

## WASHINGTON UNIVERSITY IN ST. LOUIS

St. Louis, Missouri

Founded at the end of the 19th century, Washington University in St. Louis benefited from the concurrent infrastructure required for hosting the 1904 World's Fair (Louisiana Purchase Exposition) and the Olympic Games. After the completion of the events, housing, meeting, and athletic structures were adapted to campus needs, becoming the university's Danforth Campus.

### Before

David R. Francis Field was constructed in 1902. Its first uses were hosting the third Olympic Games and the 1904 World's Fair (off photo).

The original buildings were leased to the company organizing the 1904 World's Fair in nearby Forest Park.

The Danforth Campus originated with five buildings designed with inspiration from Oxford and Cambridge, resulting in the American Gothic style of architecture.



The Danforth Campus was an expansion and relocation strategy for Washington University in St. Louis's original downtown location.

The edges of the original buildings form a central space for gathering.

Brookings Hall and the building courtyards create a "front door" connecting the university and Forest Park.

### After

Brookings Hall continues to be a prominent icon for the university and serves as the primary administrative building.

David R. Francis Field is now used for university athletics.



Buildings were first built along Forsyth Boulevard and Forest Park Parkway, leaving open space in the center of campus. More buildings have been added as part of the East End Transformation.

What was once a surface parking lot has become a park with an underground parking garage.

The East End Transformation of the Danforth Campus includes new LEED Platinum buildings, sustainable landscape strategies, and improved access for all users.

### Campus Information

USES 1904: World's Fair and Olympic Games 1905–Present: University Campus	<b>169</b> SIZE Number of acres as of 2023	<b>1904: ~5</b> <b>2023: ~110</b> BUILDINGS Before and after reuse	<b>17,000</b> POPULATION Total number of people on campus
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## CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS

Camarillo, California

Prior to becoming a university, the site was used for the treatment of people living with mental illness. In the late 20th century, attitudes towards those living with mental illnesses evolved and care practices improved, leaving facilities like the Camarillo State Hospital available for new uses. The hospital's strong architectural character, unique landscape, and robust sense of place was naturally attractive and befitting of a university campus.

### Before

The original bell tower is where patients were first housed.

The hospital campus was originally designed to frame views of the mountains.

The facility was conceived as an agriculturally-based and largely self-sustaining community designed to isolate patients.



The hospital wings were designed to maximize natural ventilation and daylight, which formed walled courtyards that contained the patients.

Two formal quadrangles were segregated for men and women (North and South Quads).

The hospital was almost exclusively made up of Mission Revival and Spanish Colonial Revival-style buildings.

### After

Height limitations in the campus core preserve mountain views from the quads, while respecting the low-scale, intimate spaces of the Mission-style buildings which are part of the campus's appeal.

The iconic Bell Tower (now home to classrooms and student-centric spaces) was the first renovation project on campus and is now recognized as the school's most prominent icon.

The new entry road provides a distinct campus arrival, while a 3.7 megawatt solar array demonstrates the campus's commitment to sustainability by providing nearly 70% of CSUCI's energy needs.



Some original hospital wards have yet to be renovated and provide the opportunity for future renovation and/or infill with new construction.

The South Quad, at more than six acres, is used for a variety of passive recreational activities and commencement ceremonies.

John Spoor Broome Library, built in 2008, is the only campus building designed apart from the traditional Mission and Spanish Colonial architecture of the campus.

### Campus Information

USES 1917–1932: Ranch House 1936–1997: Mental Institution 2002–Present: University Campus	<b>1,187</b> SIZE Number of acres as of 2023	<b>1997: ~64</b> <b>2023: ~49*</b> BUILDINGS Before and after reuse *buildings in use	<b>6,700</b> POPULATION Total number of people on campus
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# 2023

## COMPARING CAMPUSES

### Adaptive Reuse

Our 2023 poster showcases the resilience of higher education by exploring adaptive reuse. Universities have been repurposing buildings and sites throughout their history to serve different uses than they were originally designed to support. Looking back at the four distinctive adaptive reuse stories featured on this year's poster puts today's campus planning challenges into context.

