



# Advanced Building Energy Efficiency Policy Task Force (ABEEP) meeting

## Building Energy Policies and Municipal Opportunities in Illinois

October 11, 2022



# Agenda

- Quick Introductions - (5 minutes)
- Recap of August Meeting – (10 minutes)
- Resources Discussion
  - Building Performance Standards (BPS) - (30 min)
  - Stretch Codes - (30 min)
- Next steps (5 min)



# Task Force Objectives and Outcomes

- Help innovative municipalities pioneer stretch codes and BPS
- Get prepared to take action on building energy policies and have the tools to do so
- Assist in creation of a roadmap without obligation of adoption
- Provide feedback and guidance to utilities on most effective ways utilities can support
  - Emerging technology research led by ComEd, Peoples and North Shore and Nicor Gas



# ABEEP members

GRC  
MMC CAP  
own CAP  
energy plan

x	x		Aurora	Kris Murphy
				Mayor Katrina Thompson, Matt Martin
x	x		Broadview	David Upshaw, Greg Buchanan,
x	x		Brookfield	Trustee Katie Kaluzny
x	x		Darien	Sylvia McIvor
x	x		Elgin	Tom Armstrong
x	x		Geneva	Mayor Kevin Burns
x	x		Glenview	Robyn Flakne, Molly Laycob
			Harvey	Nick Greifer
x			Hillside	Mayor Joe Tamburino
x	x		Hoffman Estates	Mayor Bill McLeod

GRC  
MMC CAP  
own CAP  
energy plan

x			Lincolnshire	Jay Yunker
x	x		Mount Prospect	Alex Bertolucci, Bill Schroeder
x		x	Naperville	Craig Schneider, Ben Mjolsness, Liz Wimmer
x	x	x	Northbrook	Tessa Murray
x		x	Oak Park	Marcella Bondie Keenan, Steve Cutaia
x	x	x	Park Forest	Andrew Brown
x	x		Richton Park	Bill Gleason
		x x	Cook County	Jamie Meyers
x			McHenry County	Chalen Daigle
x	x	x	Will County	Briana Moore

# Advanced Building Policies Overview

## Stretch/reach codes

Alternative compliance path that defines a higher level of energy efficiency

**New construction**

## Building Performance Standard (BPS)

Focus on improving existing building stock through setting targets for efficiency upgrades

**Existing buildings**





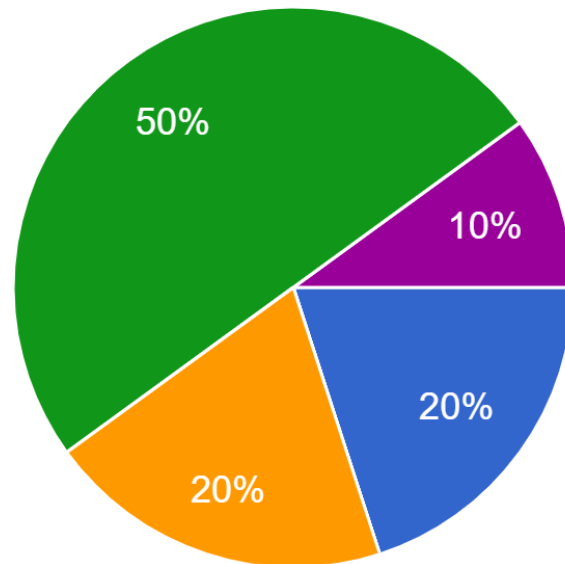
# Survey and feedback from last meeting



# ABEEP member survey results

Have you recently considered the adoption of either a stretch code or building performance standard (BPS)?

10 responses

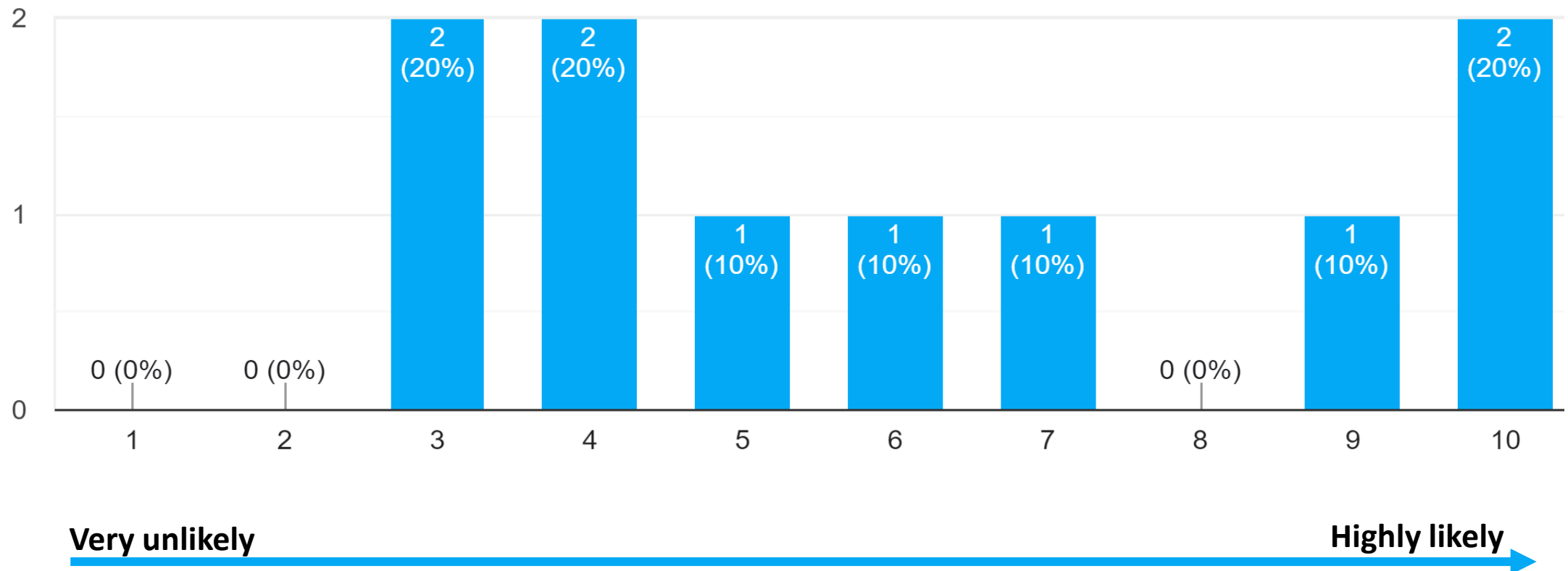


- Yes, stretch code
- Yes, BPS
- Yes, both stretch codes and BPS
- No
- Yes, but there is a long road between consideration and adoption.



