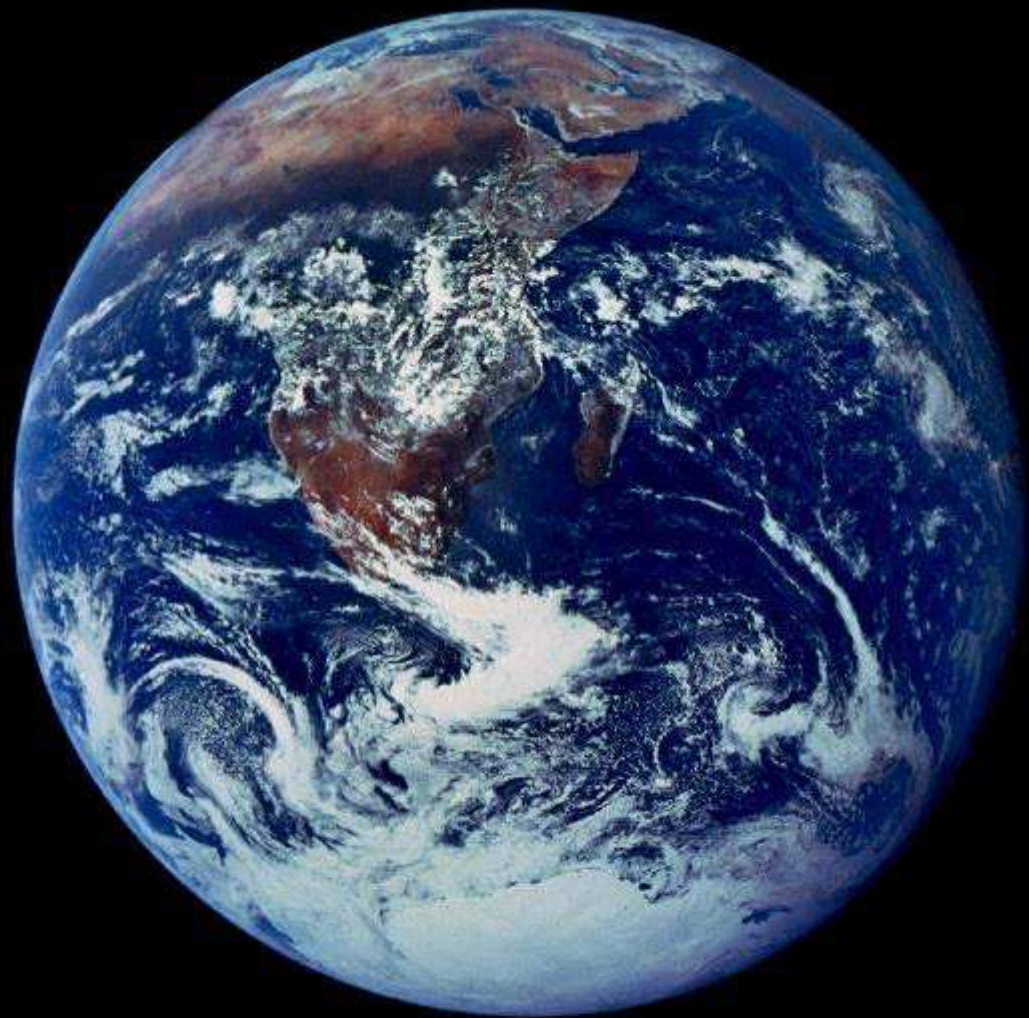
