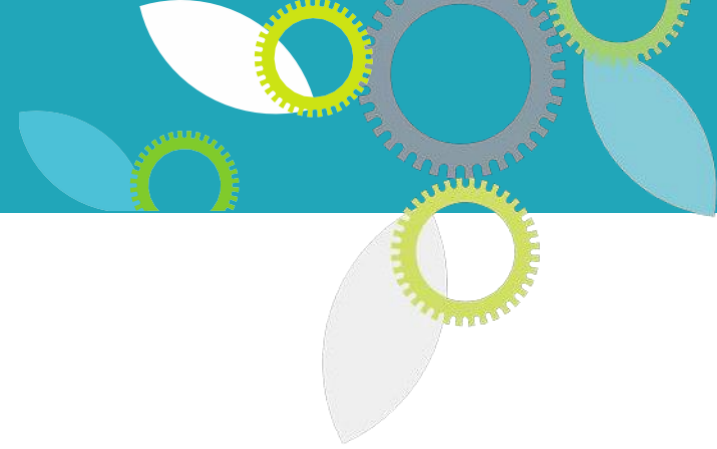




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Infrastructure Sustainability and Resiliency

Paradigm Shifts and Opportunities

November 19, 2020

Presented by:

Dr. Cris B. Liban, P.E., ENV SP

Chief Sustainability Officer

Los Angeles County Metropolitan Transportation Authority



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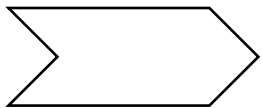
LA Metro is Los Angeles County's...



