

Strengthening Connections Between Research and Deployment

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Clean Cities Coalition Network

Building partnerships to
advance affordable,
domestic transportation
fuels and technologies



Clean Cities Coalitions:

- Serve as forums for local stakeholders to connect and collaborate on saving energy and using affordable alternative fuels
- Provide grassroots support and resources on new transportation technologies and infrastructure development
- Support networks to help their stakeholders identify cost-effective solutions that work locally

How Do Clean Cities Coalitions Fit with DOE and NREL?

Vehicle Technologies Office



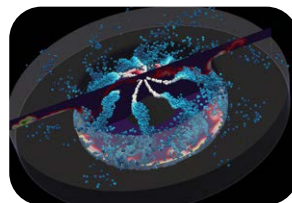
Batteries and Electrification



Materials Technologies



Energy Efficient Mobility Systems



Advanced Engine and Fuel



Technology Integration

VTO develops advanced transportation technologies to:

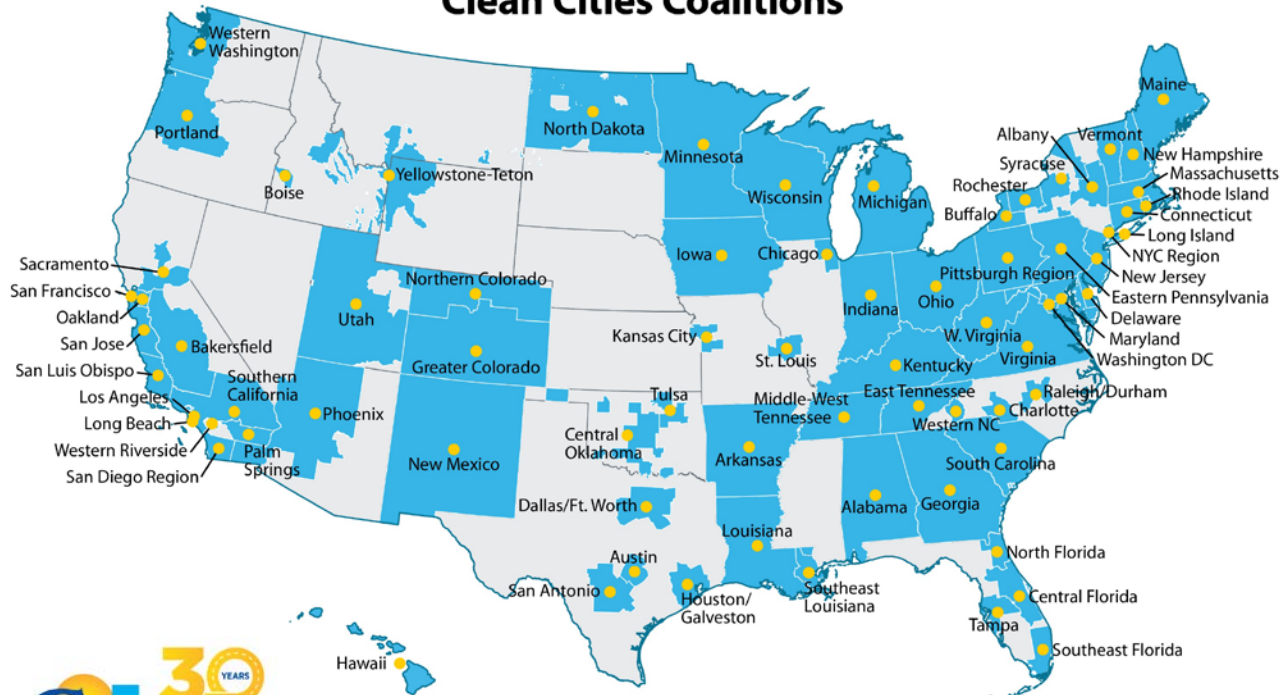
- ✓ Improve energy *efficiency*
- ✓ Increase domestic energy *security*
- ✓ Reduce operating *cost* for consumers and business
- ✓ Improve global *competitiveness* of U.S. economy

National Network of Clean Cities Coalitions

More than 75 active coalitions covering nearly every state with thousands of stakeholders

