



Hassell

DESIGN HORIZONS: DESIGNING PLACES FOR A CHANGING PLANET

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The converging pressures shaping the world our places must operate in.

2. Beyond resilience

Three principles that can deliver places that last.

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An exploration into three possible scenarios, and how a beyond resilience approach might work.

4. The path forward

Practical things that can be done today to ensure both new and existing places withstand future challenges.

HOW DO TODAY'S PLACES WITHSTAND TOMORROW'S CHALLENGES?

A place built today will still be with us in fifty years and beyond. What world will it exist in? Will it adapt to the changes that will come, or will it become a relic of a very different past? Will it still be used and loved? Or will it fall victim to the pressures of time?

The past decade is a glimpse of what may come. Record-breaking heatwaves, unprecedented flooding, accelerating species loss, widening fractures in social cohesion: the shocks that once seemed theoretical are now felt with growing frequency.

One solution has become dominant as a response to these challenges: we must build resilient places. These places must be built to withstand climate shocks. But withstanding shocks is only the start.

A broader definition of resilience is needed if our built environment is to keep pace with what's coming. A resilient place must evolve, work with living systems, and stay loved long after its opening day.

Grounded in our regenerative approach to design and supported by foresight methodologies, this paper explores what can be done today to create places built to flourish, whatever the future holds.

**A place built to last must
also be built to change.**

A PLACE BUILT TODAY MUST SURVIVE MANY POSSIBLE FUTURES

What happens to a place in 2050 depends on decisions made today. Building regulations, net-zero planning and methods of construction will shape what we build, as will emerging technologies, social movements and geopolitics. Nothing can be predicted with a high degree of confidence.

Foresight isn't prediction. It maps scenarios, so designers can prepare for a range of futures. By thinking through possible impacts and treating a place as a living organism, we can make it as resilient as the system it inhabits.

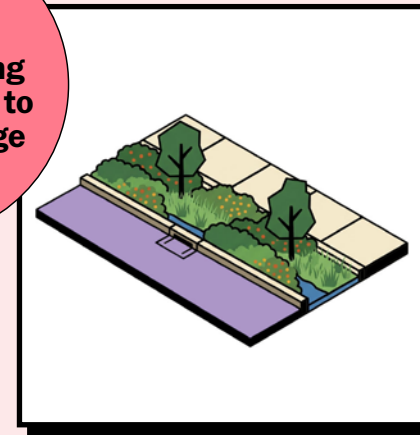
RISK:
Excessive heat affecting cities' liveability



Design for hotter summers

Climate change is causing hotter summers in many cities and most were not designed for the temperatures they now face. Excessive heat is a problem design must address. Some simple examples of resilient strategies include designing buildings to self-shade using an integrated system, such as a brise-soleil. At street level, a continuous tree canopy provides shade, reducing the urban heat island effect, while also creating habitat for birds, pollinators and other wildlife.

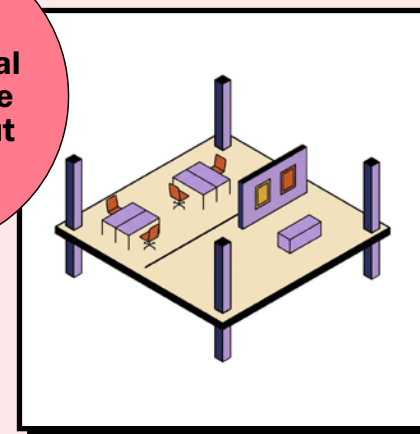
RISK:
Winter flooding increases due to climate change



Incorporate water-sensitive urban design strategies into a project

Conventional drainage moves water off-site as fast as possible into municipal systems. This puts pressure on system capacity and treatment downstream. A bioswale set between road and pavement slows stormwater, filters pollution, and lets the ground absorb what it can. Designed at scale, water-sensitive urban design can transform rainfall into a city resource instead of a problem to be managed.

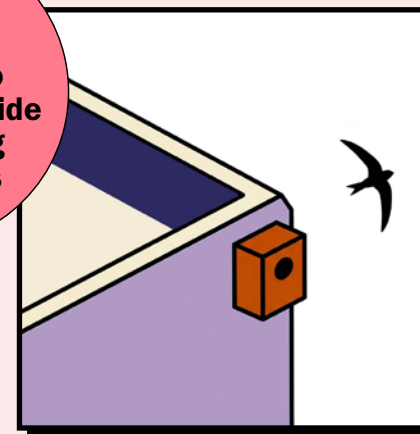
RISK:
The traditional five-day office week falls out of favour



Build in flexibility

Most buildings are designed for a single use and demolished long before their structure is spent. A flexible grid lets the same floorplate host an office, a gallery, or many other uses over time. Designing for deconstruction takes it further. Components can be removed, reused or replaced.

RISK:
Biodiversity continues to decline alongside accelerating species loss



Adopt life-centred design strategies

Buildings have always been designed for people. Life-centred design widens the frame, ensuring we are considering the needs of life beyond humans and support ecological systems by integrating green roofs, living walls and native planting. Swifts, bats and bees have lost much of the habitat they once relied on, and the buildings going up today can begin to reverse that loss and support ecological systems.

DESIGNING BEYOND RESILIENCE

To design and build beyond resilience is to make a place that changes with the world.