With pressures from changing demographics, shifting real estate needs, and increased importance of resource stewardship, institutions must adapt in creative ways. Many buildings constructed during the post-World War II boom have reached the end of their useful life, and most colleges and universities are finding that they need different types of space to support today's learners. Many institutions are finding that they need different space but not more space.

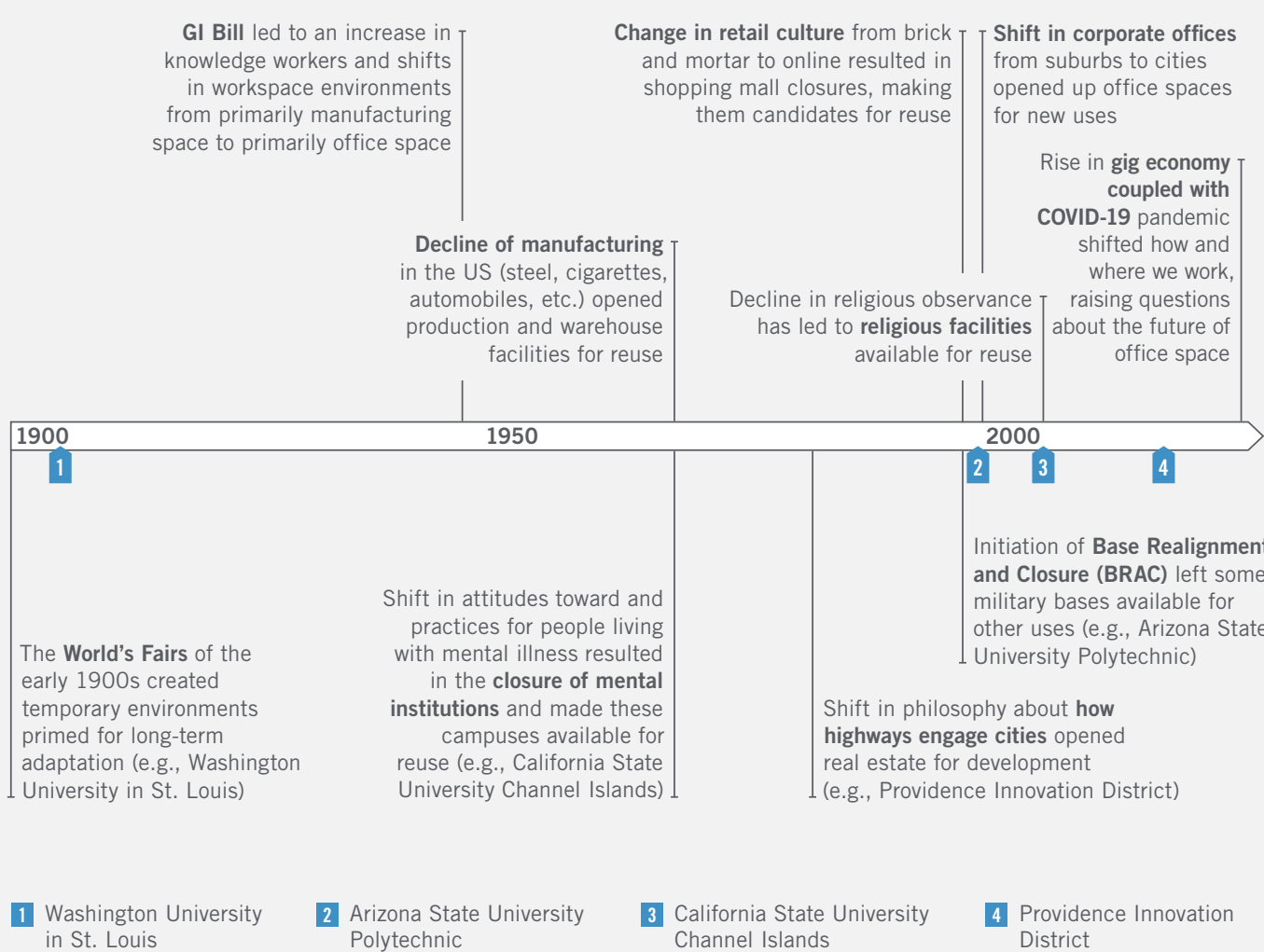
Adaptive reuse strategies can help institutions reduce their carbon impact and minimize the cost of meeting space needs while maintaining vibrant campus environments and celebrated places. Reuse strategies can include reinvention of an entire campus, brownfield redevelopment, and renovation and renewal of existing assets. In some cases, institutions pursue adaptive reuse opportunities independently while in others, adaptive reuse partnership projects in their host communities result in vibrant locations for university programs that are embedded in the community.