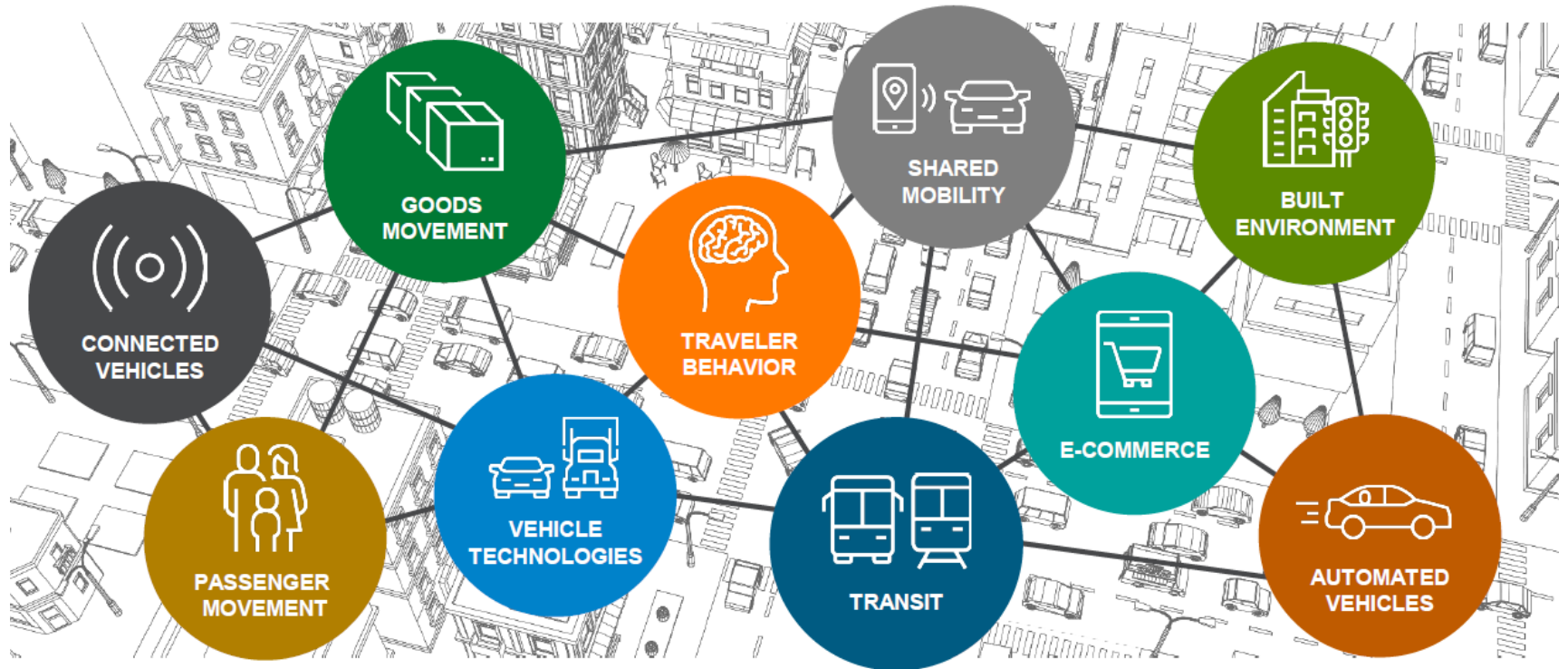
cleancities.energy.gov

Clean Cities Coalitions

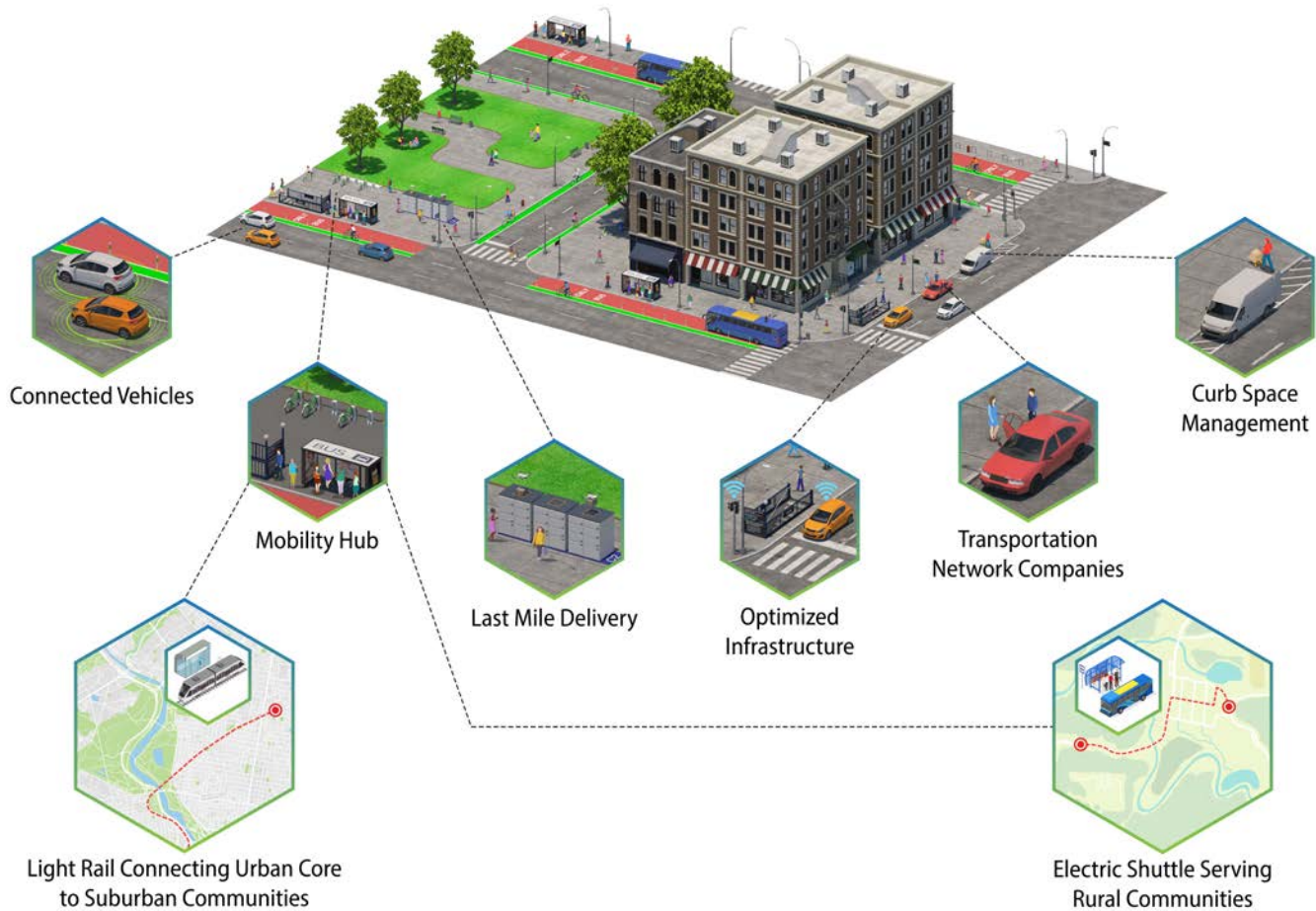


Map Date: 3/8/23

Translating Energy Efficient Mobility Systems



Identifying Deployment Opportunities





C2C: Communities to Clean Energy

Tailored support to transform community clean energy ambitions into tangible results



Community-led goal setting

Active community engagement to understand needs, collect diverse perspectives, find common ground

Technical advisement

In-depth, customized analysis of potential solutions; Validation to de-risk large-scale investment & deployment

Implementation

Develop actionable plans; Create network of cities to share replicable strategies & lessons for long-term impact