Making places that can withstand uncertainty demands a new approach to how they are designed, built, and managed.

We believe this approach – a beyond resilience approach – rests on three core principles which this paper will explore in detail: Evolution, Systems, and Resilience.

Unified, these three principles can create a truly resilient place ready to withstand the test of time.

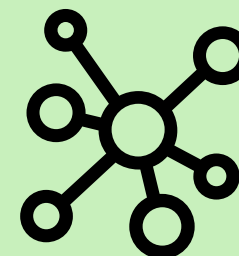
PRINCIPLE 1



EVOLUTION

Places must evolve over time.

PRINCIPLE 2



SYSTEMS

Places must be designed as part of the wider systems they join.

PRINCIPLE 3



RESILIENCE

Places must be built for resilience across the dimensions of climate, ecology, and society.

Principle 1: EVOLUTION

No design is ever complete

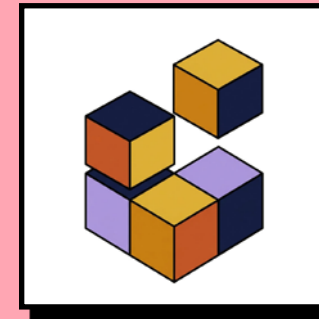
Because the world is forever changing, the places we design must be able to change with it. This requires adaptable buildings and landscapes that can be reworked over time, clear insights to signal when change is needed, and empowered people ready to act.

The concept of a place being able to evolve is nothing new. While this concept has a deep lineage in architecture and design, it's largely remained an outlier, typically reserved for the largest and grandest of projects. The industry's default is the finished object.

This model produces buildings optimised for the moment of completion, with little thought for the decades that follow.

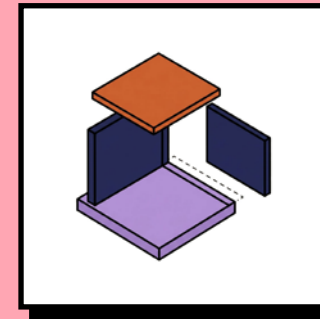
Designing for evolution means giving a place the capacity to change. That can mean designing for deconstruction, building in genuine spatial flexibility, or creating places that invite residents and communities to reshape them over time.

Eight examples of how to design for evolution



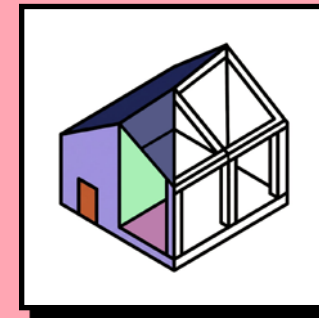
Modular building systems

Components designed to be added, removed and reconfigured over time so a building can change shape without being torn down.



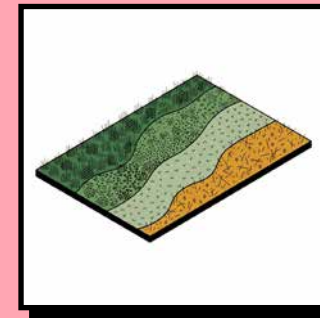
Design for deconstruction

Specifying buildings and fit-outs so their parts can be lifted out, reused or replaced as future needs change.



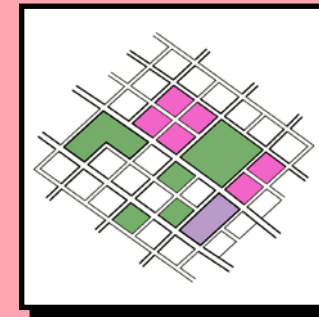
Deliberately incomplete

Places handed over with intentional gaps for occupiers to finish, shape and claim as their own.



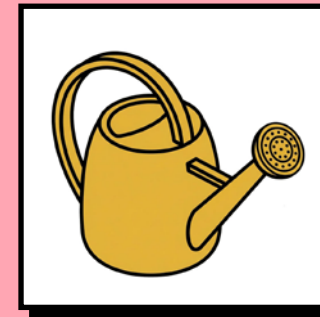
Experimental planting

Testing new combinations of planting to explore which species are best suited to future climate conditions.



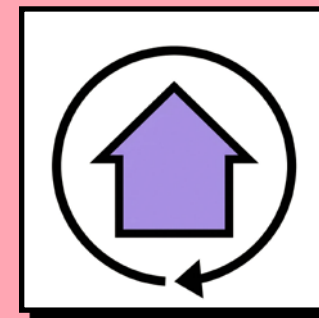
Framework over masterplan

Replacing fixed end-states with a structure of principles, so a place can adapt to conditions that have not yet arrived and decisions not yet made.



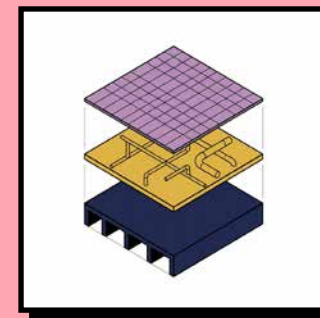
Stewardship roles

Funded, long-horizon positions written into a project's operating model, so the care for a place continues long after opening day.



Post-occupancy feedback loops

Formal mechanisms for learning how a place is used after handover, ensuring those insights shape ongoing changes to the place itself.