# Benchmarking likelihood

As a precursor to BPS policies, many communities require that their buildings benchmark and disclose their energy use. What is the likelihood of that your community would require benchmarking in commercial buildings? (10 responses)





# Benchmarking barriers

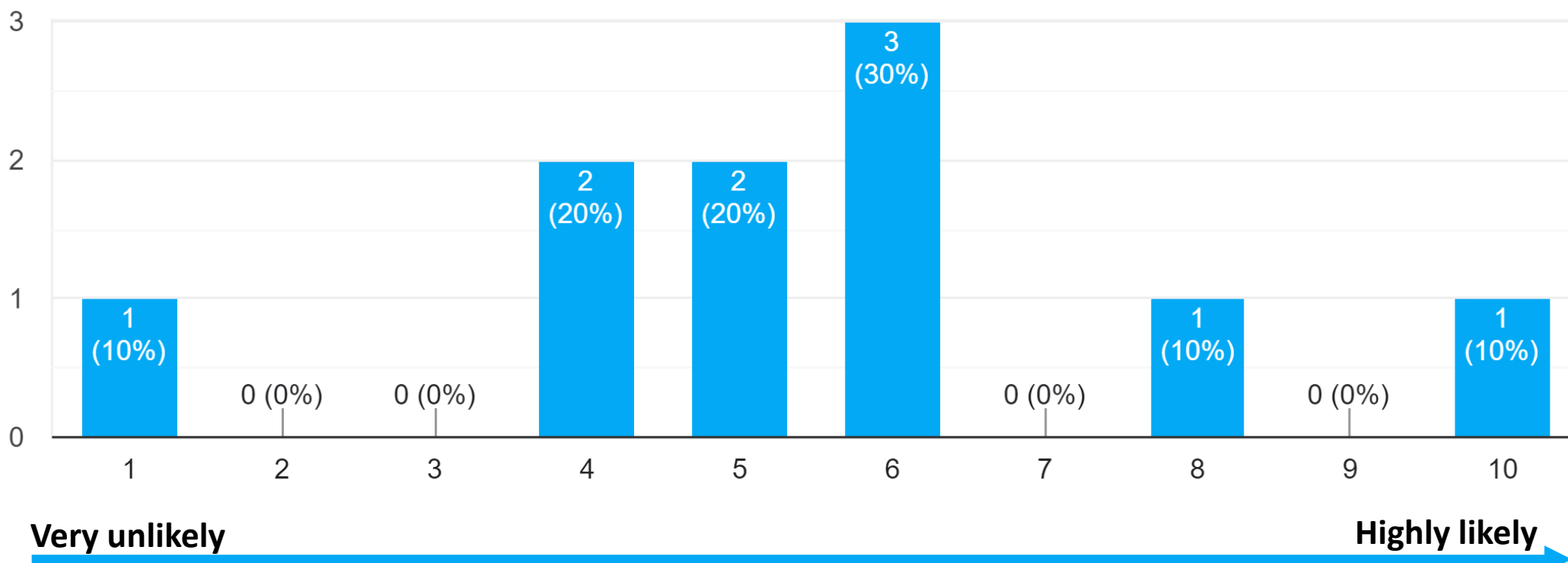
- Cost
- Local politics
- Commercial owner pushback
- Lack of staff capacity to manage it



# BPS likelihood

What is the likelihood of BPS adoption in your community?

10 responses



# BPS barriers

Community and owner buy in.

Finding the right level of performance that balances mitigating climate change and getting community buy in.

Education/Awareness for developers/contractors

pushback from the business community

We have a divided council when it comes to discussing these types of issues and our building commissions are heavily influenced by the trades. Would likely need some sort of program offering financial assistance to certain classifications of property

Enforcement

No support from elected officials and staff because of political influencers.

needing an flexible approach for lower-income households

Providing the right amount of technical support to community.

How can we integrate this with weatherization work already occurring through community action agencies?

"pro business" city admin not understanding that EE can be pro business.

Size and type of buildings included in the standard. I think a benchmarking policy would need to come first or have earlier implementation for a better understanding of performance throughout the community and at different building types/sizes.

, protecting housing affordability

Policy overload. A lot of towns have many many policies that gather dust.



# BPS Barriers

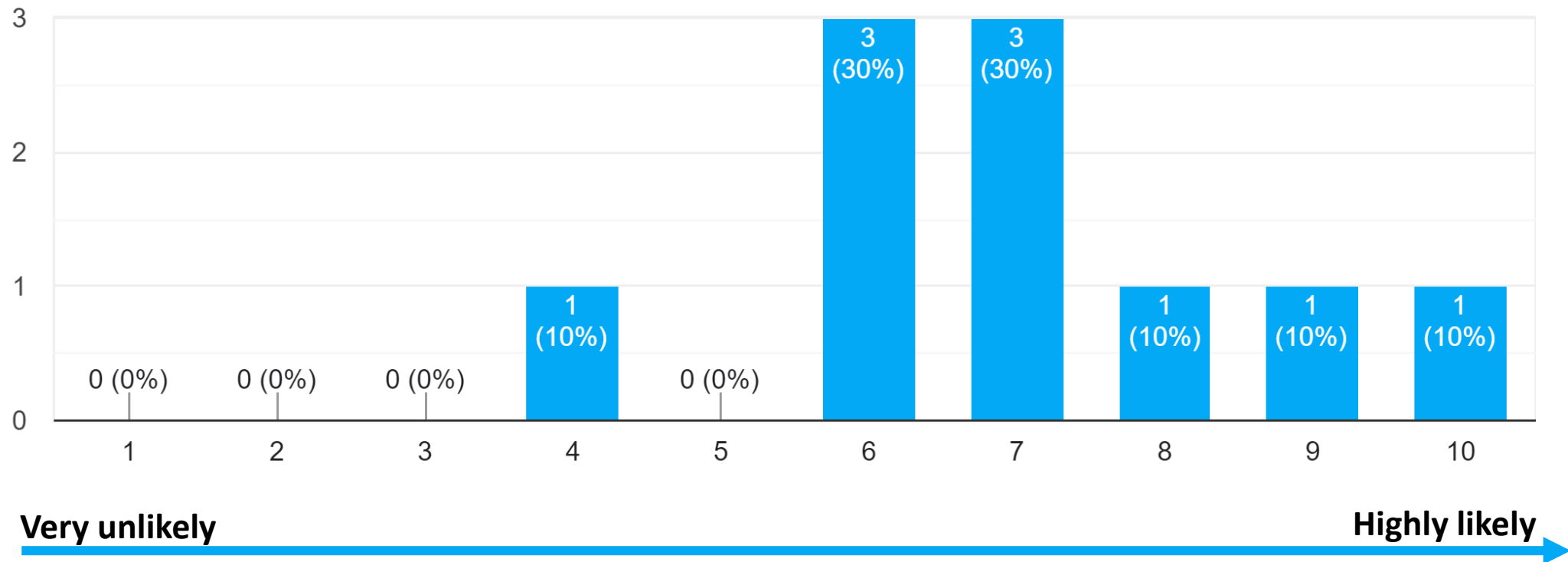
- Very old housing and historic characteristics make retrofits expensive and complicated
- Resistance from business community
- Costs
- Enforcement
- Lack of staff capacity



# Stretch code likelihood

What is the likelihood of stretch code adoption in your community?

10 responses



# Stretch code barriers

ability to enforce

construction education

Margin for error (moisture) with highly energy efficient construction.

Funding, cost evaluations, energy savings, and market it well.

Provide training and substantial advertisement of Muni Development Committee training and Developer education.