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## CONTEXT

### WHAT HAS LED TO ADAPTIVE REUSE OPPORTUNITIES

Macro-economic conditions, social change, and cultural shifts have created adaptive reuse opportunities. Buildings that were once in high demand can sit vacant or underutilized as space needs change. Our research shows that colleges and universities have leveraged these shifts to repurpose existing structures and environments into higher and better land uses to meet current campus space needs at both the campus and building scales.



## ARIZONA STATE UNIVERSITY POLYTECHNIC

Mesa, Arizona

The Arizona State University Polytechnic (ASU Poly) Campus was once part of the U.S. Williams Air Force Base. A portion of the base was converted into a college campus under the Base Realignment and Closure effort. The programmatic alignments between the base and the college granted an efficient conversion as both institution types require similar facilities, including housing, dining, and meeting spaces. ASU Poly remains today as one of Arizona State University's five campuses.

### Before

The base location was specifically chosen to be isolated from populated areas, creating a self-contained community.

The purely functional layout of the base worked as a military installation but lacked identity and a sense of place.

The area of the future ASU Poly campus contained about 14 acres of asphalt and concrete to support base activities.



The base was used to train WWII pilots and mechanics which required ground support and heavy maintenance equipment for aircraft.

Activities on the base caused soil and groundwater contamination which needed to be solved prior to the land's reuse.

### After

Williams Community School is an ASU Poly partnership, providing space and faculty for the community's middle school.

ASU Poly was required to utilize all of the existing base buildings before adding new facilities, thus giving its academic, office, housing, and support buildings a unique identity that builds community.

In addition to ASU Poly, the base has been converted to accommodate a commercial airport, a Flight Academy, community colleges, high schools, a USAF research lab, and an Army Reserve Center.



The campus is home to a desert arboretum, promoting preservation, sustainability, and contemplation.

The design of academic buildings takes into consideration the natural desert environment.

New buildings are positioned on campus to create shaded courtyards and address seasonal storms.

### Campus Information

USES 1941–1993: Military Base 1996–Present: University Campus	<b>613*</b> SIZE Number of acres as of 2023 *original base 4,000+ acres	<b>1993: ~7</b> <b>2023: ~88</b> BUILDINGS Before and after reuse	<b>6,800</b> POPULATION Total number of people on campus
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## PROVIDENCE INNOVATION DISTRICT