Layered construction

Designing structure, services and skin as independent layers, so each can be replaced or upgraded at its own pace without impacting the surrounding build.



Colma Creek, South San Francisco, USA

Hassell's renewal proposal for Colma Creek is designed to unfold in phases as sea levels rise and storm patterns intensify over the next half-century.

Principle 2: SYSTEMS

Design doesn't create systems. It becomes part of them.

Wherever we build, systems are already in place: ecological, social and economic, along with the natural processes that connect them.

Project sites are part of living, functioning and interconnected systems. Every new project, regardless of scale, adds to these systems and takes from them. A project that gives more than it takes is regenerative; one that takes more than it gives is degenerative.

The risks of ignoring systems are not always visible at first, but they can emerge as ecological, social, or economic disruptions.

A development built without regard for the wider water network can burden the region around it. A project that excludes the existing community will face opposition, delays, and lasting tension.

A project that builds over existing habitat fragments the green corridors species rely on and loses the very thing that made the site distinctive.

Designing with this in mind means examining which systems a place will join before its final form is set. In practice, that can mean mapping the ecological, social and economic systems already present, along with the natural processes that connect them. It can mean writing briefs that ask what a project gives to those systems, not only what it takes. And it can mean working at a scale that goes beyond the boundaries of the site itself.

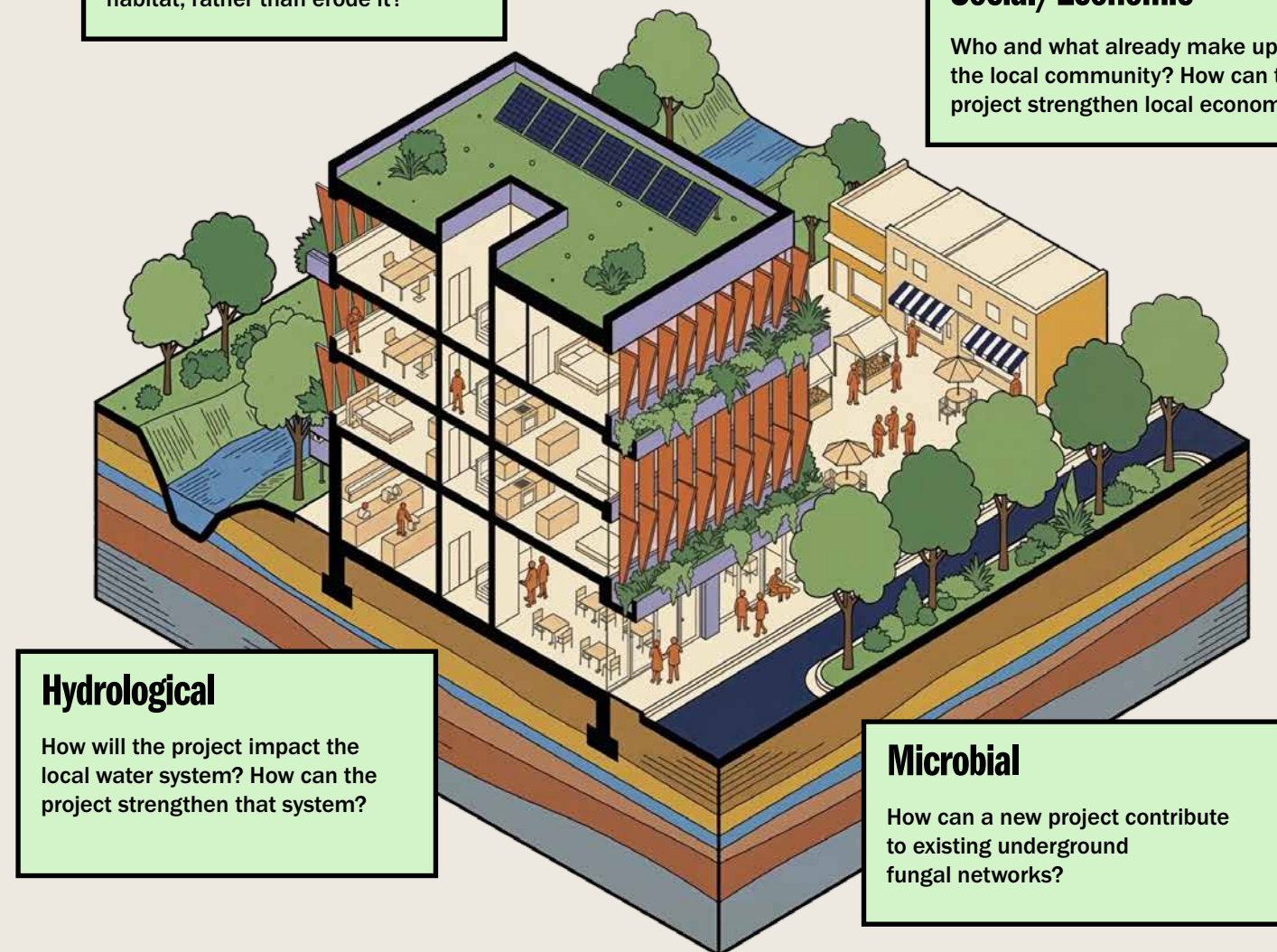
Designing with systems in mind

Ecological

What plant and animal species inhabit the area and how can a new project support their habitat, rather than erode it?

