TRUST THE VOTE PROJECT™

a silicon valley digital public works project

of the people, by the people, for the people

OSET INSTITUTE

millions of philanthropic dollars have been spent studying
how to improve elections…

- end long lines;
- reduce recounts;
- minimize contests; and
- increase confidence in the most fundamental right of democracy.

but a key issue is increasing trust in the technology of voting...*worldwide!*

VOTING INFRASTRUCTURE
IMPENDING
CRISIS

8 issues driving this crisis…

1. inherent design flaw in reliance on commodity PC hardware *due to a…*

2. lack of security-centric engineering principles *exacerbated by…*

3. incapable legacy vendors lacking core technology design competence *resulting in…*

4. obsolete systems requiring cyber-security triage in a digital arms race *dependent on…*

5. contracts to guarantee spare parts in an insecure supply chain *aggravating…*

6. partisan fights for funding in light of critical infrastructure designation *leading to…*

7. slow progress on design guideline updates *further driving a…*

8. complete lack of commercial incentive for industry to solve on it's own.

focusing on the U.S. for the moment…

~36

4̶3̶ STATES
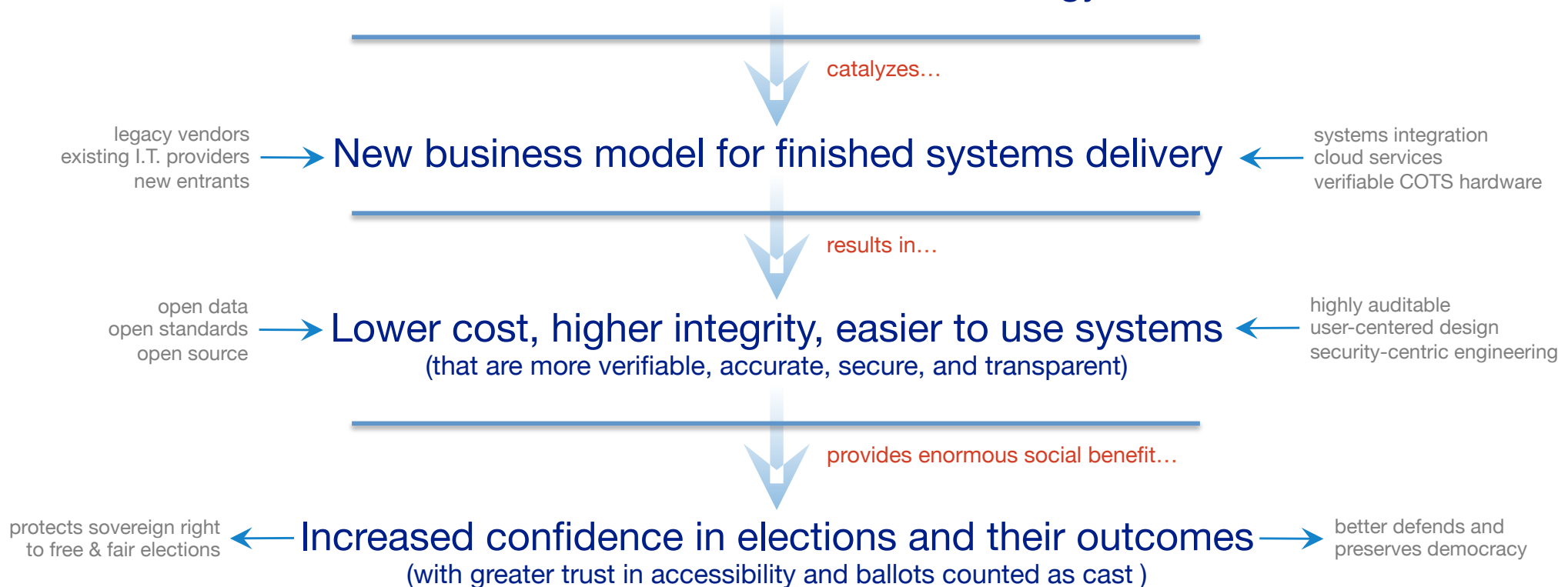
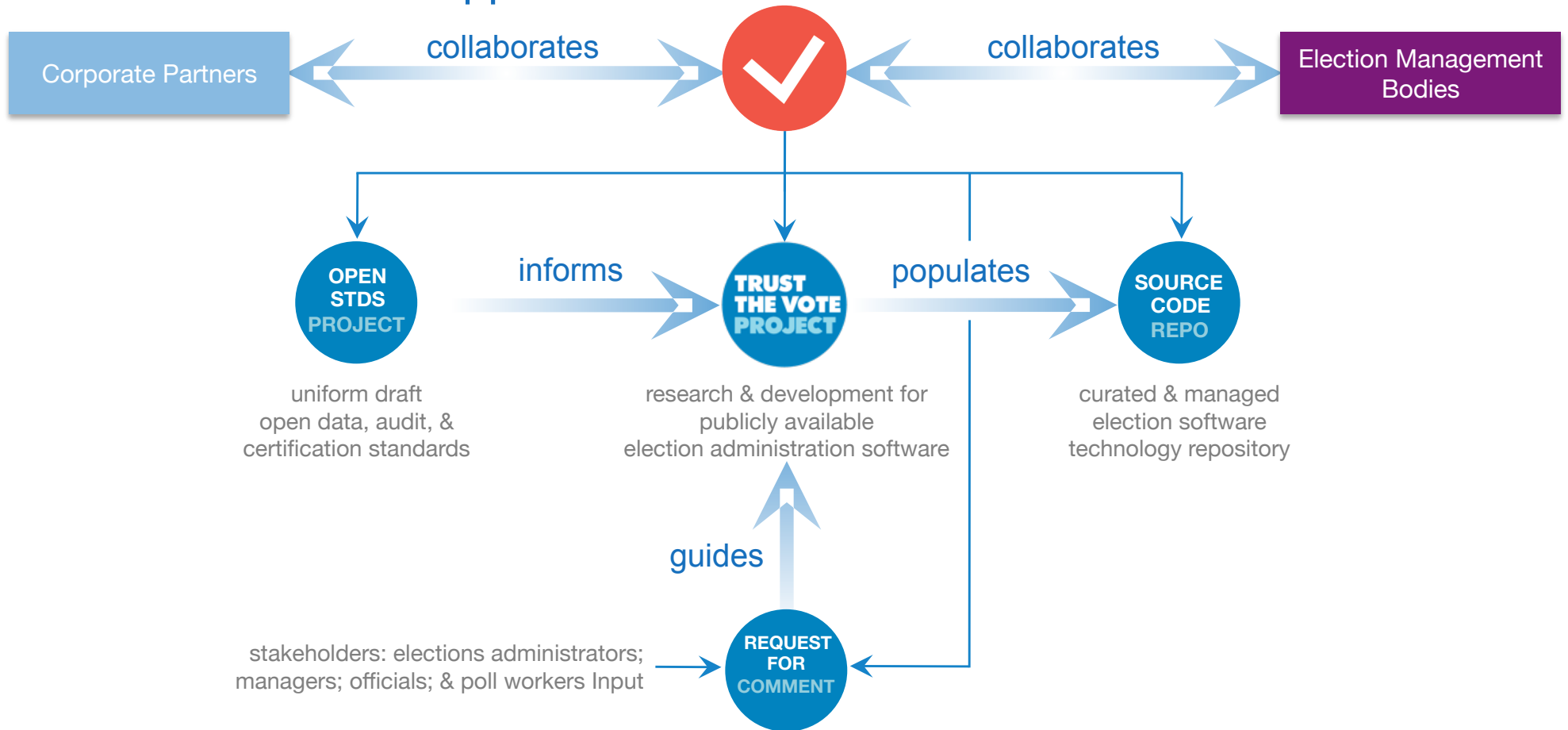NEED TO FIGURE IT OUT BY 2022