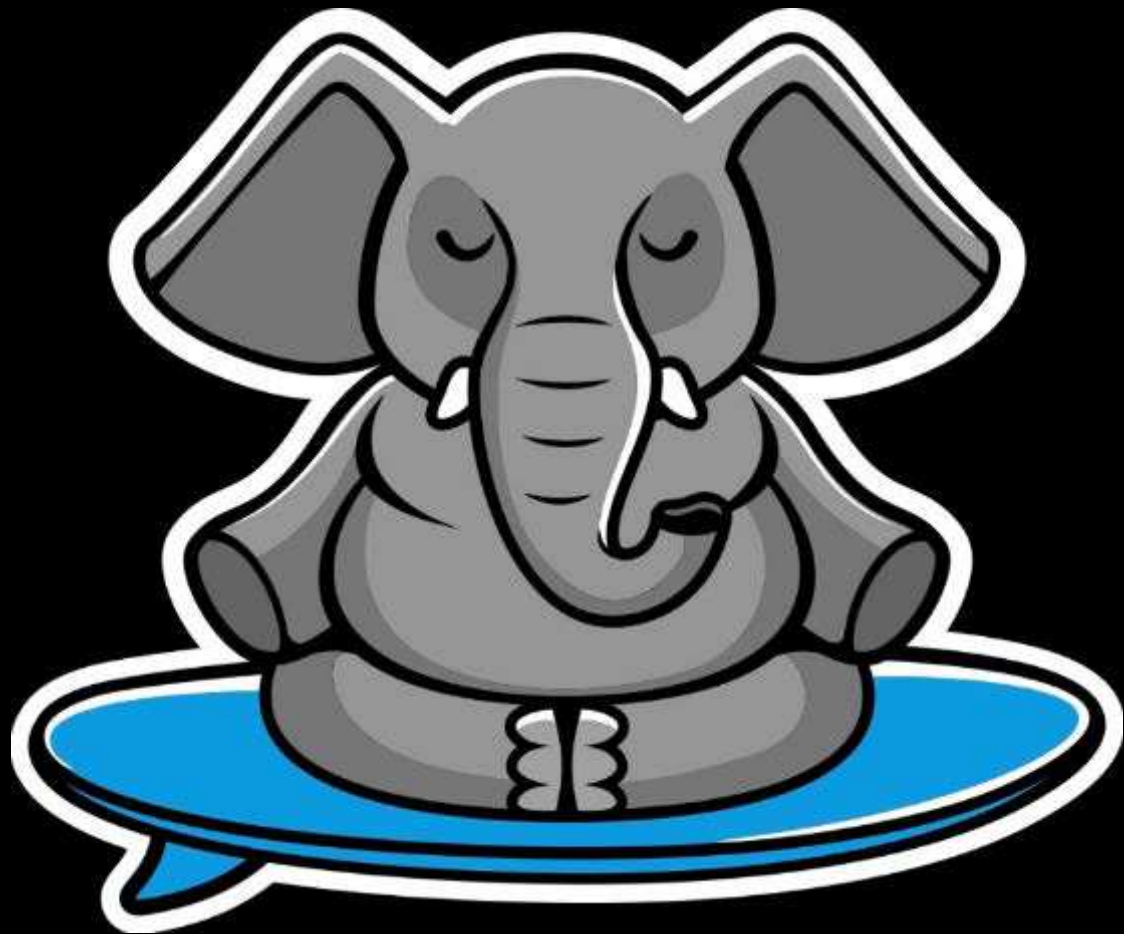