Social/Economic

Who and what already make up the local community? How can the project strengthen local economies?



Hydrological

How will the project impact the local water system? How can the project strengthen that system?

Microbial

How can a new project contribute to existing underground fungal networks?

Geological

What is the existing soil system? What species will thrive best in it?



Sunshine Coast Ecological Park, Kabi Kabi and Jinibara Country, Queensland, Australia

Adjoining the Mary Cairncross Scenic Reserve and developed with Jinibara Traditional Owners, the park extends an ecological and cultural network that farming had fragmented for a century.

Principle 3: RESILIENCE

A place must withstand more than extreme weather.

Resilience is usually understood as protection against climate shocks, such as storms, heatwaves, fires, or floods. But a place built today will face pressure from more than just extreme weather. It will be tested by a changing climate, stressed ecosystems, and shifting social demands. Going beyond resilience involves looking at all three together.

Optimising for one and neglecting the others can produce its own failures. Cooling a building through energy-intensive systems only fuels the climate extremes it's trying to resist. A flood defence that hardens a river edge loses the wetland habitat that was absorbing the flood in the first place.

A resilient place must be:

Climate-responsive: Designed for the heat, flooding, fires, and storms of the coming decades.

Ecologically regenerative: Designed within living systems that support habitat, soil, water and species, leaving a site richer for having been built.

Socially grounded: Designed with the people and communities who will use it, care for it, and ensure its long-term success.

A single design decision can do all three of the above functions at once. A planted roof that shades is a climate response, an ecological habitat and a social amenity. A stormwater-absorbing surface is a climate response, a wetland habitat and a civic space.

Designing for resilience this way means testing decisions across all three lenses, and rejecting solutions that solve one problem by creating another.

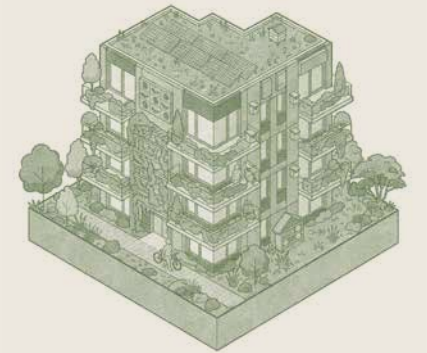
12 examples of resilient design strategies