Would like all electric or all electric ready to be included.

staff capacity to enforce the policy when unwilling developers come to town

Pushback from large corporation developers; commercial and residential

provide model code / ordinance language

education/awareness for contractors/developers; especially mom and pop developers

Pushback from real estate, developers, trades.

In low-income and/or high property tax areas where development maybe scarce, would this policy add an additional hurdle for development?

Helping to market the value of stretch codes could be useful

ordinance templates; quantifiable metrics to ask of the developers to ensure compliance

Fact sheets, templates, training, roadmap

# Stretch code barriers

- Reduce development interest
- Political support
- Costs
- Compliance and enforcement





# Feedback on Policy Flow Charts



# Process to Gather Feedback from ABEEP

- Review flow charts together
- Break down flow charts into pieces
- Gather feedback on resources needed
- Opportunity to provide feedback after this meeting

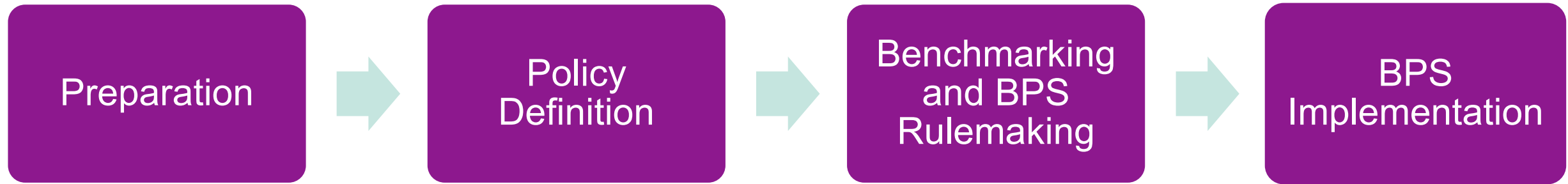




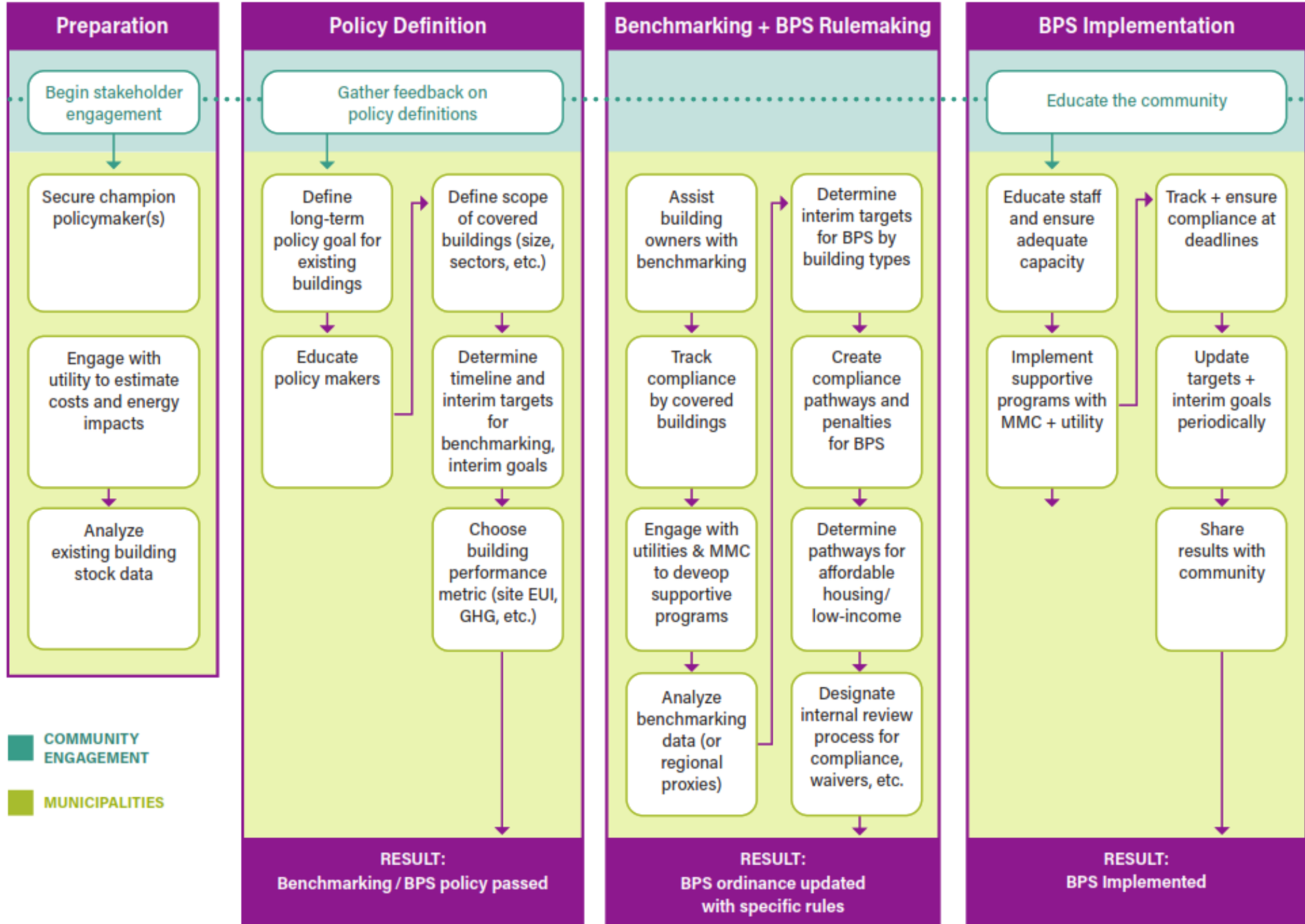
# **Building Performance Standards**

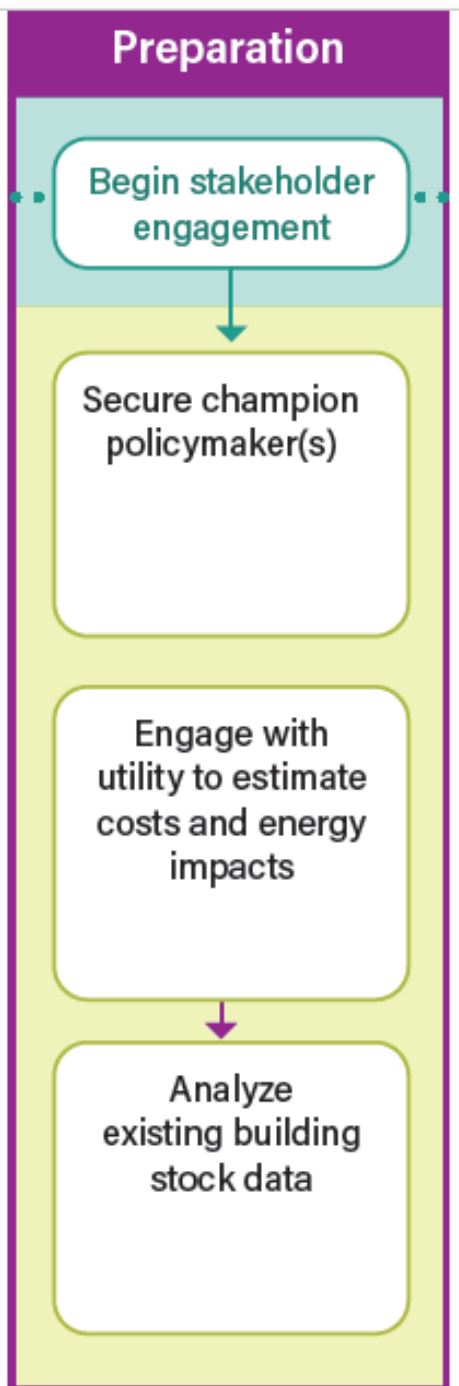


# Overarching Roadmap for BPS



# Benchmarking + BPS



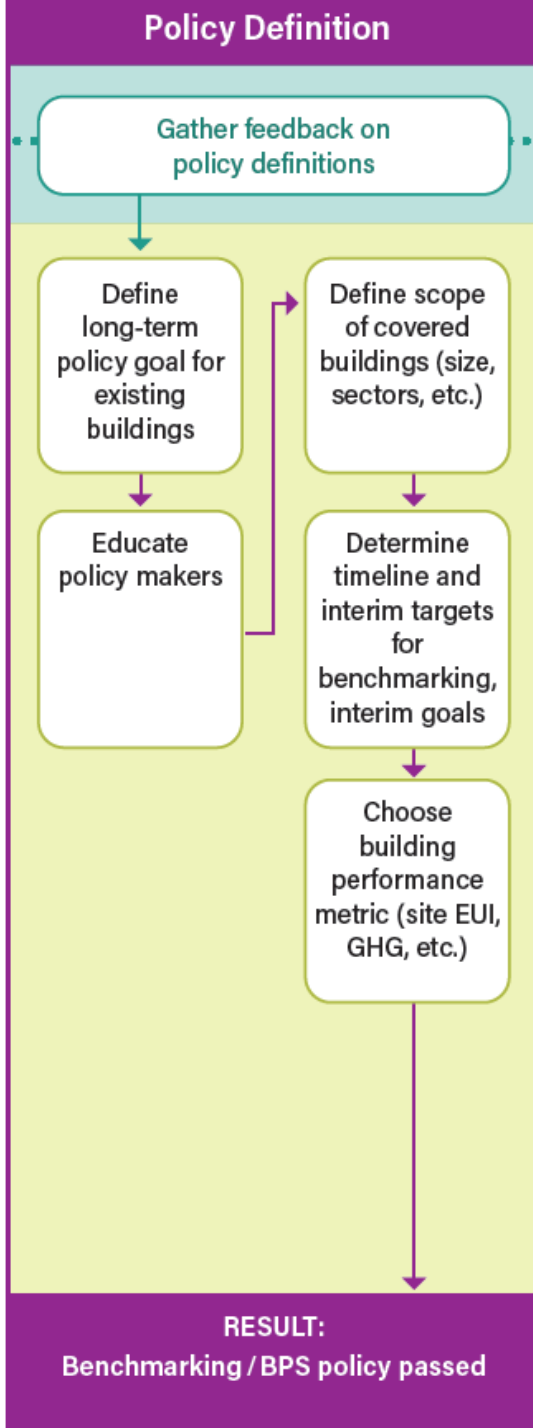


# Benchmarking/BPS Preparation

- Provides the foundation for policy making
- Helps municipality understand the scope (cost, energy savings, building stock)
- What other aspects are we missing?
- How long might this take?



# Benchmarking + BPS



## Benchmarking/BPS Policy Definition

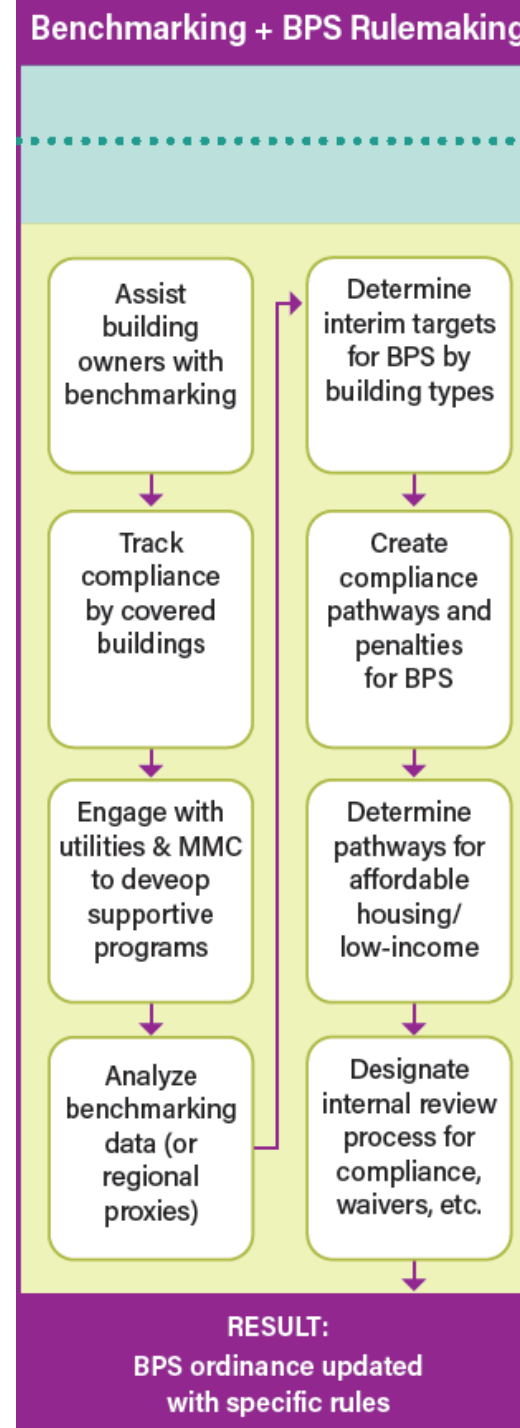
- What do you need to help define long-term policy goal?
- What do you need to determine timeline and targets?



# Benchmarking/BPS Rule Making

- What challenges do you see in this rulemaking?
- What are the resources that you need?