a radical departure; a new arrival…

with a global solution…
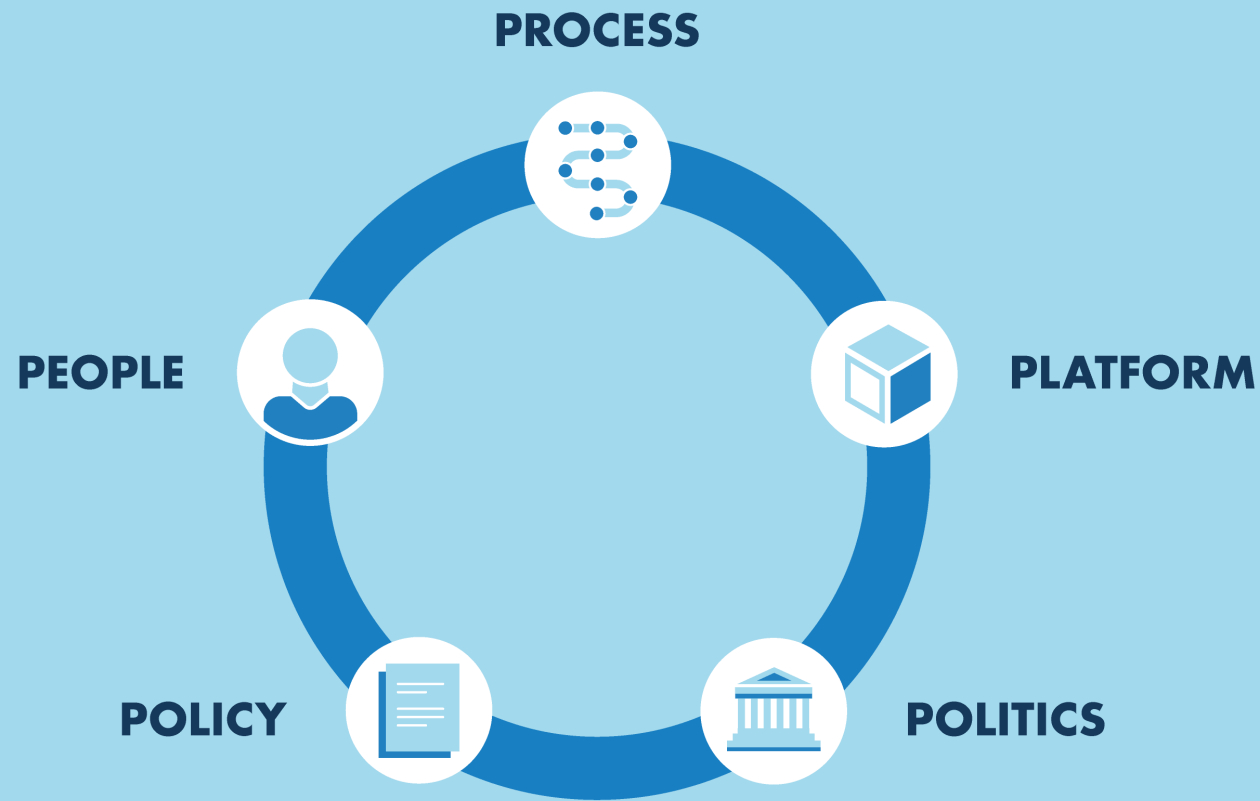
Public Election Software Technology

catalyzes…

legacy vendors
existing I.T. providers
new entrants

→ **New business model for finished systems delivery** ←

systems integration
cloud services
verifiable COTS hardware

results in…

open data
open standards
open source

→ **Lower cost, higher integrity, easier to use systems**
(that are more verifiable, accurate, secure, and transparent)

highly auditable
user-centered design
security-centric engineering

provides enormous social benefit…

protects sovereign right
to free & fair elections

← **Increased confidence in elections and their outcomes** →
(with greater trust in accessibility and ballots counted as cast)

better defends and
preserves democracy

the OSET Institute's approach…

Corporate Partners ←— collaborates —→ ◉ ←— collaborates —→ **Election Management Bodies**

OPEN STDS PROJECT —— informs —→ **TRUST THE VOTE PROJECT** —— populates —→ **SOURCE CODE REPO**

uniform draft
open data, audit, &
certification standards

research & development for
publicly available
election administration software

curated & managed
election software
technology repository

guides

stakeholders: elections administrators;
managers; officials; & poll workers Input —→ **REQUEST FOR COMMENT**

