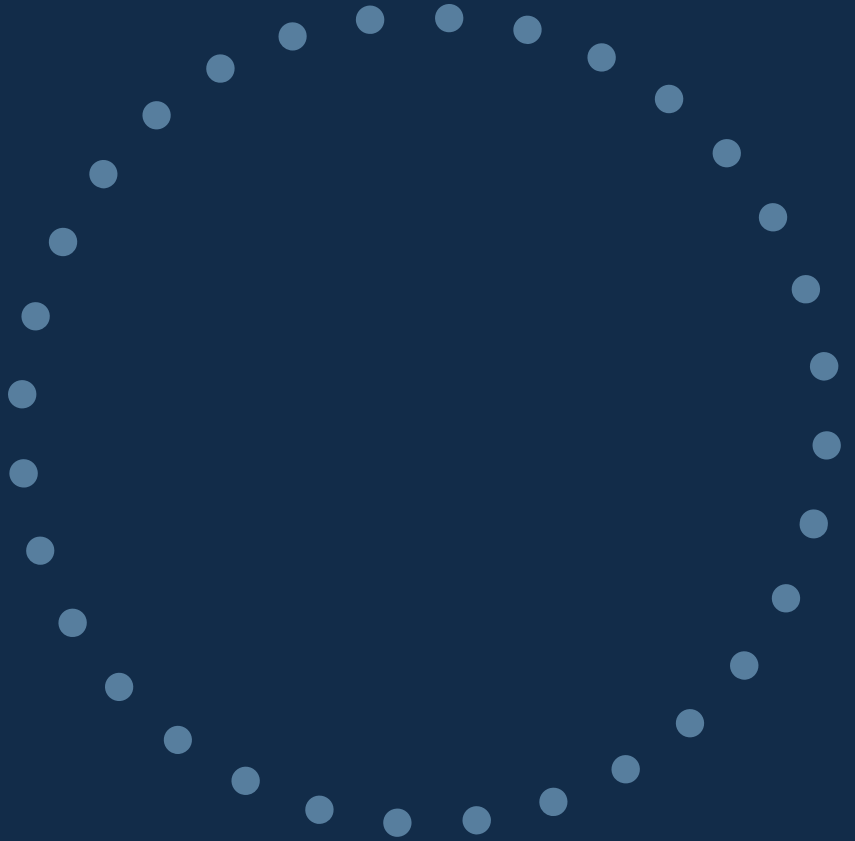
Example:

Case Study for UL 2272 - Micro Mobility, Major Problems — Addressing Safety Challenges in the Clean Energy Transition

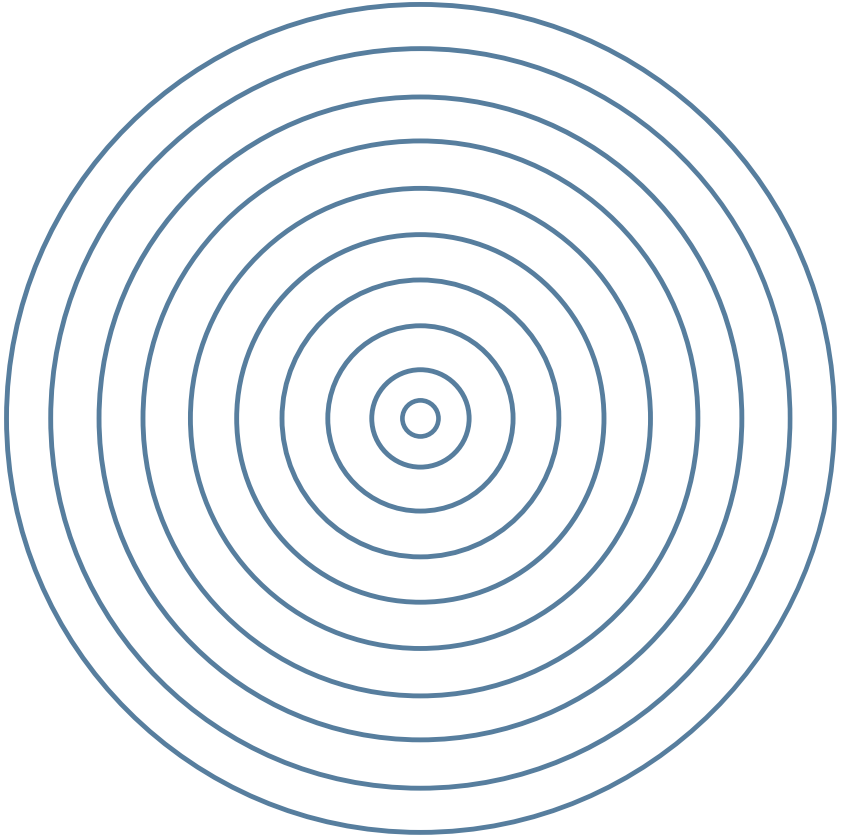


Introducing Standards Academy

www.standardsacademy.org



How do standards apply to the Future City Fellowship?