Shaping the Future of Energy

Shuli Goodman,
Executive Director,
Linux Foundation Energy

 **LF**ENERGY





Ohm's Law meets Moore's Law







WE NEED TO LEVERAGE THE SAME
DESIGN PRINCIPLES THAT WE USED TO
SCALE THE INTERNET

1999

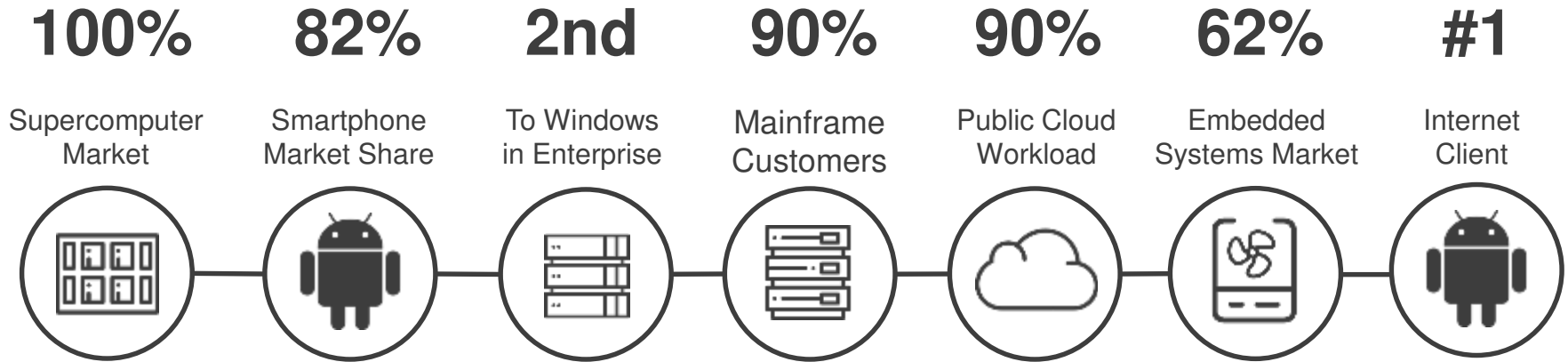
2039

 **OLF**ENERGY

Creating the world's largest shared
technology investment

 THE **LINUX** FOUNDATION

The Linux Kernel is the Most Important Software Platform in the World



Linux eventually dominates every market it enters

The Linux Foundation is a Critical Part of the Tech Ecosystem

1320+

Members From
41 Countries



100%

of Fortune 100
Tech & Telecom



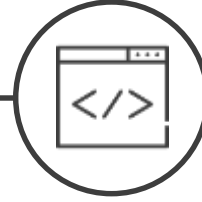
30,000+

Developers
Contributing Code



150+

Open Source
Projects



\$15.7B

Shared
Value



A new member joins the Linux Foundation every day

Today the Linux Foundation is much more than Linux...

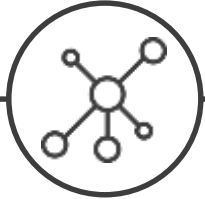
Security



Securing the internet as home to world's largest certificate authority - **securing 100M web sites.**



Networking



Home to 9 of the top 10 open source networking projects in the world backed by **70% of global network providers.**



Cloud



Creating a portability layer, driving standards and reference tools for cloud development for **100% of cloud infrastructure companies.**



kubernetes



Automotive



Automotive Grade Linux is backed by **50% of the world's automakers** and is in or slated for production in millions of vehicles worldwide.



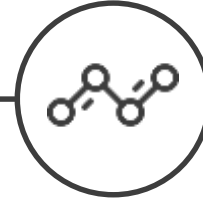
HYPERLEDGER

Blockchain



Creating a permanent, secure distributed ledger that makes it easier to create cost-efficient, decentralized business networks.

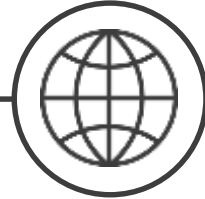
Edge/Embedded



Creating projects used in building the majority of embedded Linux distributions and rationalizing edge computing.