Regional Transit Planner/Funder



Regional Transit System Builder

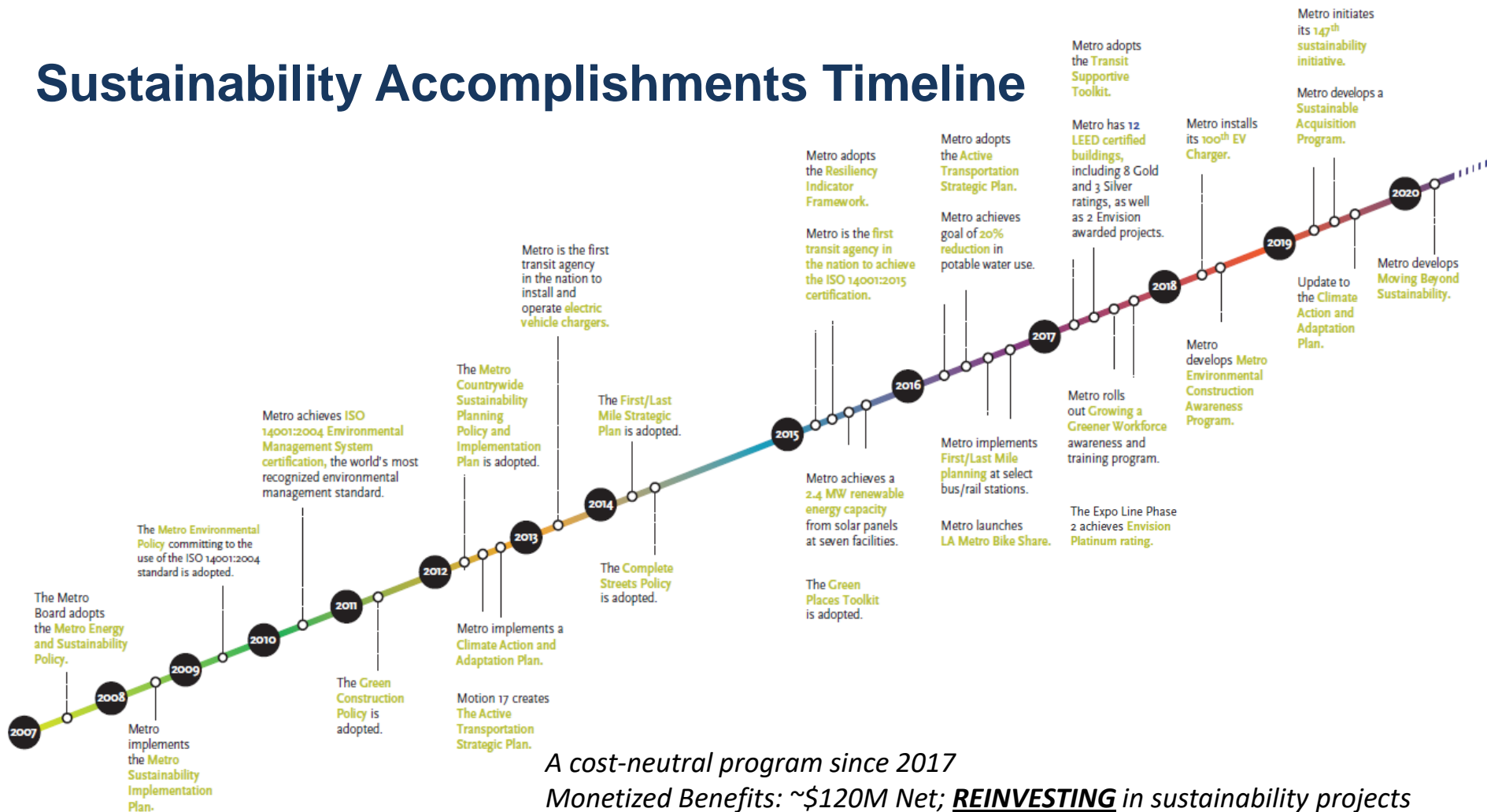


Regional Transit Operator



More information here: www.metro.net/sustainability

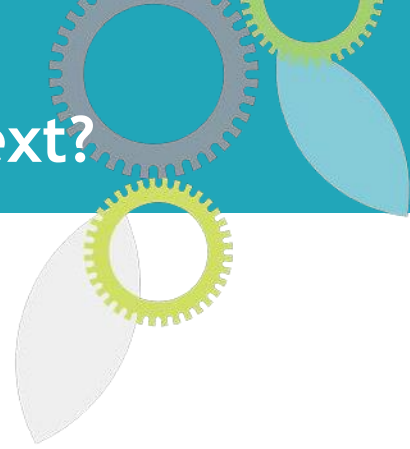
Sustainability Accomplishments Timeline



A cost-neutral program since 2017

*Monetized Benefits: ~\$120M Net; **REINVESTING** in sustainability projects*

Financial analysis done to implement these programs in next 10 years



- ❖ **Everything has changed**
 - ❖ **Assumptions**
 - ❖ **Baseline conditions**
- ❖ **What happens to the things that we are already doing?**
- ❖ **Are we using adequate and correct tools?**
- ❖ **LA Metro Recovery Task Force**