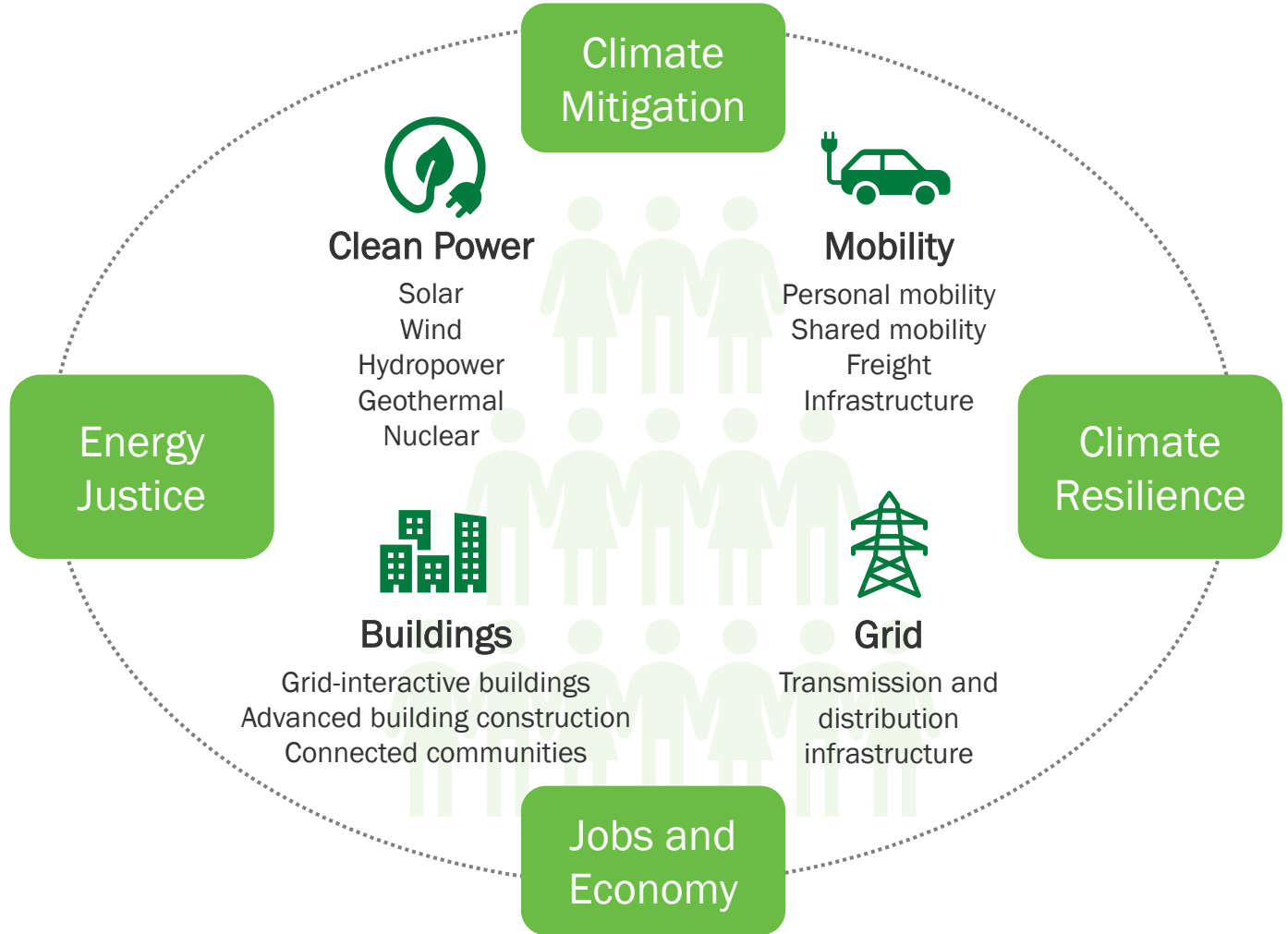


COMMUNITY FEEDBACK

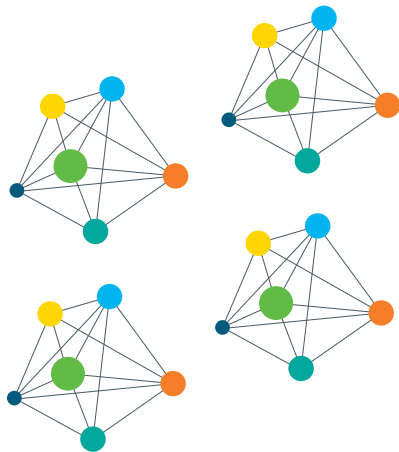
COMMUNITY FEEDBACK



**C2C will
address
cross-cutting
energy
challenges
with a
community-
centered
focus**



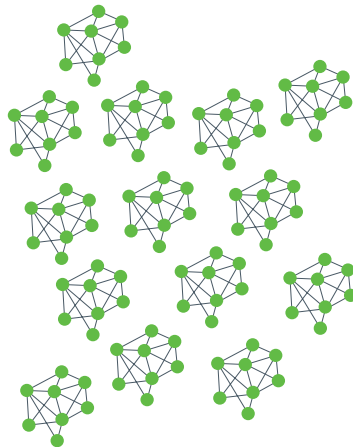
C2C Program Offers Differ by Length of Engagement and Supported Engagements