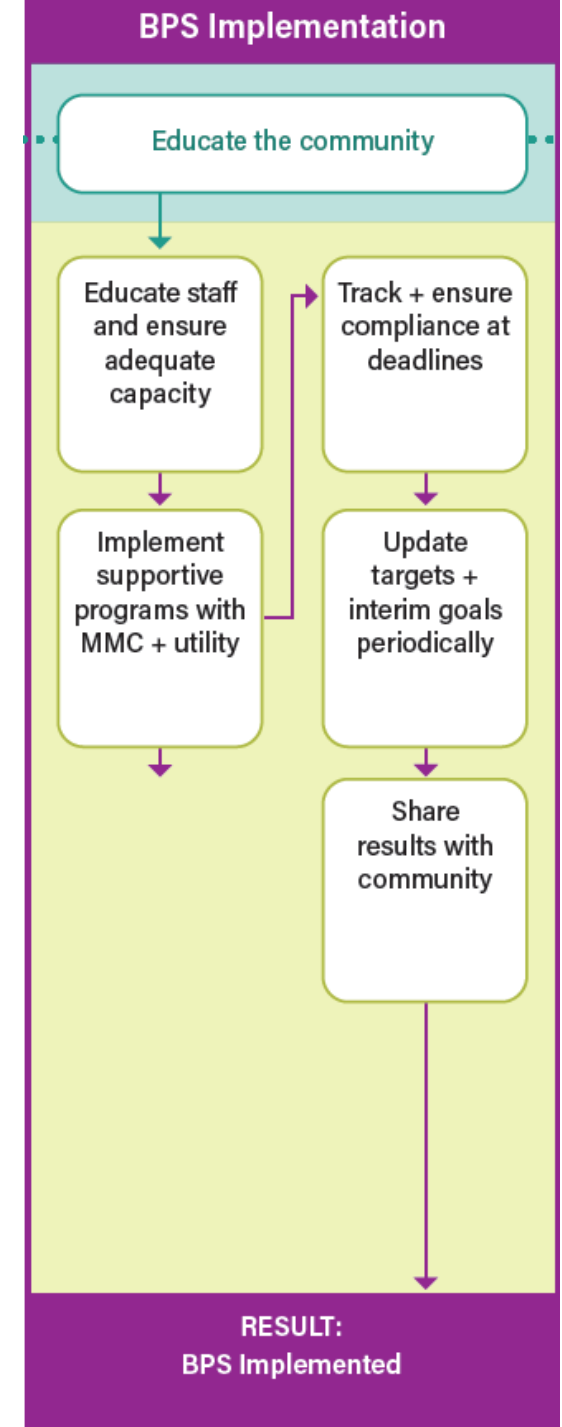
## Benchmarking + BPS



# Benchmarking/BPS Implementation

- What resources do you need to educate staff and ensure capacity?
- What other challenges do you foresee?

## Benchmarking + BPS





# Building performance metrics and targets

There are several metrics municipalities have used to track performance towards BPS goals. In some cases, multiple metrics are set as part of the BPS ordinance. BPS standards use this metric to set a long-term goal for building performance, and several interim short-term goals to drive progress over time. Metrics should be set by building type and consider baseline energy data by building type to determine goals.

## Performance Metrics

BPS policies typically select a primary metric to set goals and targets. Secondary metrics can also be included to ensure policy comprehensively addresses goals. Recommended to consider both emissions and energy use metrics. These metrics would be set by building type.

### Metrics

- Site energy use intensity: Measured as energy use per square foot. Limits performance to where building owners have direct control.
- EnergyStar rating: Score calculated as part of entry into EnergyStar Portfolio Manager.
- GHG emissions: Focuses more directly on carbon goals. Calculated as energy use multiplied by relevant emissions factors. Often used in place of energy to avoid
- Other metrics: Can include secondary items such as indoor air quality, water use, or coincident peak demand to meet secondary goals. Has not previously been adopted by other jurisdictions.

## Setting Targets

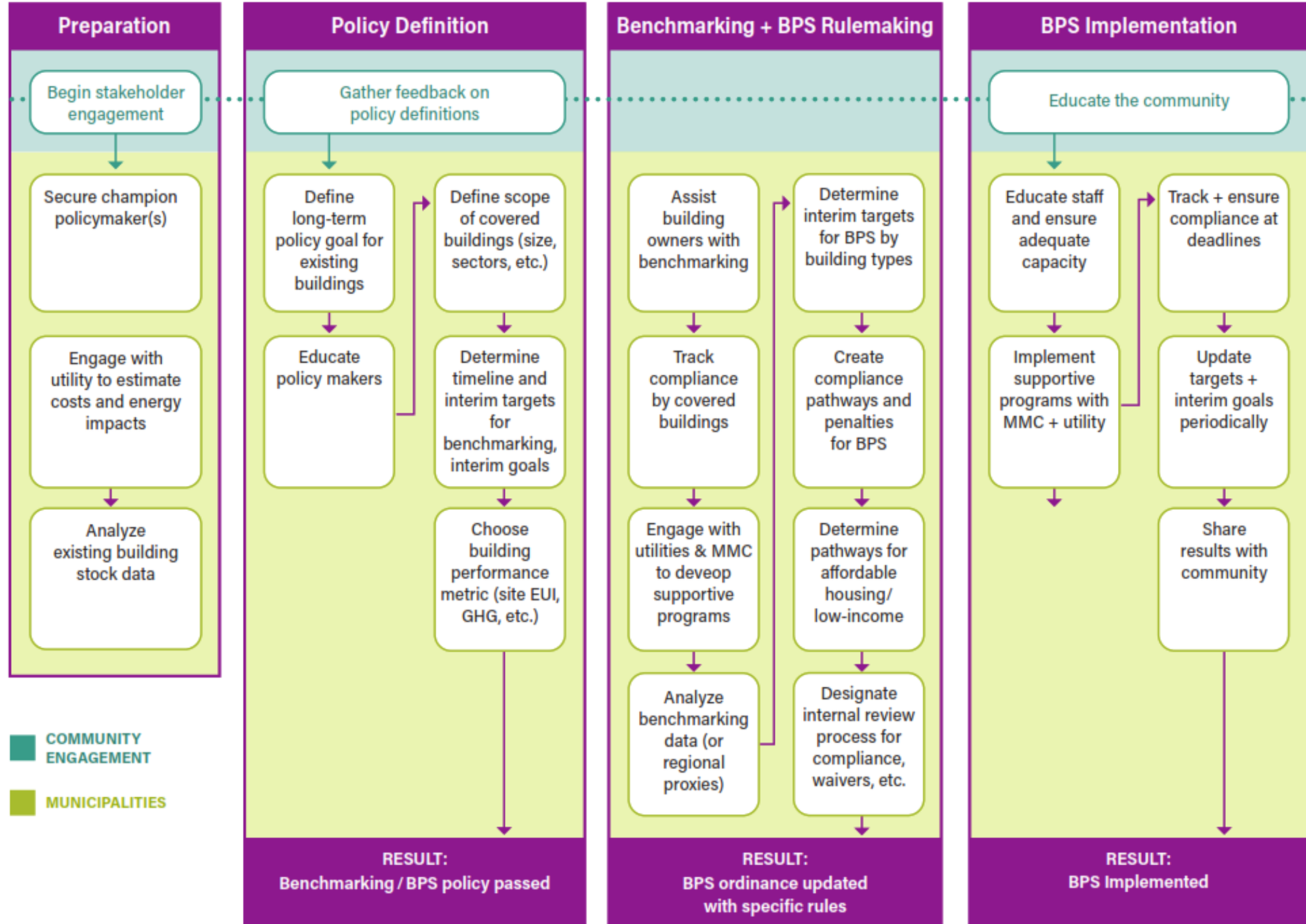
Set two types of targets:

1. **Final performance standard**: set for 15 to 30 years in the future. Allows all buildings to encounter one capital cycle for large-scale EE investment.
2. **Short-term standards**: set interim goals for every 3 to 6 years to ensure buildings are making progress toward final goals.