the democracy ecosystem we exist in…

PROCESS

PLATFORM

PEOPLE

POLITICS

POLICY

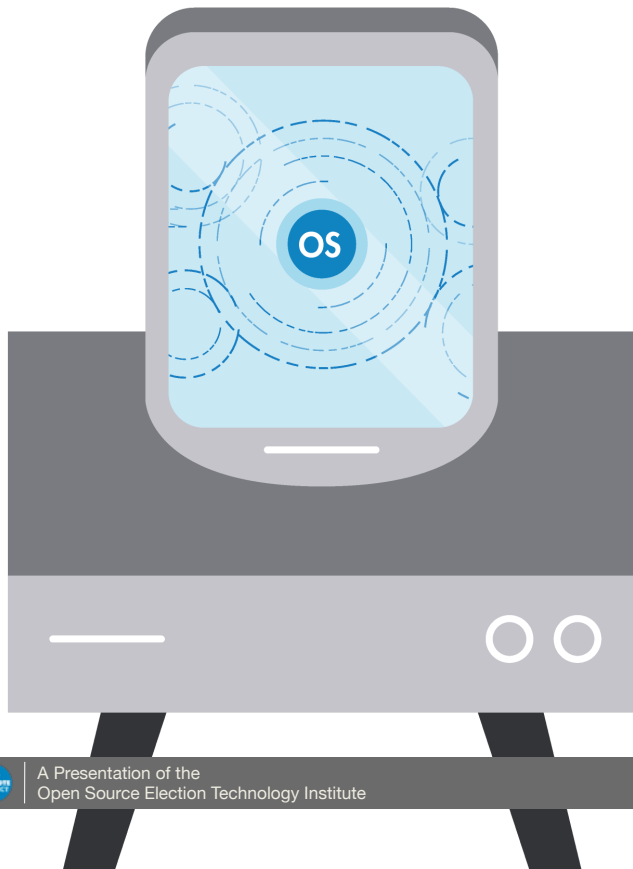and the element we're focused on…

PLATFORM

a (very) loose "operating system" metaphor…
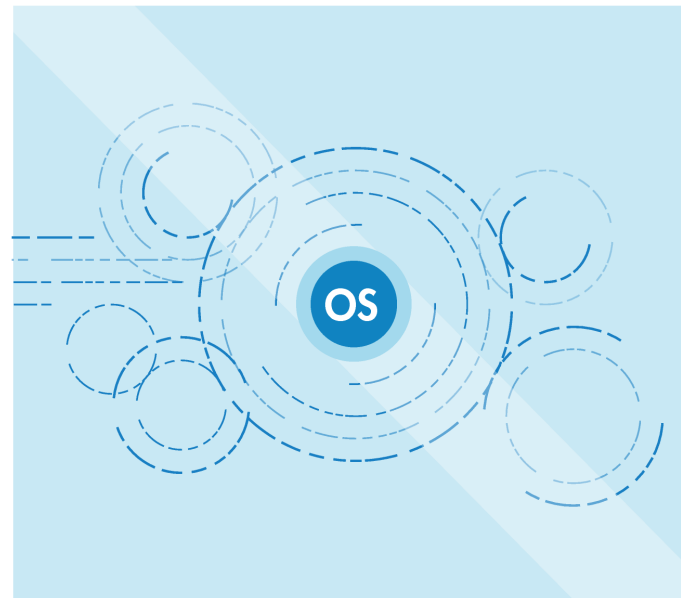
ElectOS™ is for voting machines; sort of like android® for mobile devices

ElectOS™

(But far more Secure!)

android™

~

OS

# 6 main building blocks comprise ElectOS™ …

Registering

1

Voter Services Portal

Voting

2

🔒 Polling Place

| Digital Poll Book | Voter Kiosk | Accessible Ballot Marker | Precinct Ballot Counter |