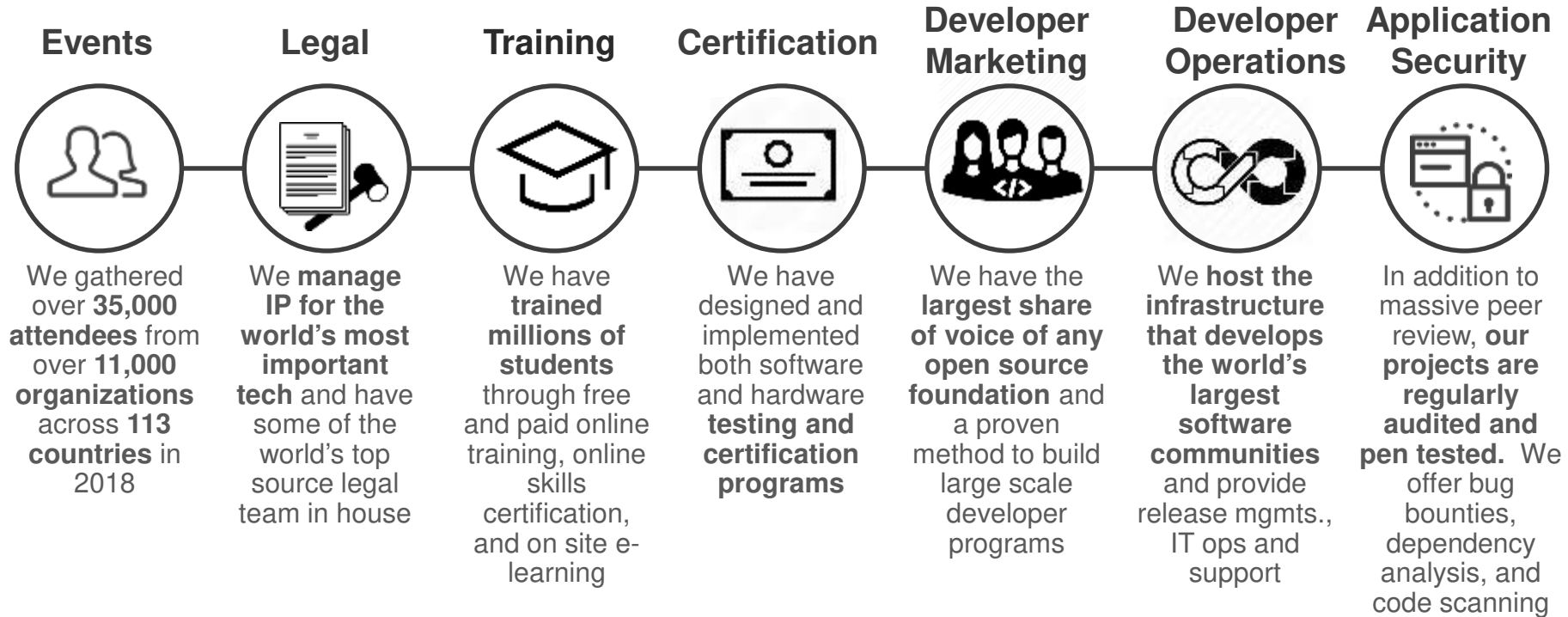
Web



Providing the application development framework for next generation web, mobile, serverless, and IoT applications.



Building Large Sustainable Ecosystems Requires Collective Resources



Linux Foundation Projects



Linux Foundation Ecosystem: 1300+ Companies



Fostering and sustaining an ecosystem
of
open source, vendor-neutral projects



The Mission of the LF Energy Foundation

VISION: the grid of the future is composed of loosely coupled systems that are resilient, manageable, and observable. Combined with robust automation, the digitalization of energy will enable engineers to make high-impact changes frequently and predictably with minimal toil.

- The LF Energy Foundation's mission is to accelerate the energy transition by fostering and sustaining an ecosystem of open source, vendor-neutral projects. We democratize state-of-the-art patterns to make these innovations accessible for everyone.
- LF Energy empowers the energy systems of the world to build and run scalable applications in modern, dynamic environments to transform the grid from purely centralized to distributed.