City	Metric	Target
Boston	Annual GHG emissions (tCO2/sq. ft)	50% emissions reduction by 2030; 100% by 2050
Denver CO	Site energy use intensity	Hit maximum site EUI by 2030
Maryland	Onsite greenhouse gas emissions	Achieve 20% reduction in GHG by 2030; net-zero by 2040
New York City	Annual GHG emissions (tCO2/sq. ft)	Reduce the emissions by 40 percent by 2030 and 80 percent by 2050
Washington DC	EnergyStar Score	Reduce carbon emissions and energy consumption by 50% by 2032



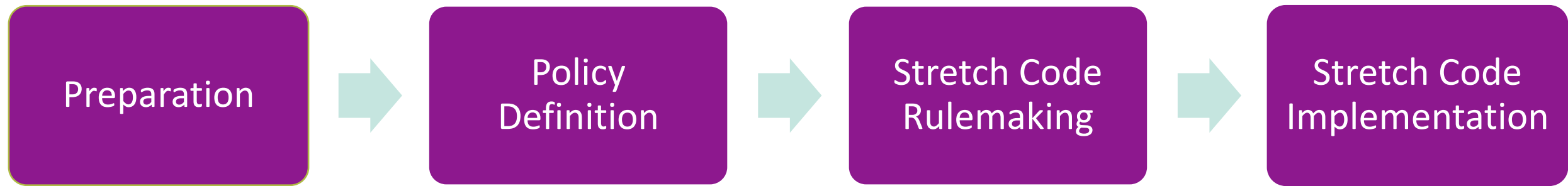
# Benchmarking + BPS



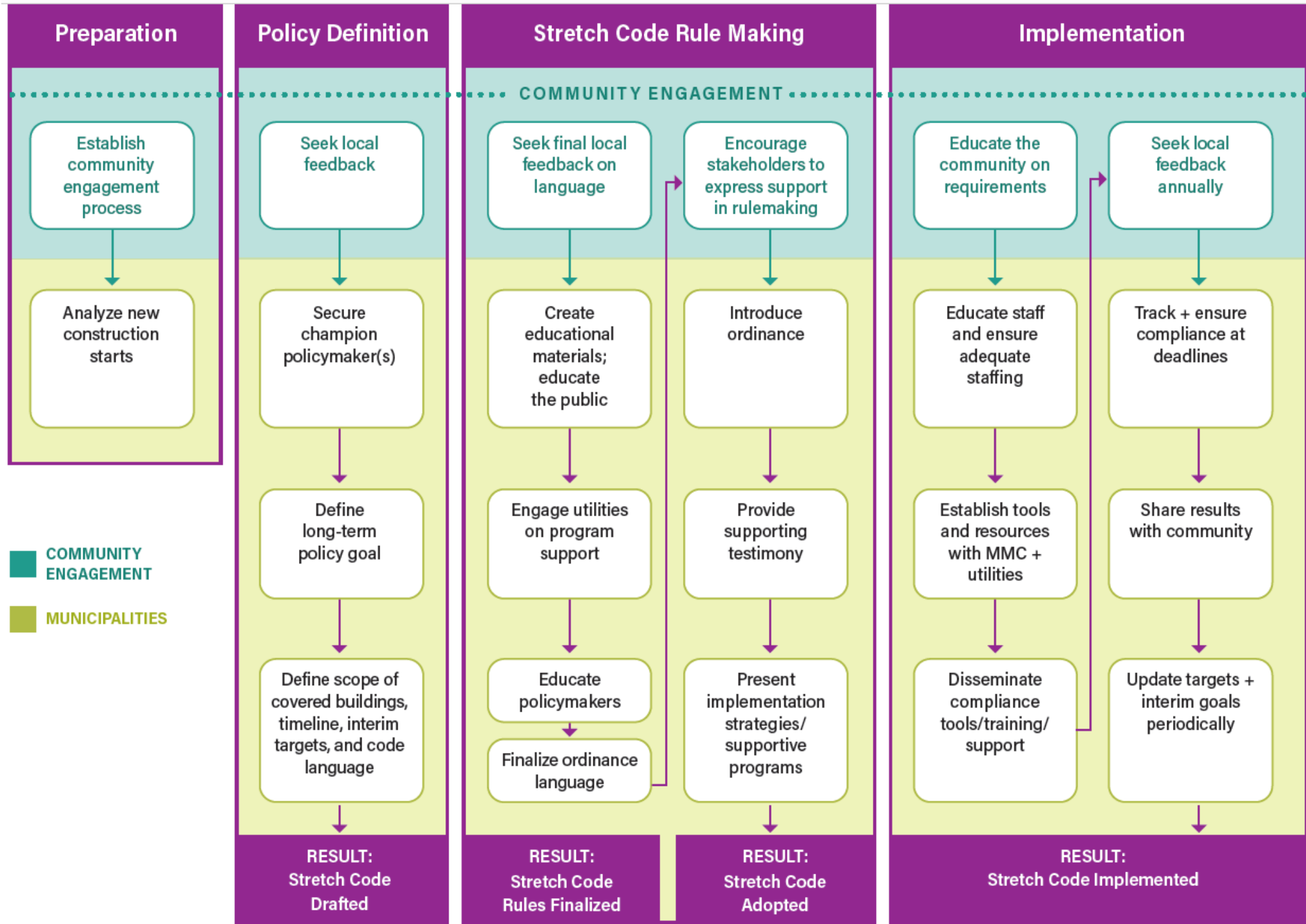


# Stretch Codes

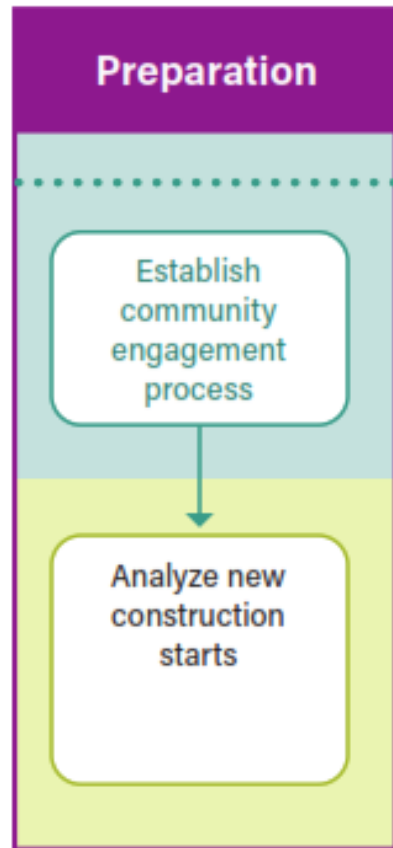
# Overarching Roadmap for Stretch Codes



# Stretch Codes



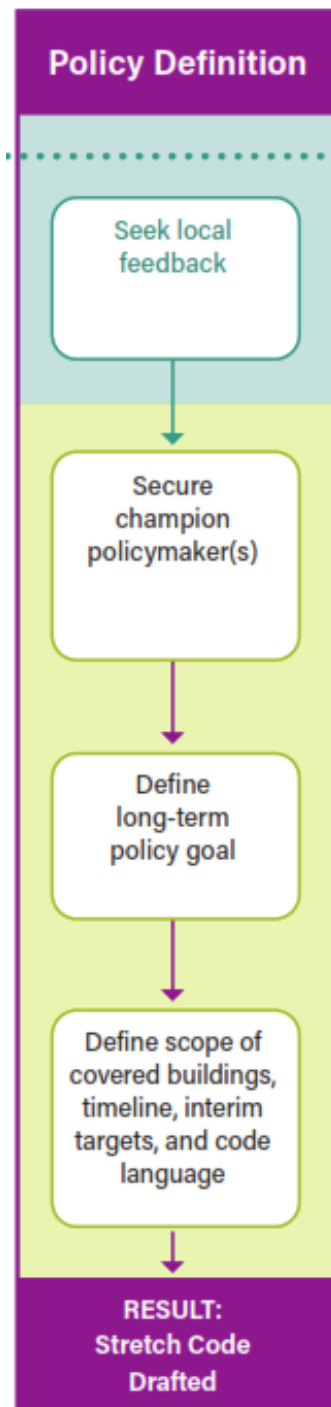
## Stretch Codes Preparation



- Provides the foundation for policy making
- Helps municipality understand the scope (new construction market)
- What other aspects are we missing?
- How long might this take?