In-depth partnership

~3 years

nrel.gov/c2c/indepth

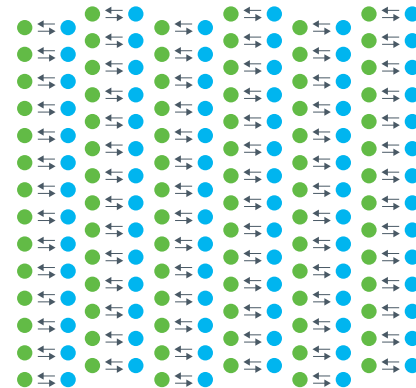


Cohort

~6 months

Length of engagement

nrel.gov/c2c/cohorts



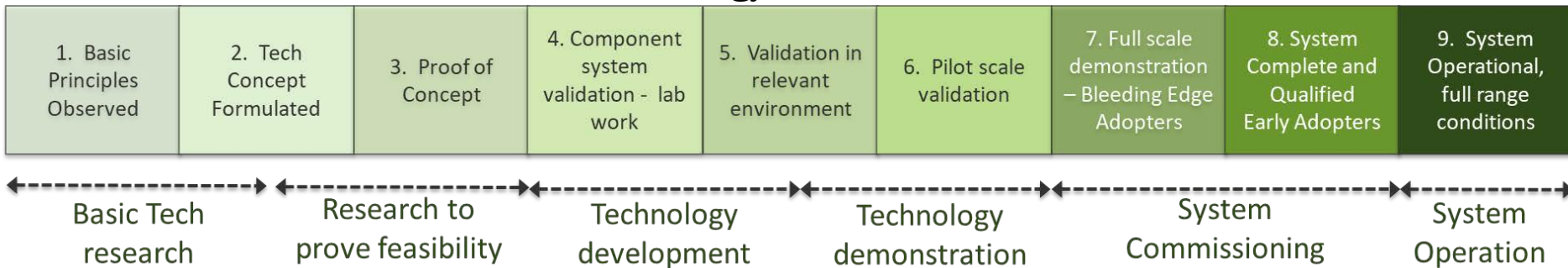
Expert match

~2 months

nrel.gov/c2c/expertmatch

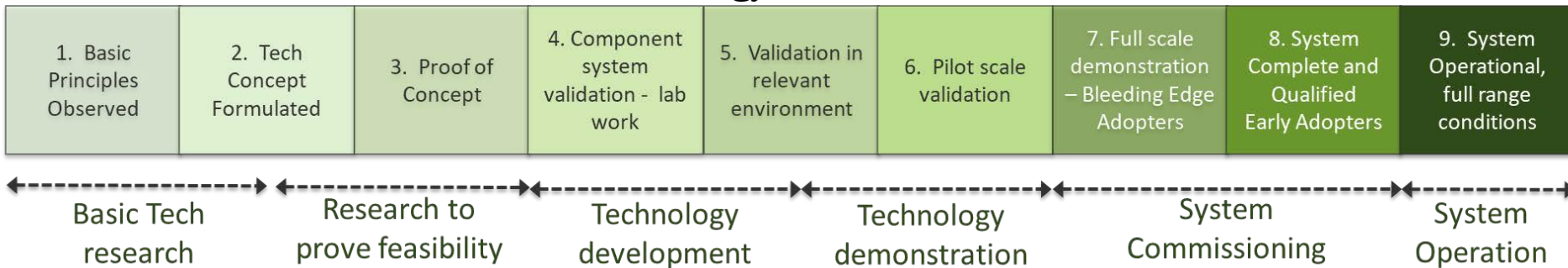
From Research to Practice – the Spectrum

DOE Technology Readiness Level



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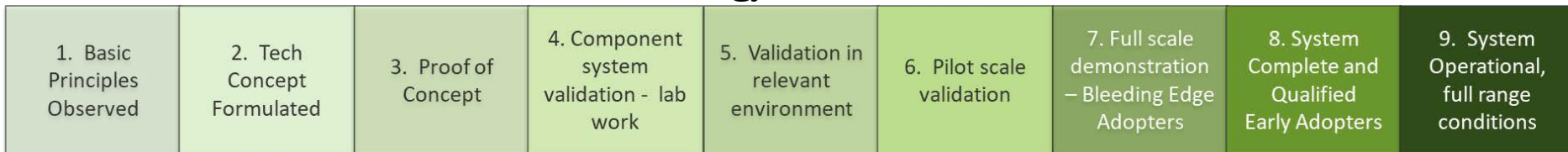