Water-sensitive urban design



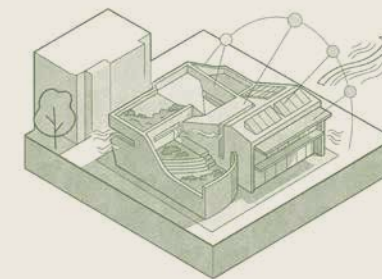
Life-centred design



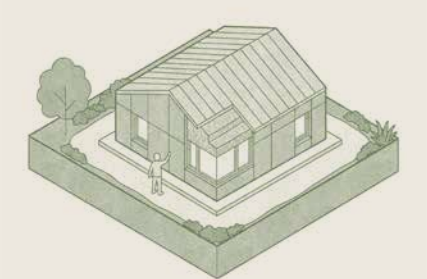
Habitat restoration



Passive design



Optimised form



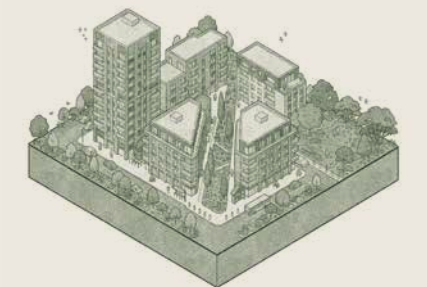
Fire-resilient design



Local community hubs



Designing for darkness



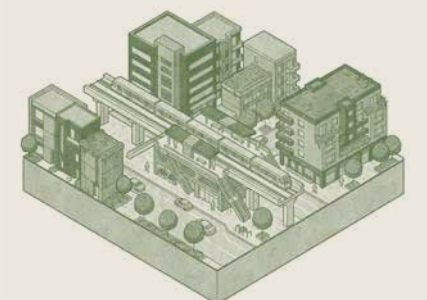
Ecological corridors



Walkable cities



Urban heat island reduction



Transit-oriented developments



Darling Harbour Sydney Public Realm, Gadigal Country (Sydney), Australia

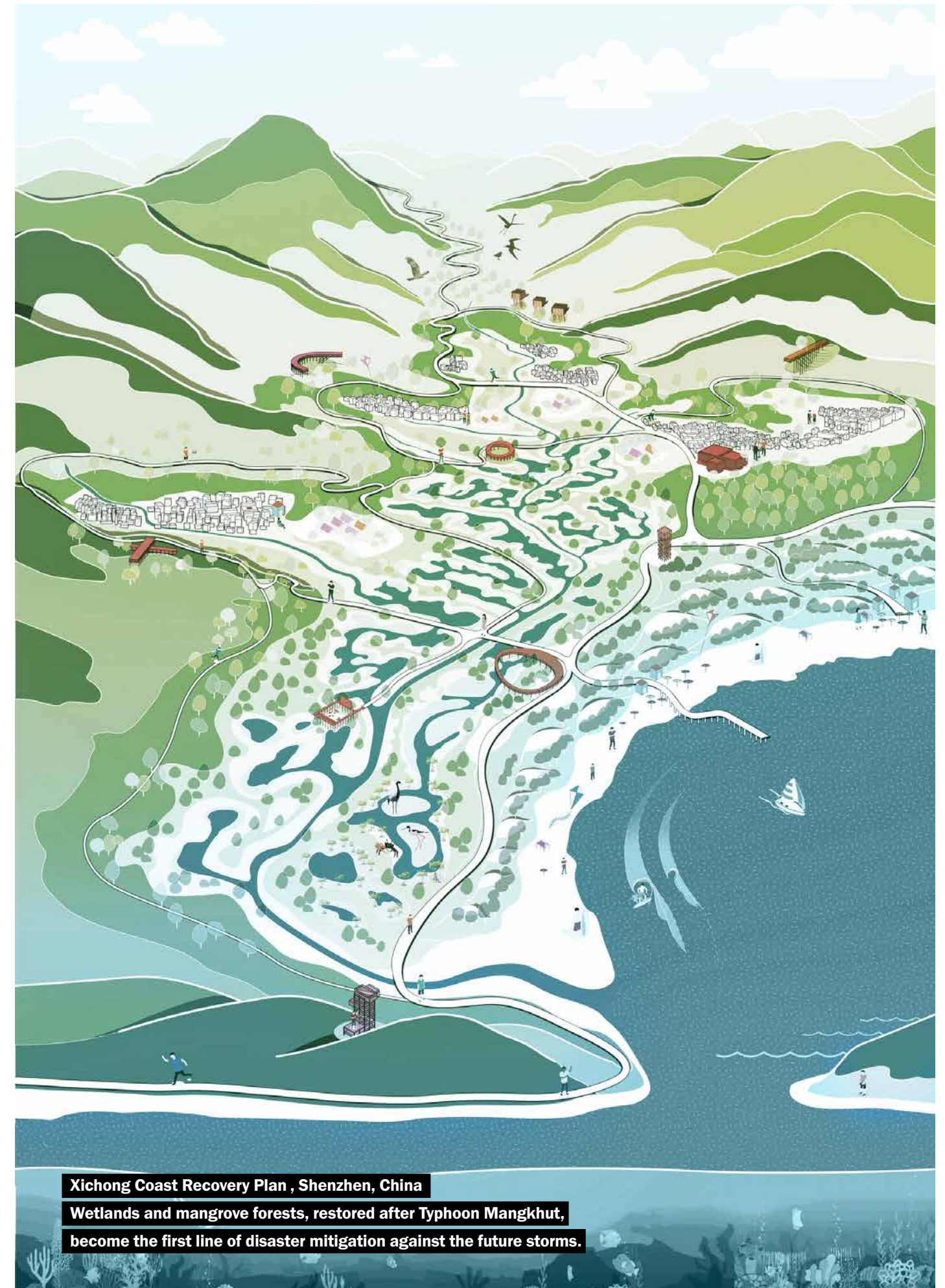
A landscape of 650 drought-tolerant trees and water sensitive urban design strategies keeps the precinct cool, ecologically rich and irrigation at a minimum for the hotter summers ahead.

PROVOCATIONS

Having defined the core principles of a living place – Evolution, Systems, Resilience – this section stress-tests them against three distinct urban scenarios.

- **THE BUILDING SCENARIO:**
Investigates how architecture can hold multiple futures.
- **THE NEIGHBOURHOOD SCENARIO:**
Examines how local places can strengthen communities over time.
- **THE CITY SCENARIO:**
Speculates on how urban networks can adapt their most vulnerable places to an uncertain future.

These provocations emerge from live project challenges and global insights gathered across Australia, Europe, Asia, and North America. Each scenario sits in a generalised city archetype rather than a specific location, so the strategy can travel across contexts.



WHAT IF THE OFFICE TOWER OUTLIVED THE OFFICE?

THE BUILDING SCENARIO

An office tower is planned in a coastal Australian city with hot summers and wet winters. The brief is focused on the short-term: high density, predominantly single-use, with some ground-floor mixed-use.

A typical approach might prioritise a few easily reached sustainability targets such as shading, material reuse from the existing site, or a public-access ground floor. The building works on the day it opens. The question is how it performs three decades later, when summers are hotter and the office market has moved on.

A BEYOND RESILIENCE APPROACH

The alternative starts with a different brief. The tower is sized, structured and serviced to outlive its first use as a workplace. Floor-to-floor heights are generous enough to enable a residential or educational fit-out without structural change. Floor plates can be split or combined as demand shifts, and services are routed for easy replacement when the standards they meet today become obsolete.





SYSTEMS

An ecological corridor threads through the building, rising from ground level through planted outdoor areas to a blue-green roof that stores rainwater.

EVOLUTION

The building is designed with future tenants in mind, so it can serve needs beyond the traditional office.

RESILIENCE

The building is built for the decades ahead: an outdoor space shaded for hotter summers, services wired for a low-carbon grid, and a ground floor that contributes to the street.