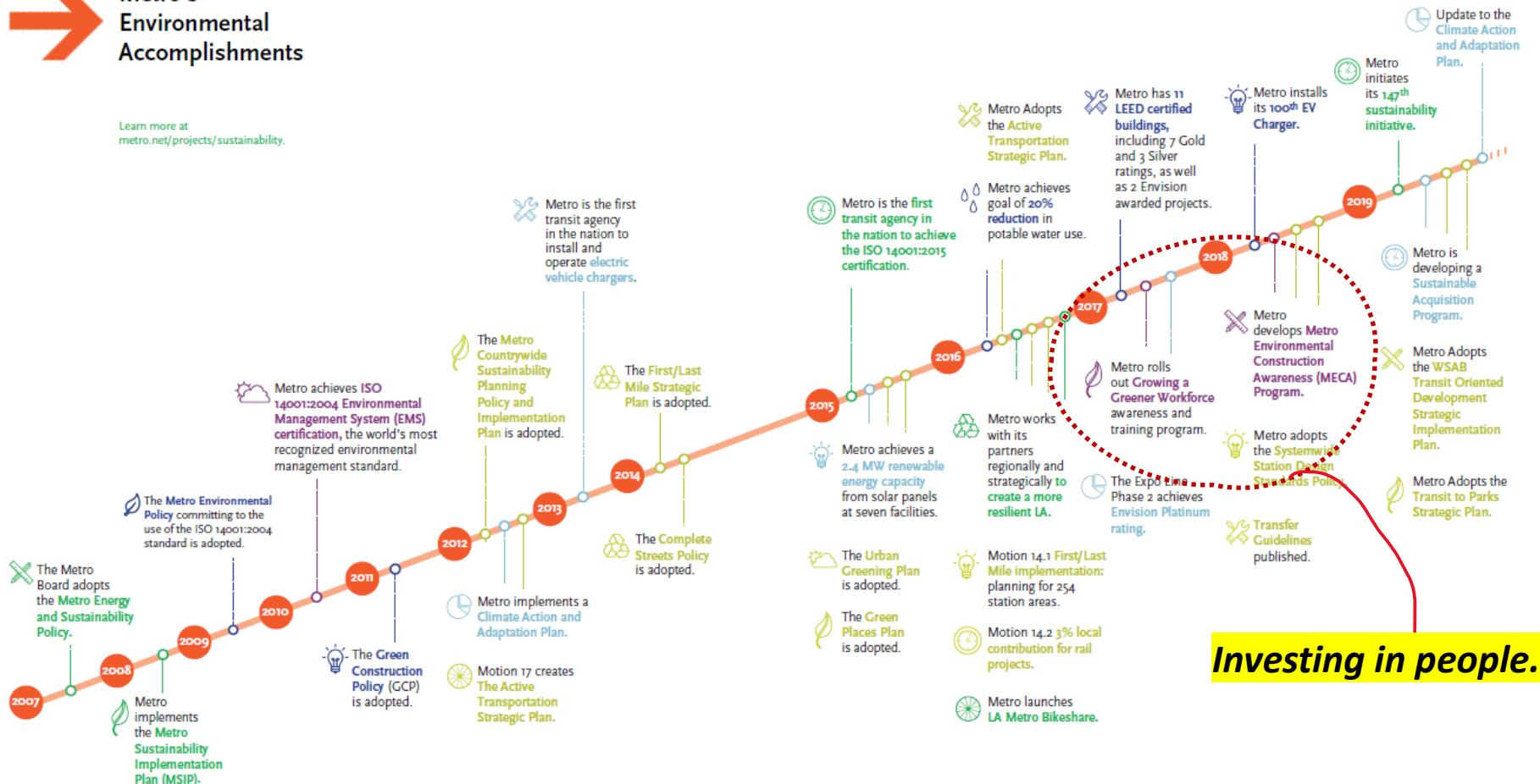


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Sustainability Accomplishments Timeline

Metro's Environmental Accomplishments

Learn more at metro.net/projects/sustainability.



Investing in people.

Sustainability Accomplishments Timeline

Metro's Environmental Accomplishments

Learn more at
metro.net/projects/sustainability.



Partnerships are key.