Providence, Rhode Island

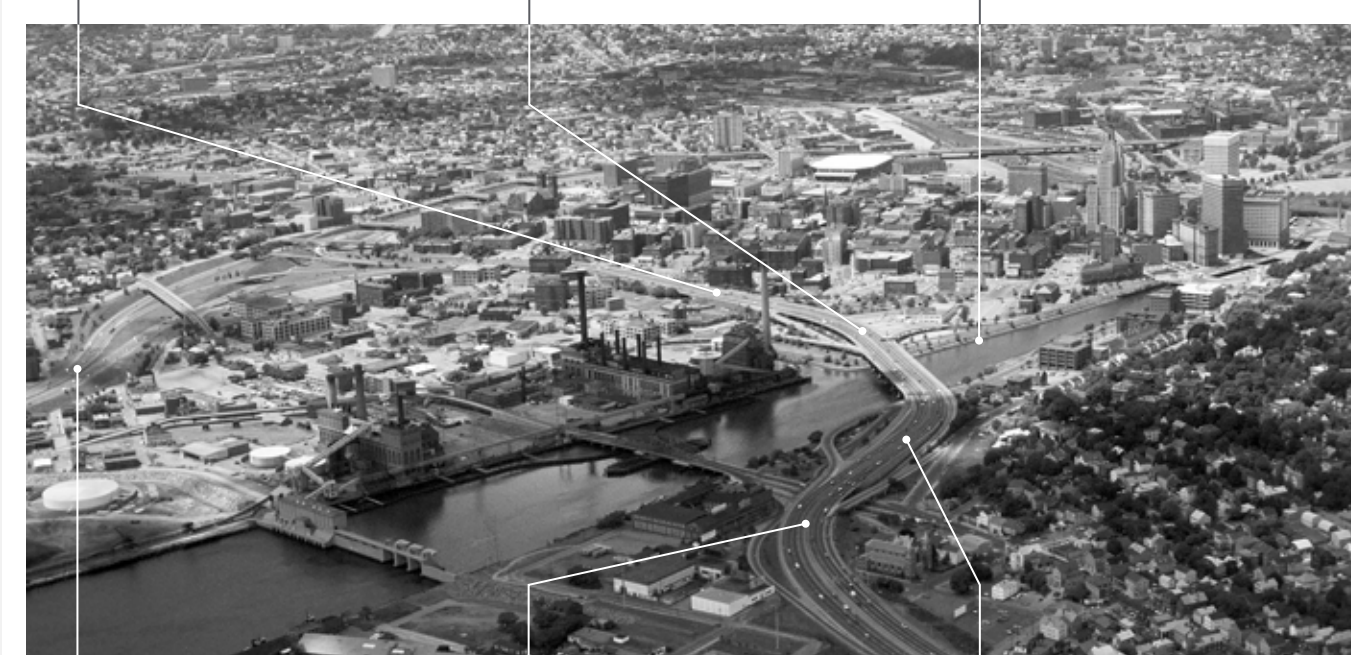
Providence was a city divided by a major vehicular artery, but the realignment of I-195 allowed neighborhoods to be connected and urban life to be rejuvenated. Providence's historic Jewelry District, home of Brown University's medical school, could then be reconnected to the city center. What was once a brownfield was reclaimed as a million-square-foot mixed-use community, including housing, a new hotel, retail, labs, research space, and a variety of tech start-up spaces.

### Before

Since the 1950s the site was used as a viaduct for I-195.

Tight turns at exits created high volumes of traffic congestion.

Edge of the Providence River was used as a hurricane barrier in the late 1930s.



The original layout of I-195 was deteriorating, becoming hazardous and causing increases in vehicular accidents.

Construction of the overwater highway led to the demolition of 35 buildings including businesses and residences.

Relocating the overwater highway to the other side of the hurricane barrier was intended to free up 45 acres of the Old Harbor in 1991.

### After

The new highway layout allows for connections between adjacent neighborhoods and extends connections across the city.

The district acts as a catalyst, creating spaces that facilitate collaboration and interaction between community members, business owners, students, and institutional leaders.

The district's proposed 700+ housing units, offices, and collaboration spaces will generate a significant economic impact.



The relocation of the highway opened 26 acres for future development.

The new pedestrian bridge allows circulation across the Providence River.

The former hurricane barrier has transformed into a seven-acre waterfront park.

### Campus Information

USES Pre-1950: Wharf/downtown 1950–2007: Highway 2015–Present: Mixed Use	<b>26</b> SIZE Number of acres as of 2023	<b>2007: Highway</b> <b>2023: ~14</b> BUILDINGS Before and after reuse	<b>4,765</b> JOB YEARS Generated from construction activities (estimated, project ongoing)
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## IMPACT

### WHY ADAPTIVE REUSE MATTERS

Adaptive reuse provides a high-impact strategy institutions can leverage in their built environments to meet pedagogical, fiscal, and environmental goals. In some cases, these strategies can also benefit their surrounding communities by elevating land uses. Institutions can better understand the impact of their potential adaptive reuse projects by cataloging the quality, quantity, and performance of existing assets to inform a phasing strategy to acquire, divest, or renovate with pedagogical and functional considerations in mind. Comprehensive renovations can support a better human experience, reduce operational costs, and minimize embodied and operational carbon emissions.