HOW PUBLIC PLACES SUPPORT THE NEXT GENERATION OF GARDENERS

THE NEIGHBOURHOOD SCENARIO

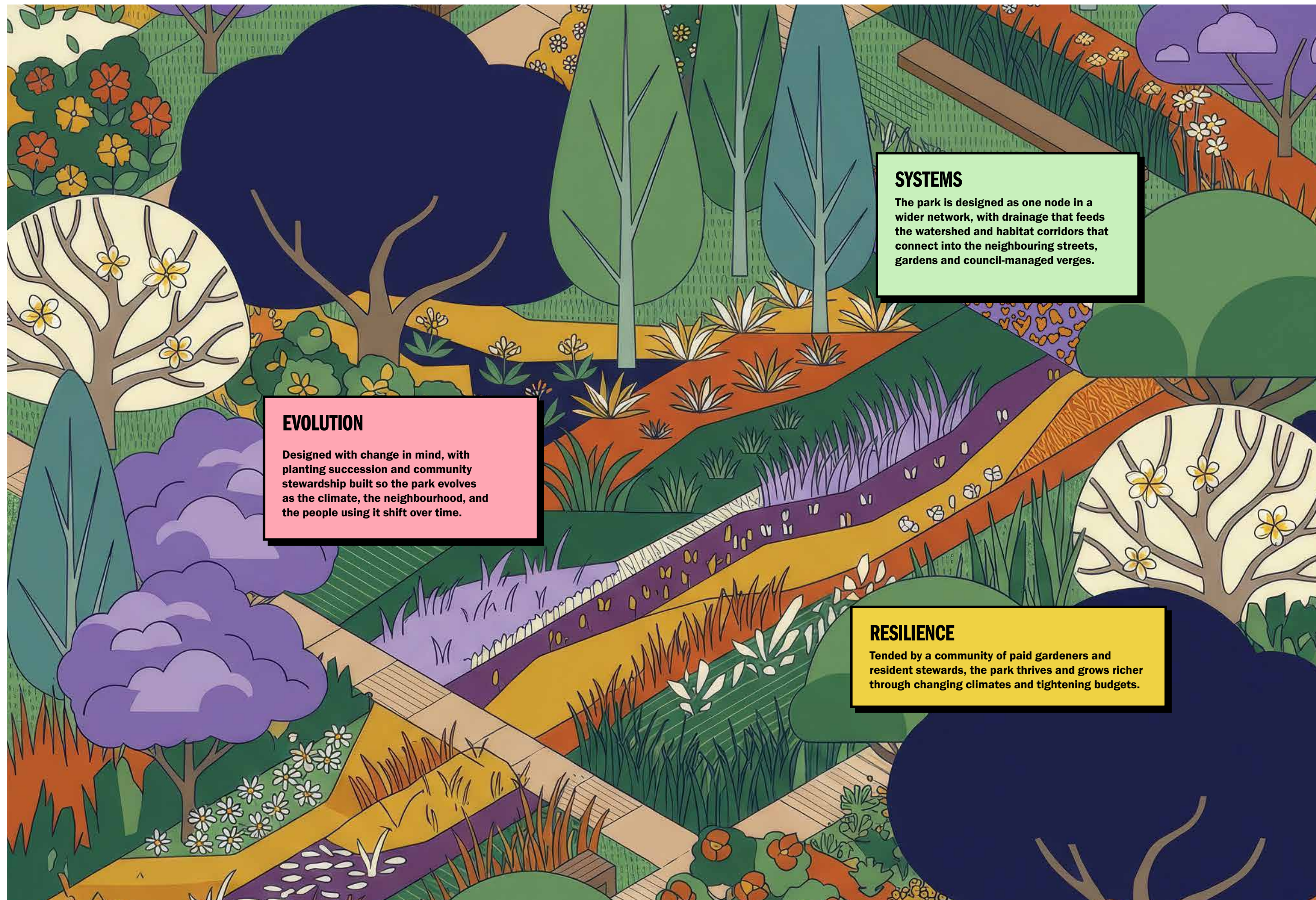
A new urban park is planned in a sub-tropical city, where summers are getting longer and hotter. The brief is generous: a biodiverse planting palette, climate-suited species, an ambitious ecological narrative. A typical approach might focus on what's visible at handover, such as the species mix, the planting plan, and the moments people will photograph at opening and over the coming seasons.

The question is what will still be thriving at year five, when the maintenance contract has been signed and five summers of wildly different weather, funding challenges, and local adjacent developments have taken their toll.

A BEYOND RESILIENCE APPROACH

The alternative reframes the park as a living system rather than a finished landscape. A permanent gardener role is written into the operating budget alongside lighting and water, and a community stewardship structure gives residents a hand in shaping the park over time, from planting days to species choices in renewed beds. The planting strategy is built on trial and error, and an acceptance of change that will occur naturally over time.





SYSTEMS

The park is designed as one node in a wider network, with drainage that feeds the watershed and habitat corridors that connect into the neighbouring streets, gardens and council-managed verges.

EVOLUTION

Designed with change in mind, with planting succession and community stewardship built so the park evolves as the climate, the neighbourhood, and the people using it shift over time.

RESILIENCE

Tended by a community of paid gardeners and resident stewards, the park thrives and grows richer through changing climates and tightening budgets.

WHEN THE WATER RISES, HOW DOES THE CITY COPE?