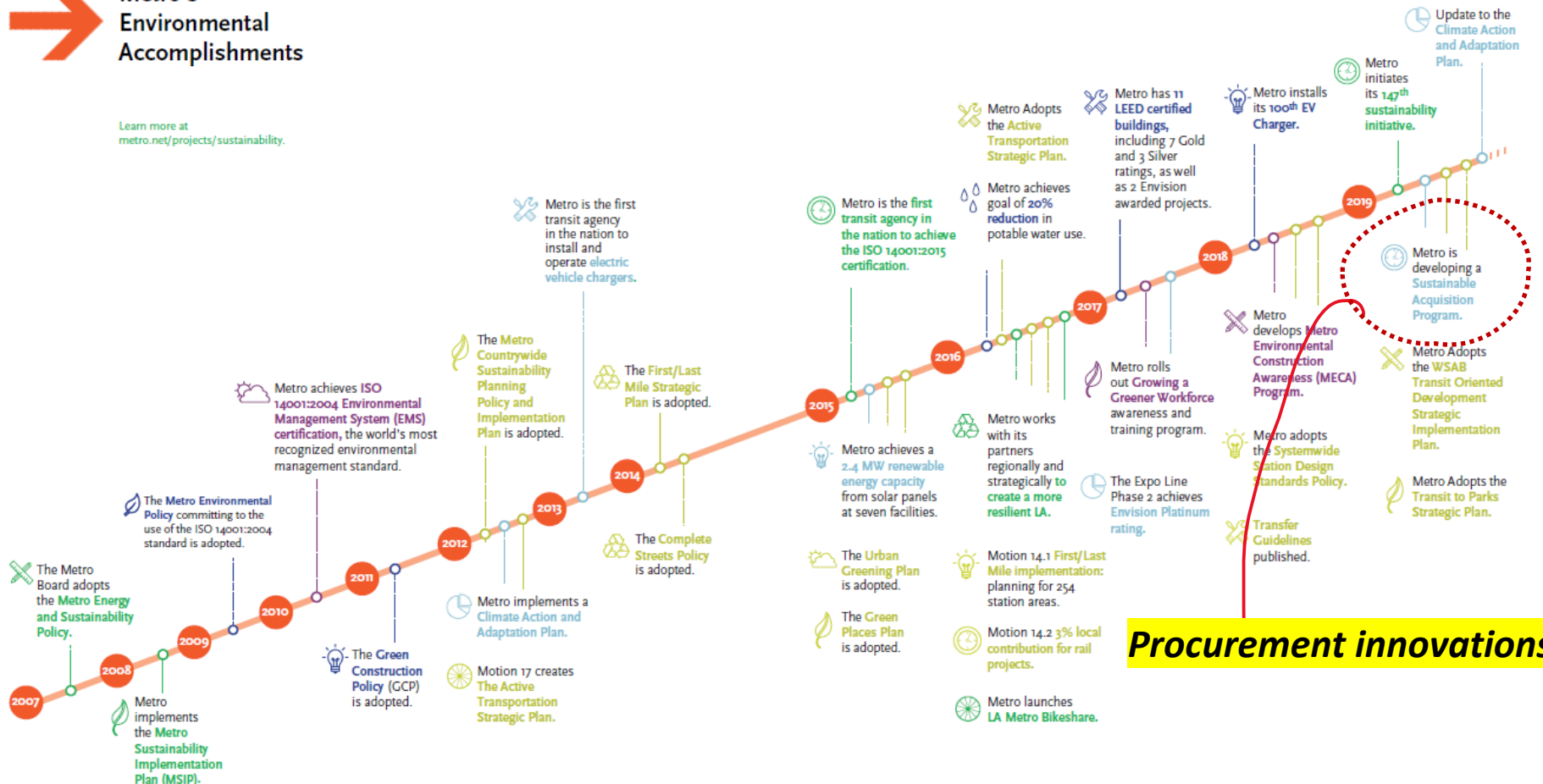


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Sustainability Accomplishments Timeline

Metro's Environmental Accomplishments

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Procurement innovations.



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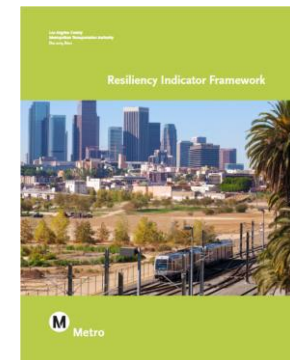
Infrastructure Considerations

❖ Effects of Infrastructures to Environment

- ❖ Project Development/Planning
- ❖ Design/Construction
- ❖ Operations and Maintenance