# Stretch Codes



## Stretch Codes Policy Definition

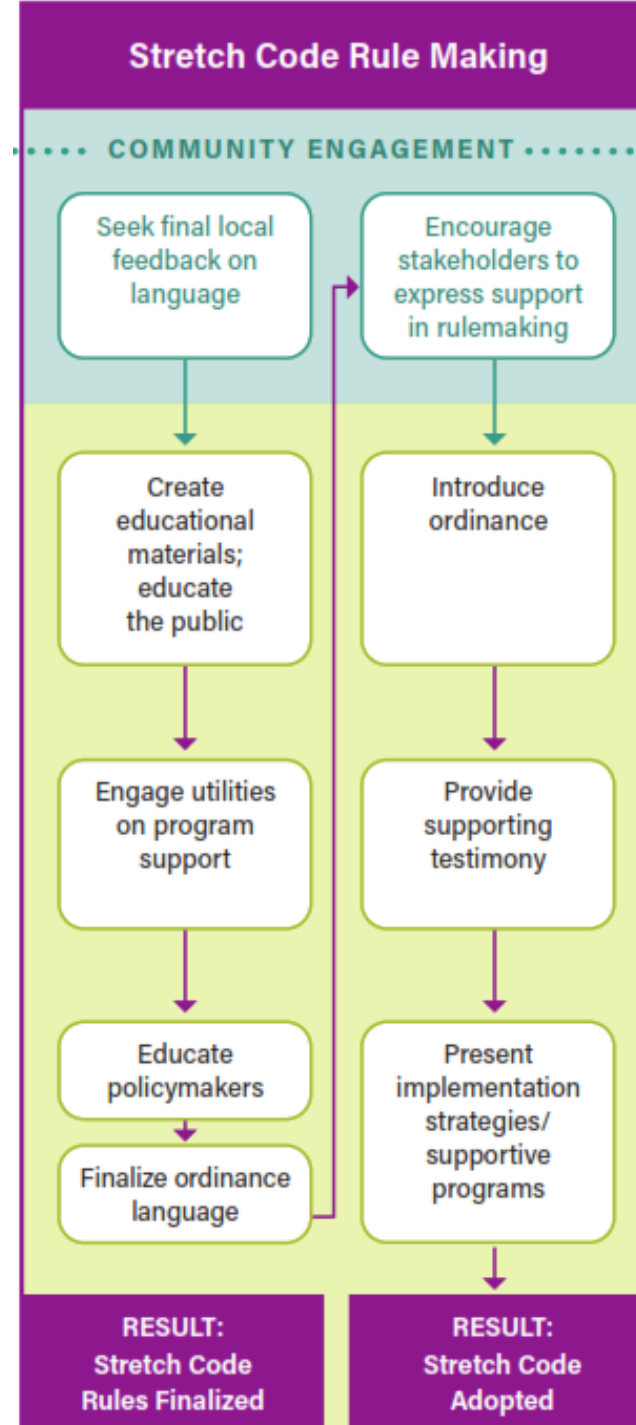
- How do you seek local feedback?
- What happens if there are no champions?
- What resources do you need to define scope?



# Stretch Codes Rule Making

- What challenges do you see in this rulemaking?
- What are the resources that you need?
- Are we missing key elements?