Reporting

3

VoteStream

Managing

4

🔒 Election Administration Office

| Election Data Manager | Ballot Design Studio | Device Manager |

🔒 Registrar of Voter's Office

| Registrar | Digital Poll Book Manager |

🔒 Central Counting Office

| Central Ballot Counter | Tabulator | Analytics |

Data Standards

Election Definitions   Registration Data   Results Data

5

Guiding Principles

Accuracy   Security   Transparency   Verifiability

6

ElectOS™ represents 10-years of patent-pending election official reviewed system architecture & engineering
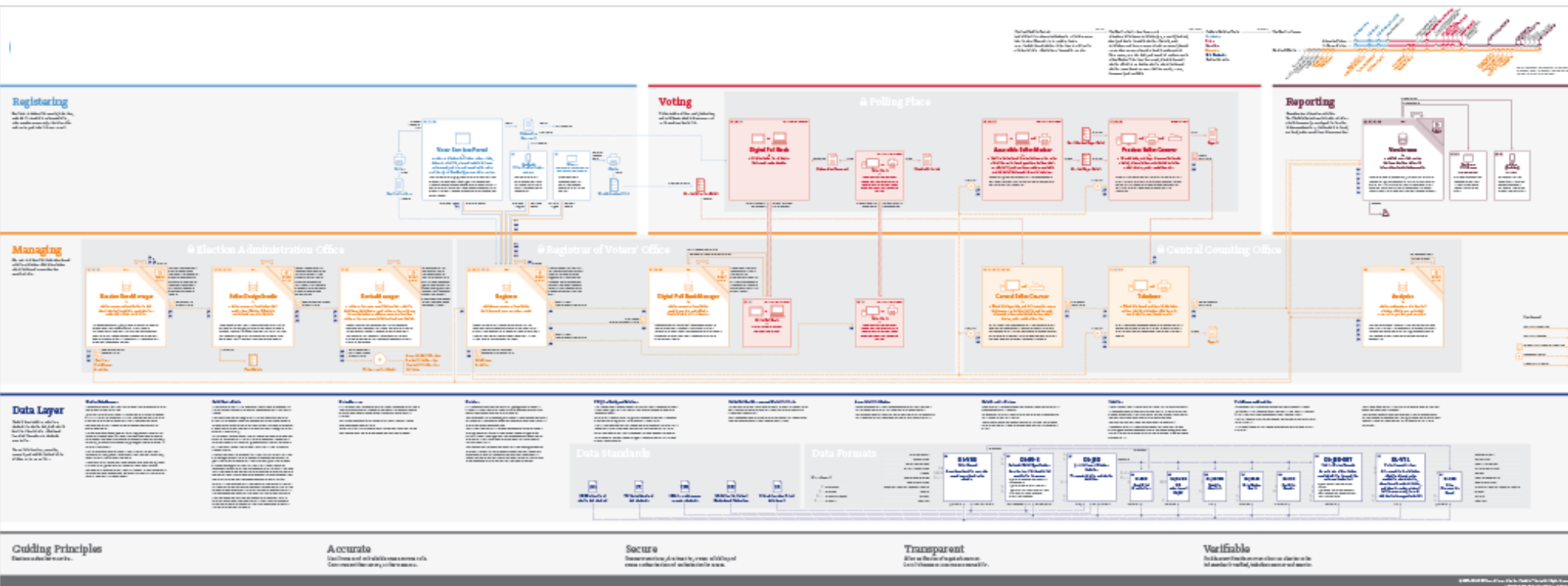
in the U.S. we have a shrinking window to finish…
...or another <u>decade</u> of status quo!

2020 2022 2024 2032
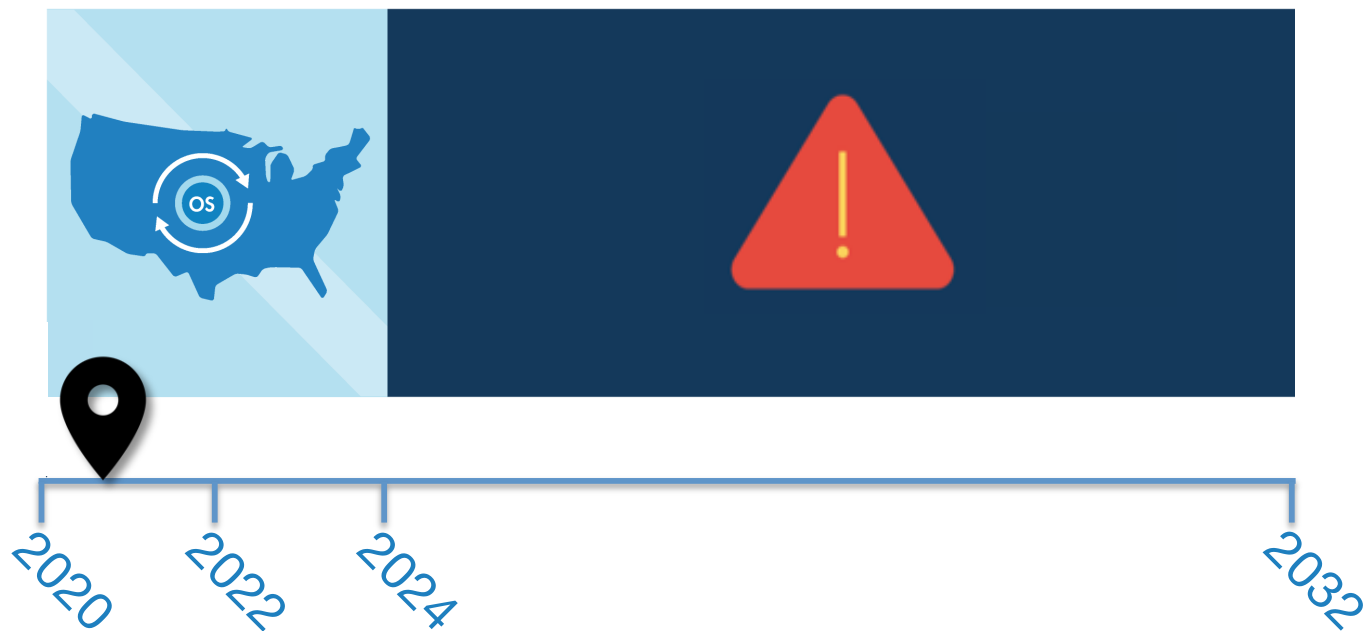
our strategy is delivery because…