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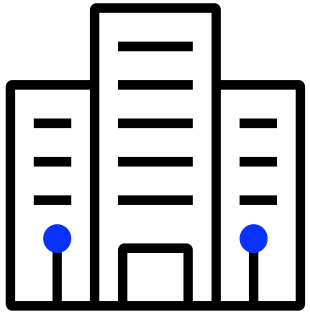
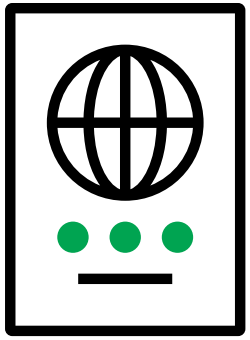
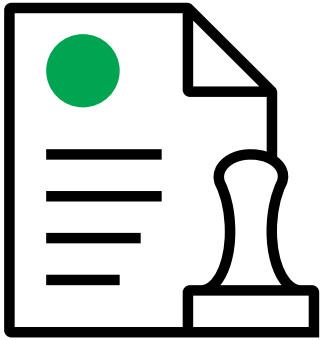


You will connect standards to your city clients' needs.



Use at least <u>two standards</u> to justify your design decisions. Consider circularity standards, sustainability standards, and safety standards.

Browse: https://ulse.org/focus-areas/
https://standardsacademy.org/
https://www.shopulstandards.com/



"Propose" a new standard for a product or system that would ensure the safety and sustainability of your design.

Include scope, definitions, tests, and certification thresholds.

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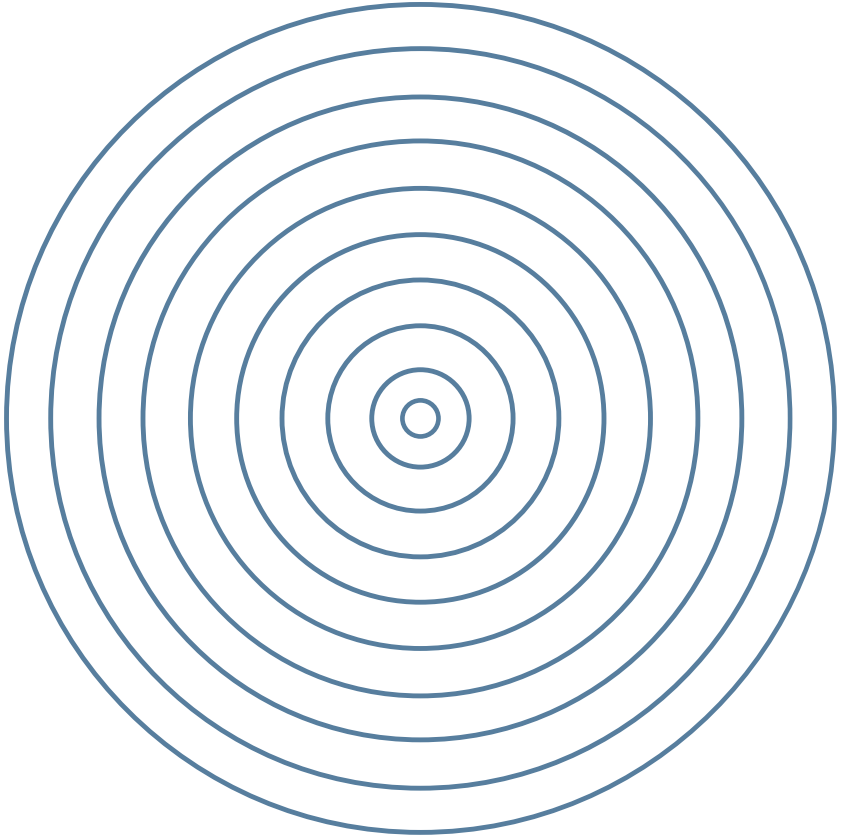
Questions?



Firstname Lastname
Title

Thank you.