❖ Effects of Environment to Infrastructure

- ❖ All Hazards Assessment
- ❖ Mitigation/Adaptation
- ❖ Resiliency

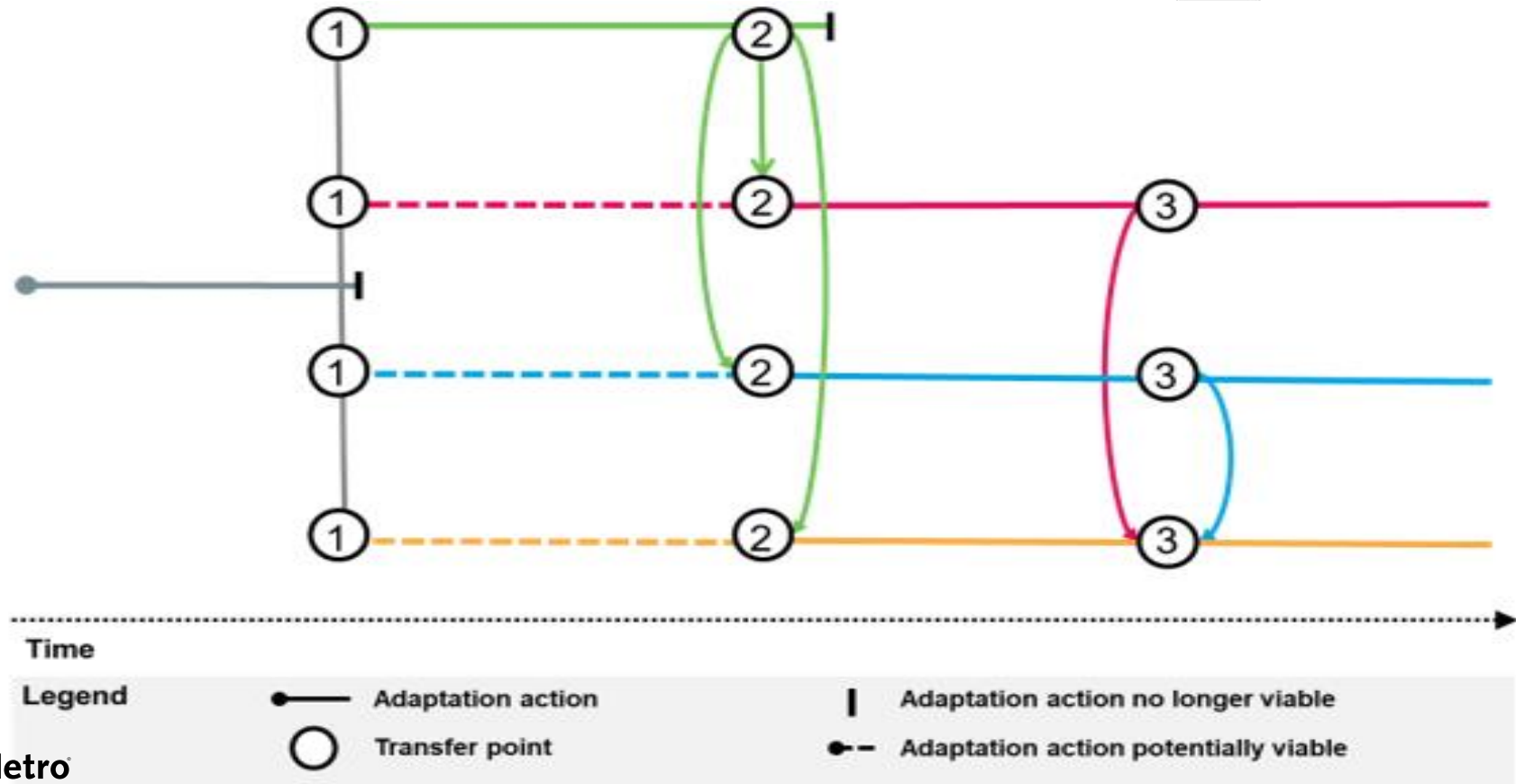




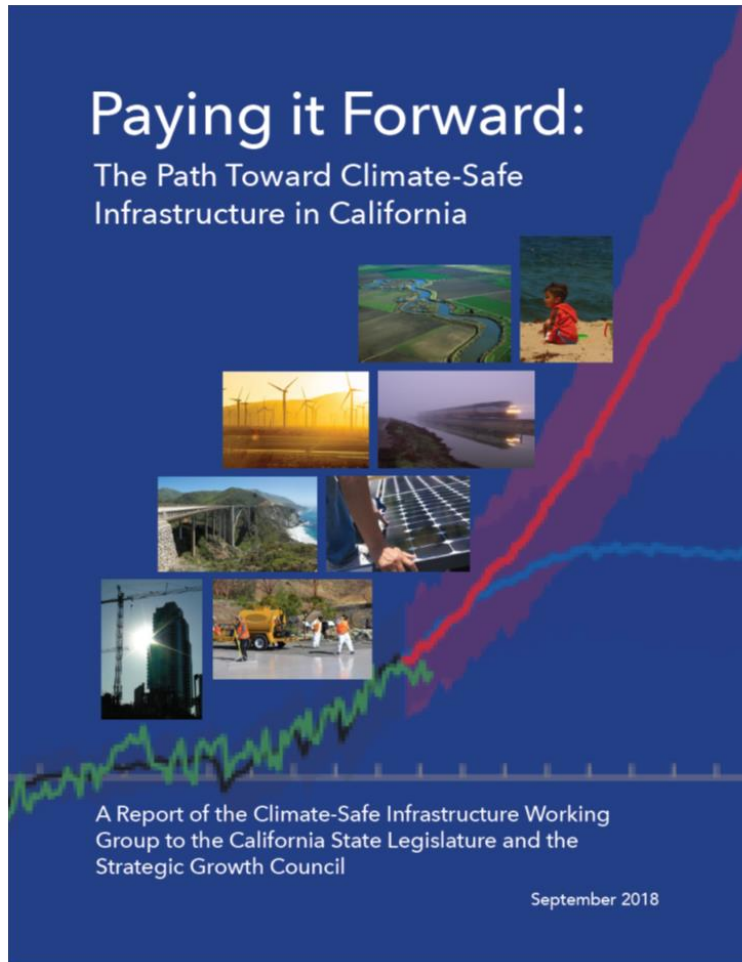
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Building on What We Know vs. Doing Nothing

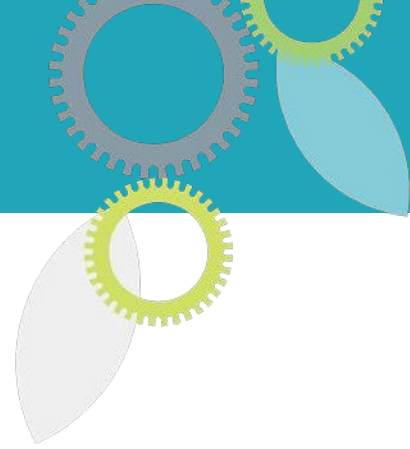
Adaptive Design/Flexible Adaptation Pathway Model



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- Climate Safe Infrastructure as Policy
- Permanent Funding for Science & Infrastructure
- Reinvent Engineering Process
- Training: All Phases of Infrastructure
- Development of Standards/MOPs
- Changes in Procurement