EEMS Research

Tech creation and validation

From Research to Practice – the Spectrum

DOE Technology Readiness Level



EEMS Research

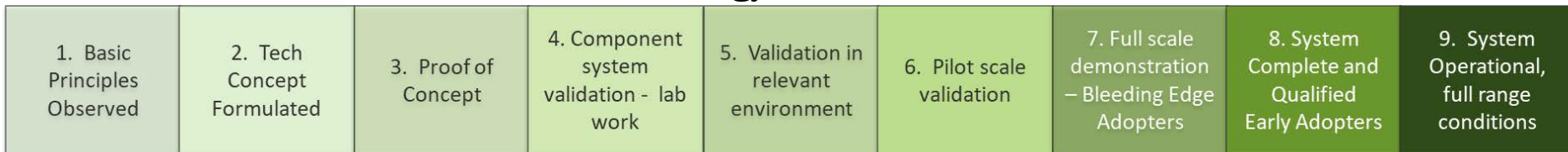
Tech creation and validation

Tech in Community

Test, scale, integrate, de-risk

From Research to Practice – the Spectrum

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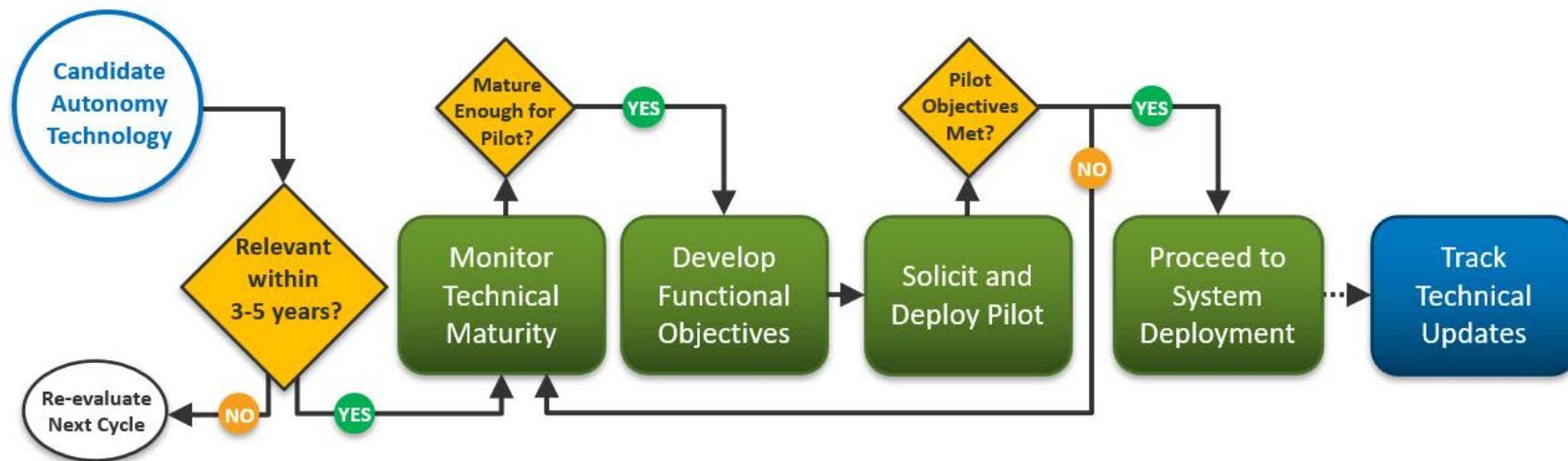
Tech in Community

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Clean Cities

Productive deployments

DFW Airport Innovation Decision Process



Successes and failures

Successes

- Engage Wayne State University and city of Columbus to scale virtual automated traffic signal performance measures (ATSPMs)
- Bastrop eCab and StL Labyrinth on-demand mobility projects
- Volume estimates into Eastern Transportation Coalition Traffic Data Market
- Smart Columbus – dissemination of EV, Smart City, fleet and other tech
- NYSERDA Clean Transportation Prizes (modeled on Smart Columbus)
 - Metrics, data, fellows, emphasis on under-served communities
- Airport innovation adoption for landside autonomy
- MEP engagements with state DOTs

Framing the discussion —

- What programs or strategies could NREL emphasize to help bring new mobility technologies and solutions more swiftly out of the research phase and into deployment?
- For operators (airports, transit agencies, mobility providers), what are limitations or challenges in supporting or moving forward deployment projects?
- What can NREL or DOE do to help bridge that gap?
- What else are we missing here?

Thank You

www.nrel.gov

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