Regulating e-bikes and bicycles on mixed-use, multimodal pathways is crucial to ensuring public safety, particularly for vulnerable users. Here are some comparative suggestions from various places with established regulatory frameworks:

1. Speed Limits

- **Europe (General)**: Many European cities limit e-bike speeds to 25 km/h (15.5 mph) for Class 1 and Class 2 e-bikes. Some areas, like the Netherlands, have specific zones with lower speed limits (e.g., 15 km/h or 9 mph) in congested or pedestrian-heavy areas.
- **United States (General)**: The Consumer Product Safety Commission (CPSC) categorizes e-bikes into three classes:
    - Class 1: Pedal-assist only, up to 20 mph.
    - Class 2: Throttle-assist, up to 20 mph.
    - Class 3: Pedal-assist, up to 28 mph, generally restricted from bike paths and trails.
    - Some cities and states enforce lower speed limits on mixed-use pathways, often around 10-15 mph.
- **Australia**: In New South Wales, e-bikes are limited to 25 km/h on shared pathways. Speed limits are rigorously enforced in areas with high pedestrian traffic.

2. Power Limits

- **Europe**: The European Union limits e-bike motor power to 250 watts for road use. Higher power e-bikes are classified as mopeds or motorcycles, requiring registration and insurance.
- **United States**: The federal limit is 750 watts, but states and municipalities can set lower limits. For instance, New York City limits e-bikes to 750 watts, but some localities restrict it further.
- **Canada**: E-bikes are limited to 500 watts and a maximum speed of 32 km/h (20 mph).

3. Regulations and Enforcement

- **Netherlands**: Known for its extensive cycling infrastructure, the Netherlands enforces strict rules on bike lanes and shared pathways. Speed cameras and frequent police patrols help ensure compliance.
- **Germany**: E-bikes are categorized similarly to those in the EU, but local municipalities can impose stricter limits in specific areas. Bike paths are often segregated from pedestrian pathways.
- **United States (California)**: Class 3 e-bikes are required to have speedometers and are restricted from bike paths unless explicitly allowed by local ordinance. Enforcement includes fines and possible confiscation of non-compliant e-bikes.
- **Japan**: E-bikes must be pedal-assist only, with a maximum power of 250 watts and a speed limit of 24 km/h. Local authorities enforce these rules strictly with periodic checks.

4. Designated Areas and Pathways

- **Sweden**: Certain high-traffic areas have designated lanes for e-bikes with stricter speed limits (10-15 km/h). These are often separated from pedestrian zones by physical barriers.
- **New Zealand**: Shared paths often have designated times or zones where e-bikes are either restricted or allowed at reduced speeds to minimize conflicts with pedestrians.
- **Singapore**: E-bike riders must dismount and push their bikes in crowded pedestrian areas. Shared pathways have clear signage indicating speed limits and e-bike restrictions.

Recommendations for Implementation

1. **Lower Speed Limits**: Consider setting speed limits for e-bikes and traditional bicycles on mixed-use paths to 10-15 mph. Use variable speed limits in areas with high pedestrian traffic.
2. **Power Restrictions**: Limit motor power to 250-500 watts, depending on local needs and infrastructure capacity.
3. **Clear Signage and Separation**: Implement clear signage indicating speed limits and e-bike restrictions. Where possible, separate pedestrian and bicycle lanes with physical barriers.
4. **Regular Enforcement**: Use speed cameras, patrols, and periodic checks to ensure compliance with regulations.
5. **Education and Outreach**: Conduct public awareness campaigns to educate e-bike users and pedestrians about safe sharing practices on mixed-use paths.

Conclusion

Balancing the benefits of e-bikes with the safety of all pathway users requires thoughtful regulation, robust enforcement, and continuous public education. By learning from various jurisdictions and implementing best practices, we can create safer, more inclusive shared pathways.