

LINK21

CONNECT NORTHERN CALIFORNIA

Will Link21 include new train technologies?

Study Purpose: Define train technologies that will be considered in Link21 planning

Link21 is focused on improving two different existing rail systems – BART and Regional Rail– so that the passenger rail network in the Northern California Megaregion (Megaregion) functions as an interconnected system. Several important initial studies have been conducted to address key technical issues that will help shape the future of Link21 planning. One initial study looked at modern train technologies and their ability to meet Link21’s Goals and Objectives, and to serve the needs of urban, commuter, and intercity rail travelers.

Megaregional Travel Needs

Today, neither BART nor Regional Rail technologies alone can efficiently serve all the Megaregion’s diverse travel needs. These systems have different performance characteristics and serve diverse travel needs.

BART is a fast, high frequency urban service with a lightweight, largely electric fleet operating best within the urban core and connecting San Francisco, the Peninsula, South Bay, and East Bay communities.

Regional Rail is a megaregional commuter and intercity service with a heavier fleet powered by electricity, diesel, hydrogen, or battery. This service operates on longer routes designed for less frequent stops and faster speeds to reduce overall travel time.



About Link21

Link21 and its partners will transform Northern California’s passenger rail network into a faster, more integrated system, providing safe, efficient, and affordable travel for everyone. At the core of Link21 is a new transbay passenger rail crossing between Oakland and San Francisco that could be a second crossing for BART, a new one for Regional Rail, or both.

Link21Program.org



Key Findings

Modern Regional Rail train technologies, common throughout Europe and Asia, typically use lightweight, zero-emission electric trains. These technologies are being considered for Link21.

Future train technology must be compatible with the existing train systems and deliver a range of rail services to help meet the transportation needs of people within the Megaregion.

Train technology under consideration will:



Integrate Systems to Enhance Rider Experience

Allow compatibility between the two systems serving both BART and Regional Rail ridership needs with a seamless transition between higher-speed megaregional routes and the urban core.



Connect People and Places to Improve Access

Improve megaregional connections through the new transbay passenger rail crossing by increasing the number of places that are accessible between the Sacramento and San Joaquin regions, and San Francisco, the Peninsula, and the South Bay.



Reduce Emissions to Improve Air Quality

Support environmental stewardship by replacing existing diesel-powered Regional Rail trains to reduce greenhouse gas emissions by the time the new crossing is in service.



High-performance, zero-emission trains, like those in the future Caltrain fleet, could support Link21's goals and needs.

Future Link21 planning will focus on further evaluation of high-performance, zero-emission train technologies that have the potential to achieve Link21's Goals and Objectives. Link21 is working with the state of California on technology considerations as the leader of procurement of zero-emission rail vehicles for intercity passenger rail. Within the Link21 planning efforts, only systems compatible with BART and existing Regional Rail systems are going to be considered.

**For more information,
visit Link21Program.org.**