CODE CAUSES CHANGE

we've built a beachhead of software

we're helping drive open standards

with election officials' encouragement

to increase integrity & lower cost…

black box

⅓ COST →

glass box

CRITICAL DEMOCRACY INFRASTRUCTURE

for the U.S., creating enormous social benefit
with massively global scalable impact…

$3 BILLION

$980 MILLION

Status Quo

ElectOS™

here's where we are…

ElectOS Element *	CONCEPT	REQUIREMENTS	SPECIFICATION	PROTOTYPE	ALPHA	BETA	RELEASE	CERTIFICATION		
BallotScribe	███	███							←	Accessible ballot marking device
VoteCast P	███	███							←	Precinct-level optical scan counter *(lowering priority with migration to central count)*
VoteCast C	███	███							←	Central optical scan counting system
VoteTab	███	███	███						←	Ballot tabulation system
Device Manager	███	██							←	Critical mechanism for trusted boot with hardware attestation
BallotMaker	███	███	███						←	Cloud-based ballot design & layout studio
VoteStream	███	███	███	███					←	Cloud-based elections results reporting system
Versa	███	███	██						←	Cloud-based election management system
TENET	███	███	███						←	Multi-tenant strong authentication and security administration service
Electorate v1.5	███	███	███	██					←	Cloud-based voter administration services

ElectOS Voting System | *ElectOS Election Administration*

* Notes
1. Elements incorporate their contributions to the data layer and API services.
2. Elements embody RFC (*Request For Comment*) work.
3. Electorate v.1 embodies the Voter Services Portal ("VSP")
4. Electorate v.2 will embody the Election Management System ("EMS")
5. Electorate v.3 will embody the "Registrar" system respectively, as labeled in the Architecture
6. Electorate v.4 will embody a new Voter Database ("VRDB").
7. This ETF Progress chart does not reflect work on any of: repository and configuration management, open data standards working group efforts, or documentation.

here's how it makes impact…

OSET INSTITUTE | TRUST THE VOTE PROJECT

ElectOS™ → **Publicly Available Election Software Technology**

builds & publicly releases…

available to…

accenture   DXC.technology   IBM → **Systems Integrators and/or Managed Services Providers**

builds commercial systems & solutions on…

delivers to…

Sample Hardware Providers   **Sample GovCloud Services Providers**

DELL™   hp   amazon web services™   Azure

chromebook   Google Cloud

SAMSUNG   TOSHIBA   salesforce

Finished Voting Systems + **GovCloud Election Administration Services** → **Global Democracies in Need of Electoral Technology**
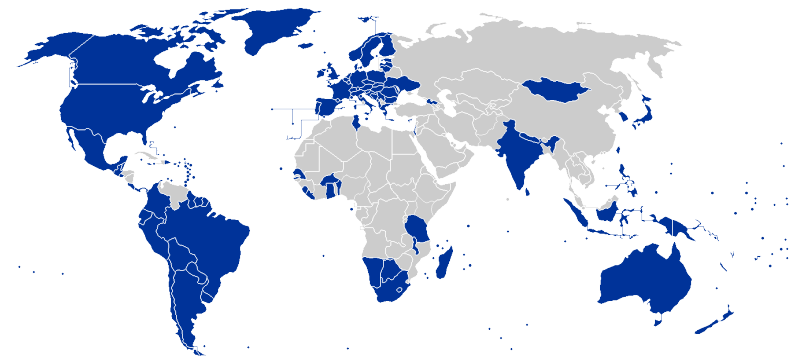
discussion

OSET INSTITUTE

osetfoundation.org

TRUST THE VOTE PROJECT

trustthevote.org

530 Lytton Avenue
2nd Floor
Palo Alto, CA 94301
650.600.1450
@OSET | @TrustTheVote