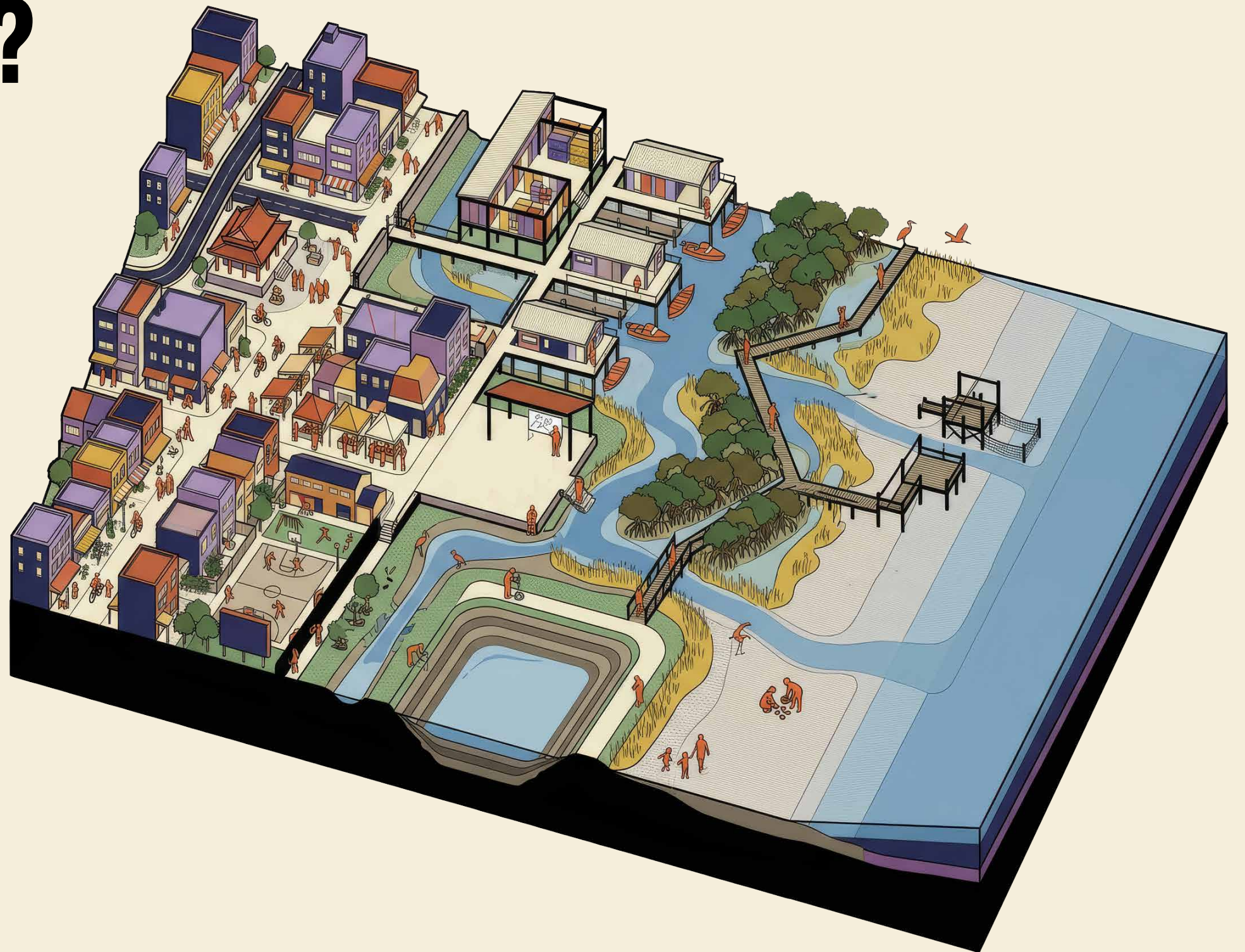
THE CITY SCENARIO

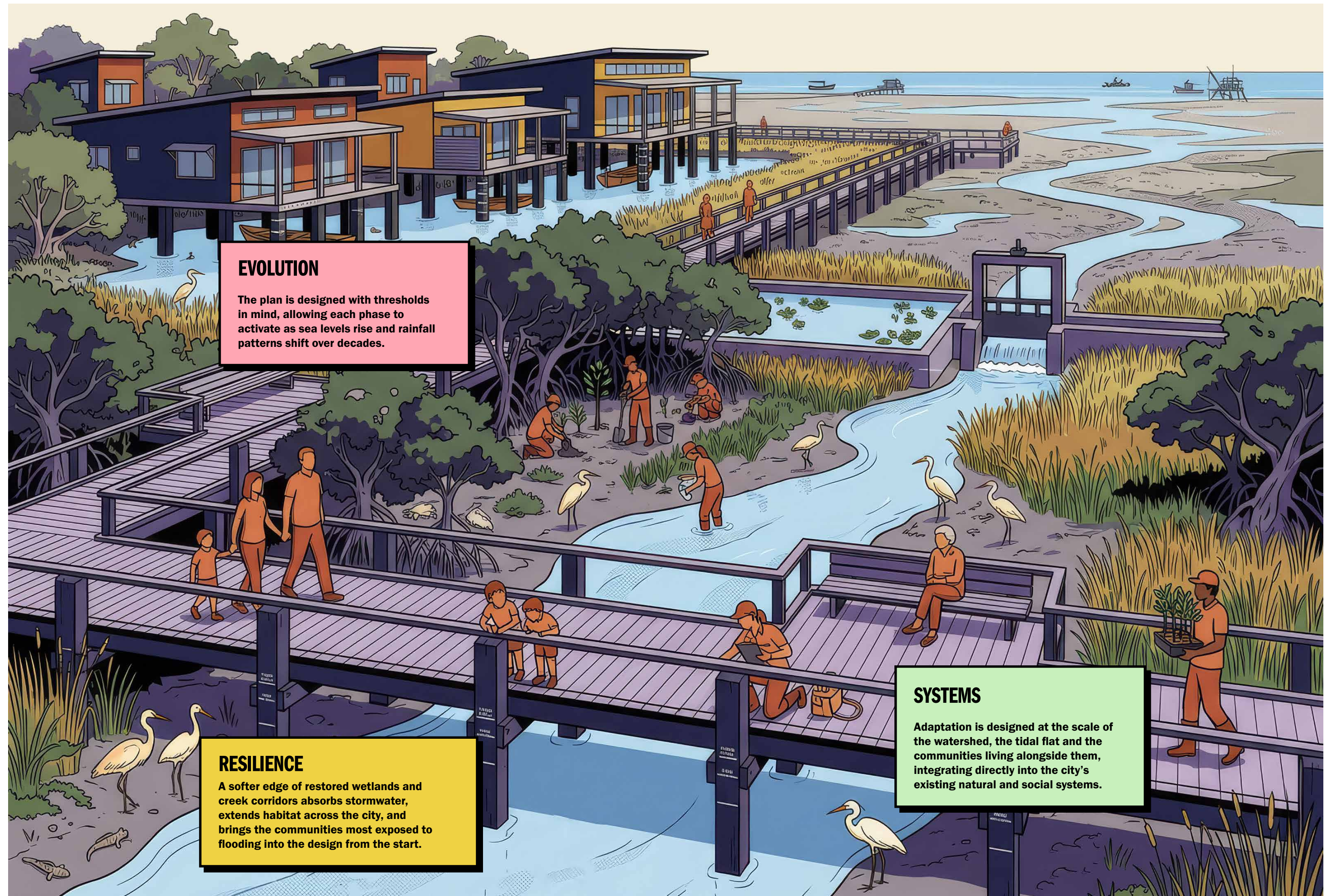
A coastal city in Asia faces a rising sea and an intensifying monsoon rainfall. The default brief is to hold the water back. This strategy is built around engineered seawalls ready to handle storms greater than those on record.

A typical approach might pair hard infrastructure, such as a wider seawall or tidal barrier, with softer measures such as a planted promenade and public space above. But a wall has a built height. What happens in the year the sea exceeds it?

A BEYOND RESILIENCE APPROACH

The city is read as a system of catchments, creeks, tidal flats and porous ground, with adaptation designed at the scale of those systems. Some districts are protected, others are designed to flood, with land-use chosen accordingly and wetland habitat restored where it can absorb stormwater more cheaply and richly than concrete. The city's edge is no longer a hard line but a graded transition between dry land, occasional flood, and permanent water.





EVOLUTION

The plan is designed with thresholds in mind, allowing each phase to activate as sea levels rise and rainfall patterns shift over decades.

RESILIENCE

A softer edge of restored wetlands and creek corridors absorbs stormwater, extends habitat across the city, and brings the communities most exposed to flooding into the design from the start.

SYSTEMS

Adaptation is designed at the scale of the watershed, the tidal flat and the communities living alongside them, integrating directly into the city's existing natural and social systems.

WHAT NEXT?

A place built today will operate through decades of change. The places that endure will be the ones that can evolve, work with the systems around them, and hold up through climate, ecological and social change.

For places to succeed, the work must begin early. The earlier the three principles of Evolution, Systems and Resilience enter a project, whether at briefing, site selection or the first conversation between client and design team, the more they shape the outcome and the less they cost to act on. By the time a building is under construction or a park is being planted, most of the decisions that matter have already been made.