## Stretch Codes

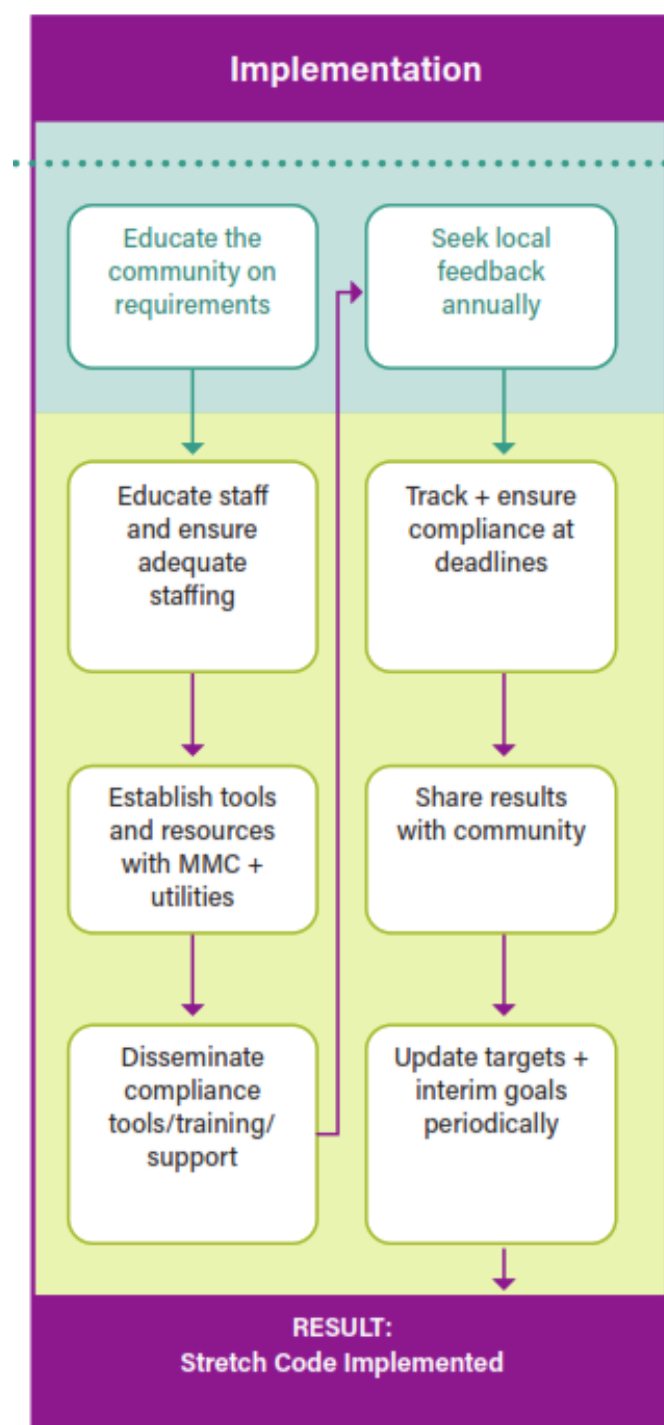




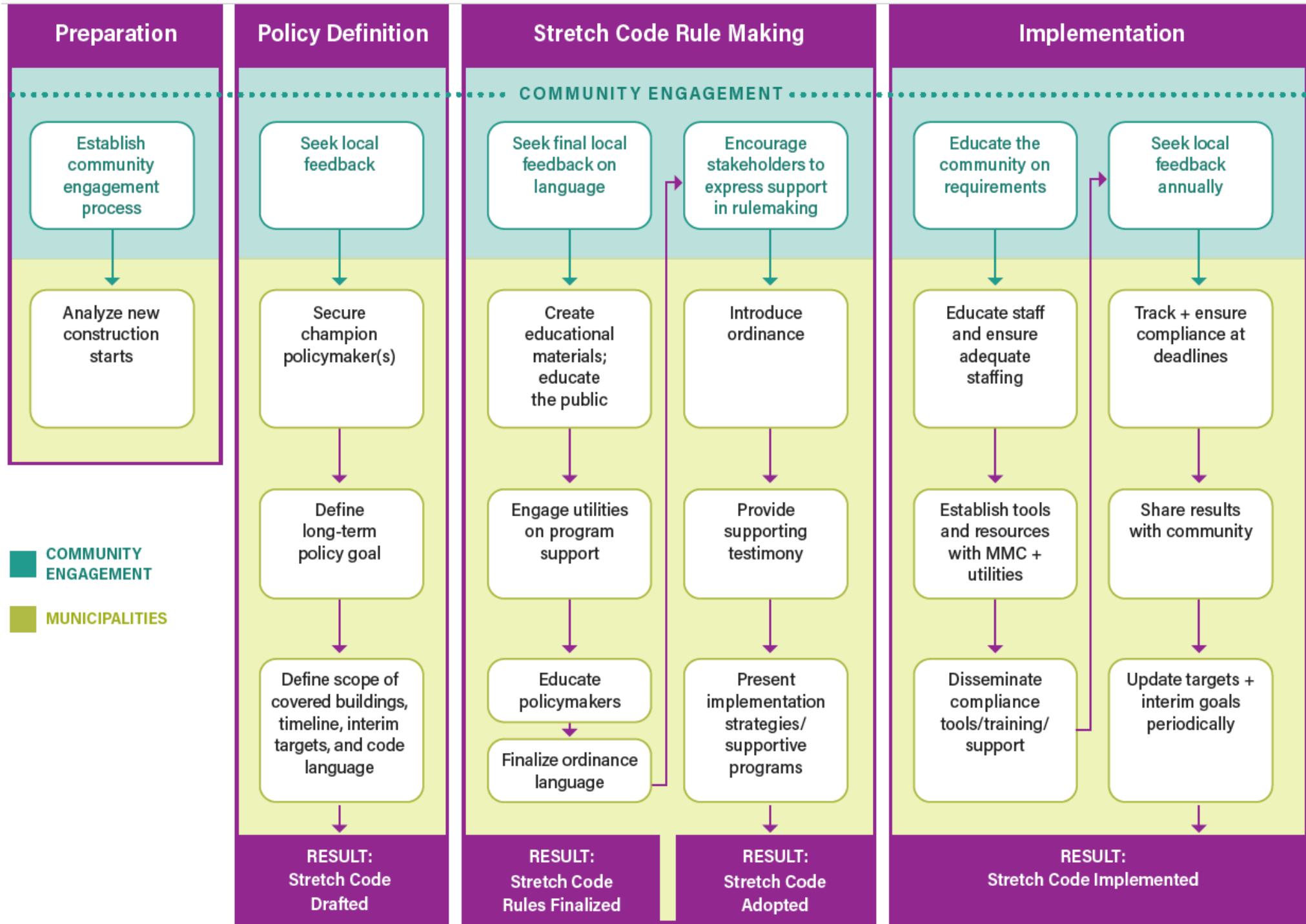
# Stretch Codes Implementation

- What resources do you need to educate staff and ensure capacity?
- What other challenges do you foresee?

## Stretch Codes



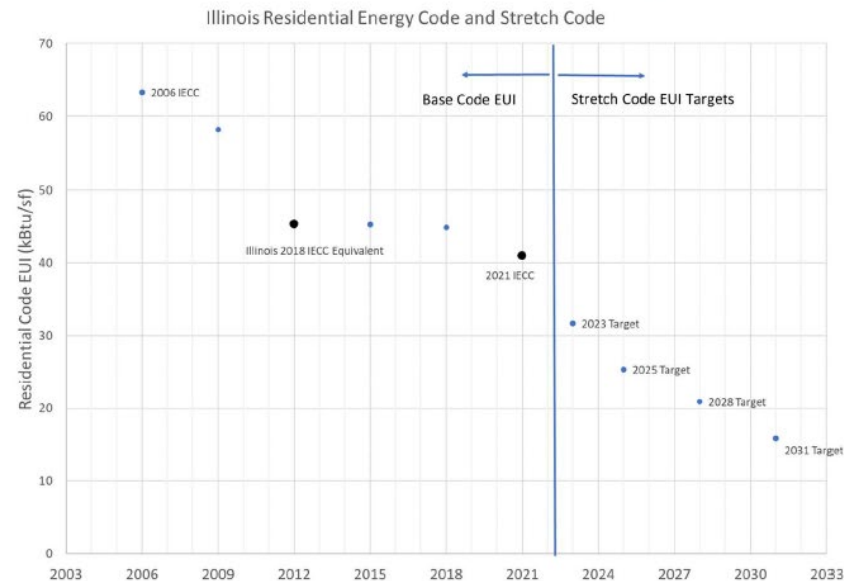
# Stretch Codes



# Residential stretch code targets

Illinois has set the site energy indices for the new Illinois stretch code, which will be developed and available for adoption by January 1, 2024. Municipalities will have the ability to adopt the stretch code for low-rise residential buildings and commercial buildings, and potentially go further than the stretch code for commercial buildings. In the interim, municipalities can adopt the stretch code targets or their own commercial stretch code. Municipalities are not limited in aspects not related to energy conservation, such as EV-ready, electrification-ready, solar-ready, etc. When a stretch code is adopted, it because the minimum requirement within that municipality. These targets must be met by conservation measures only, and “excludes net energy credit for any on-site or off-site energy production.”

## Residential EUI Targets



Codes for Climate

© New Buildings Institute 2021

## Setting Goals

There are four considerations of a stretch code policy:

- 1. Final new construction goal:** set for 15 to 30 years in the future. Example: Net-zero carbon by 2040 or NZE-ready by 2034.
- 2. Pre-stretch code goal:** determine if the municipality will adopt the SEI/EUI targets prior to the Stretch Code development or require its adoption once developed
- 3. Stretch Code goal:** determine if the municipality will adopt the first IL stretch code once available
- 4. Long term Stretch Code goal:** determine if the municipality will mandate automatic adoption in subsequent years



# Next Steps



## Next Steps for ABEEP

- Keep an eye out for follow-up email, opportunity to provide additional feedback
- Finalize flowcharts and list of resources
- Plan for final meeting in early December