- Climate Safe Commission
- *AB2800 (Quirk/Gonzales): Making the provisions of the original bill extended indefinitely.*

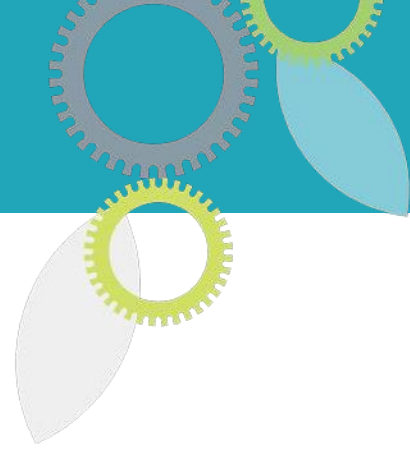


❖ **Efforts on the ASCE Sustainability Roadmap**

- ❖ **Standards**
- ❖ **Incorporating Climate Data into Practice**
- ❖ **Developing Procurement Documents**
- ❖ **Certification**

❖ **International Coalition on Sustainable Infrastructure**

- ❖ **Guidance, Tools and Standards**
- ❖ **Finance and Funding**
- ❖ **Innovation**
- ❖ **Leadership and Life-Cycle**



Questions/Discussion

Cris B. Liban, D.Env., P.E.
e/m: LibanE@metro.net

*www.metro.net/sustainability
sustainability@metro.net*