SIX ACTIONS FOR YOUR NEXT PROJECT

Evolution



Brief for principles, not end states.
Set principles and triggers rather than a fixed deliverable, so the project can adapt as conditions and decisions evolve.

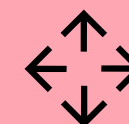


Fund stewardship from day one
Budget for the people who will care for the place across its life, not only for the cost of building it.

Systems



Map before you brief
Understand the ecological, social and economic systems a place will connect to before deciding what to put there.



Measure what you give and take.
Set project metrics that capture contribution to the systems around the site, not just the project's footprint within its boundary.

Resilience



Test against three lenses.
Run every major decision past climate, ecological and social pressures, and discard what solves one problem by creating another.



Brief for the climate of the future.
Design for the conditions of the coming decades, not the ones the records describe.

ABOUT

Design Horizons is an ongoing foresight project looking at how the built environment industry might evolve in the years to come to meet the challenges our planet faces.

At Hassell, we’re actively exploring what a better future looks like and what our role is as placemakers. To learn more and read about the latest trends and innovations, visit hassellstudio.com or contact:

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Acknowledgment of Country

We acknowledge and respect Traditional Owners across Australia as the original custodians of our land and waters, their unique ability to care for country and deep spiritual connection to it. We honour Elders past, present and emerging whose knowledge and wisdom has, and will, ensure the continuation of cultures and traditional practices.

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