LF Energy Addresses These Use Cases

CONNECTED ASSETS



Connecting a DER network of networks

Interoperability to facilitate distributed control applications

Decreases the costs and time for systems integration

CONNECTED BUILDINGS



Control & management of energy for buildings

Building control enables managers to shape demand and resources

Increases intelligence to lower costs and support building resilience

CONNECTED VEHICLES



Enabling EV infrastructure

Digital connectivity to coordinate vehicles as load and resource

Provides critical grid resilience while onboarding new mobility solutions

CONNECTED INFRASTRUCTURE



Optimization of the distribution system

Grid edge integration to enable the utility of the future to be responsive

Allows us to scale DER and new technologies safely and reliably

CONNECTED MARKETS



Opening new markets

Digital infrastructure that supports micro and bulk transactions of DER

Unleashes new markets that drive innovation

CONNECTED HOMES



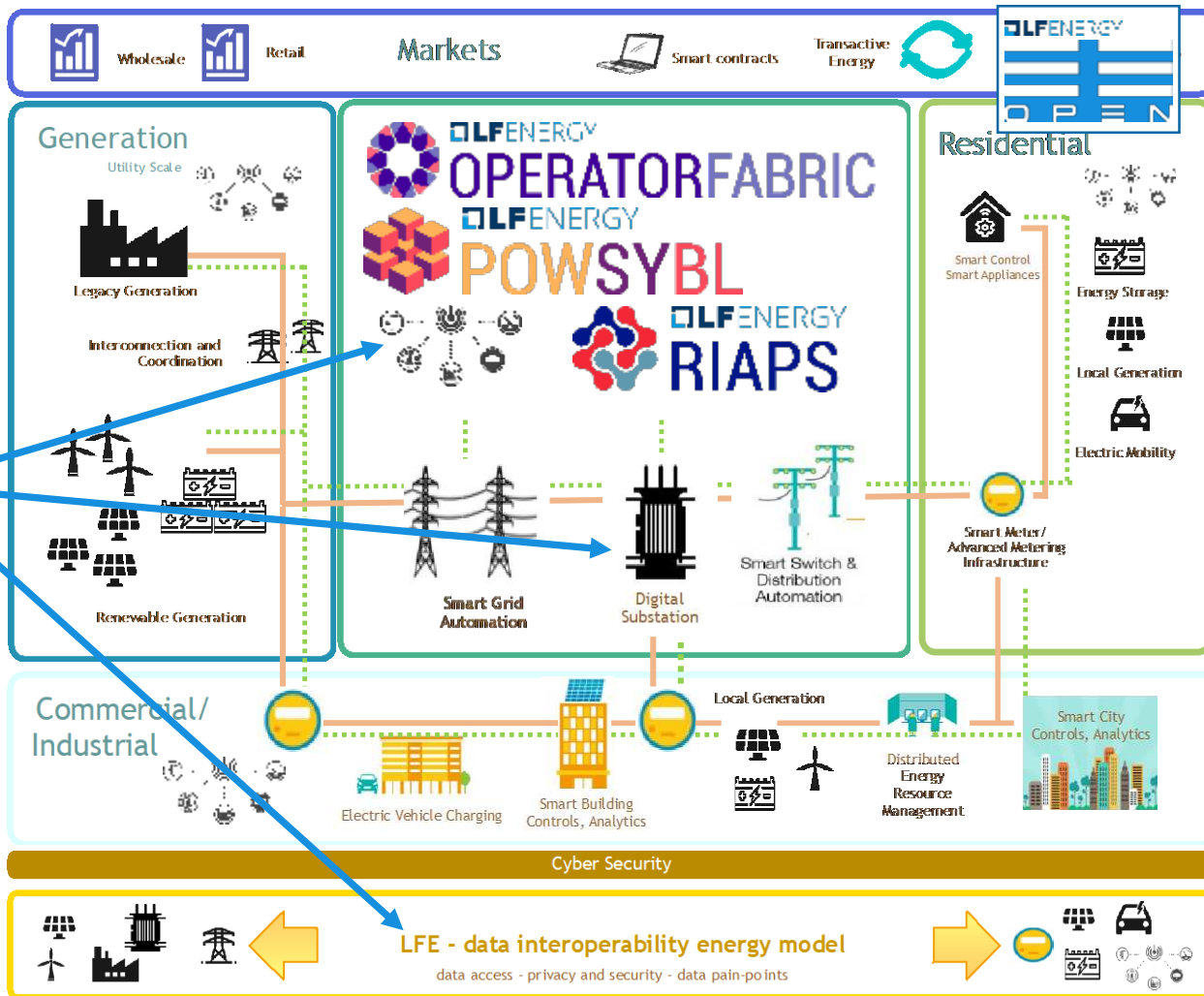
Making homes smart

Digital foundations for net zero homes

Provides consumers with choice will offering critical load shaping capacity

■ Current Projects

■ New projects



LF Energy Membership

- LF Energy, like other projects of the Linux Foundation, is funded through membership dues and contributed engineering resources
- Membership levels include: Premium, General
- Government entities, academic and nonprofit organizations can apply to join for free as Associate Members
- Non-members may participate fully in the technical community with contributions, earn committer, or TSC roles on merit.

THE GENERAL SHERMAN TREE
THE LARGEST (single stem)
LIVING THING ON EARTH
Also the Fastest Growing
2300-2700 Years Old



Hero's Journey

