



Green in the Third Dimension.

cityLam Façade Greening



Façade greening with cityLam

***Ecological sense combined with
economic benefits.***

What kind of a world do we live in?

As the global trend towards urbanization remains unchanged, it is predicted that the percentage of people living in urban areas will rise to 70% over the next few decades. This, combined with the drastic consequences of climate change and high construction densification in the urban environment, has resulted in a greater demand for ecological and economic urban construction strategies. A way must be found to reconcile the rising demand for residential space with ecological concerns.



How you can rise to the challenge.

CityLam's 'Green in the Third Dimension' offers the perfect solution by providing a sustainable example of façade greening; economic benefits resulting from low acquisition and operational costs, and the ecological advantages of binding CO₂ and dust particles, work together to provide a sophisticated and architecturally appealing high-tech modular solution, conceived, developed, tested and produced in Germany.

As an 'all-inclusive solution' we not only deliver the greened cityLam modules, we can also plan and install them to meet customer specifications for any building. Ready to use right from the word go. Anywhere.

How can cityLam's 'Green in the Third Dimension' benefit the users, or owners and operators of a building?

	Quality for users	Services for owners and operators	
Aspect: Temperature	Temperature regulation using evaporative cooling and shading	Cost effective alternative to technical air conditioning/ reduction in heat loss in the building	
Aspect: Light and view	Privacy / glare protection / 'green views'	Replacement of technical systems	
Aspect: Microclimate	Improved air quality	Increases demand for living space	
Aspect: Noise	Reduction of noise pollution by means of absorption and reflection	Noticeably higher building quality for future users	
Aspect: Aesthetics	A sense of well-being / psychological and social effects of 'green living'	Adds value to the property due to the aesthetic appeal and variety of possible façade designs	
Aspect: Product quality	High-quality appearance / profiting from the product's intrinsic properties	Profiting from the expert production and assembly knowledge	
Aspect: Political-social will	--	Pioneer image / qualification as a forward-looking building owner or operator	

cityLam and the return of nature

Integral building optimization meets sustainable urban planning.

A city has many facets — and cityLam is a worthwhile alternative for any city. The architectural and constructional challenges of our times spare neither office buildings nor corporate headquarters, hotels, train stations, airport terminals, retirement homes, hospitals, schools, nurseries or any number of public, commercial and private facilities. They must all find solutions for future challenges, despite ever scarcer resources and increasing operational costs.

CityLam can help a city breathe more easily with its greened modular systems. The principle is really quite simple: as a city grows, nature grows with it thanks to cityLam. We see nature as an integral system with numerous positive characteristics, for instance two examples of this are an ecological and economic safeguarding of privacy and protection against noise along with the natural regulation of the microclimate.

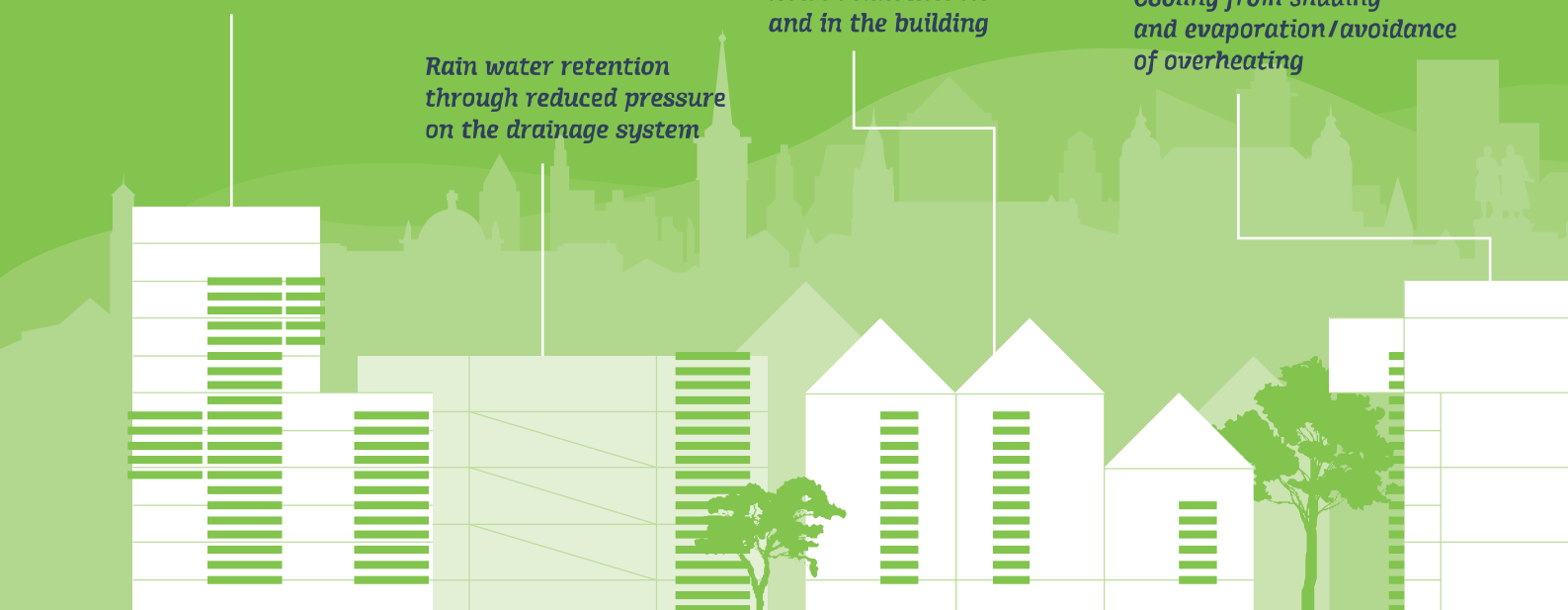
CityLam unites singular building optimization on a small scale with the goal of introducing forward-looking urban planning on a large scale — at all levels.

Approaches to urban planning

*Rain water retention
through reduced pressure
on the drainage system*

Noise reduction on and in the building

*Cooling from shading
and evaporation/avoidance
of overheating*



Focus: 'rectification of ecosystem disturbance' pursuant to §15 para. 2 BNatSchG

When planning and constructing numerous buildings, the legislative body demands that ecosystems are restored as close to their original state as possible. In practical terms, this means that any interventions need to be balanced out or ecosystems replaced elsewhere. Vertical façade greening from cityLam can fulfil certain ecosystem replacement functions.



The calculation

- Building area: $30 \times 30 \text{ m} = 900 \text{ m}^2$
- permissible replacement ecosystem on the building:
 $(30 + 30 + 30 \text{ m}) \times 10 \text{ m height} = 900 \text{ m}^2$

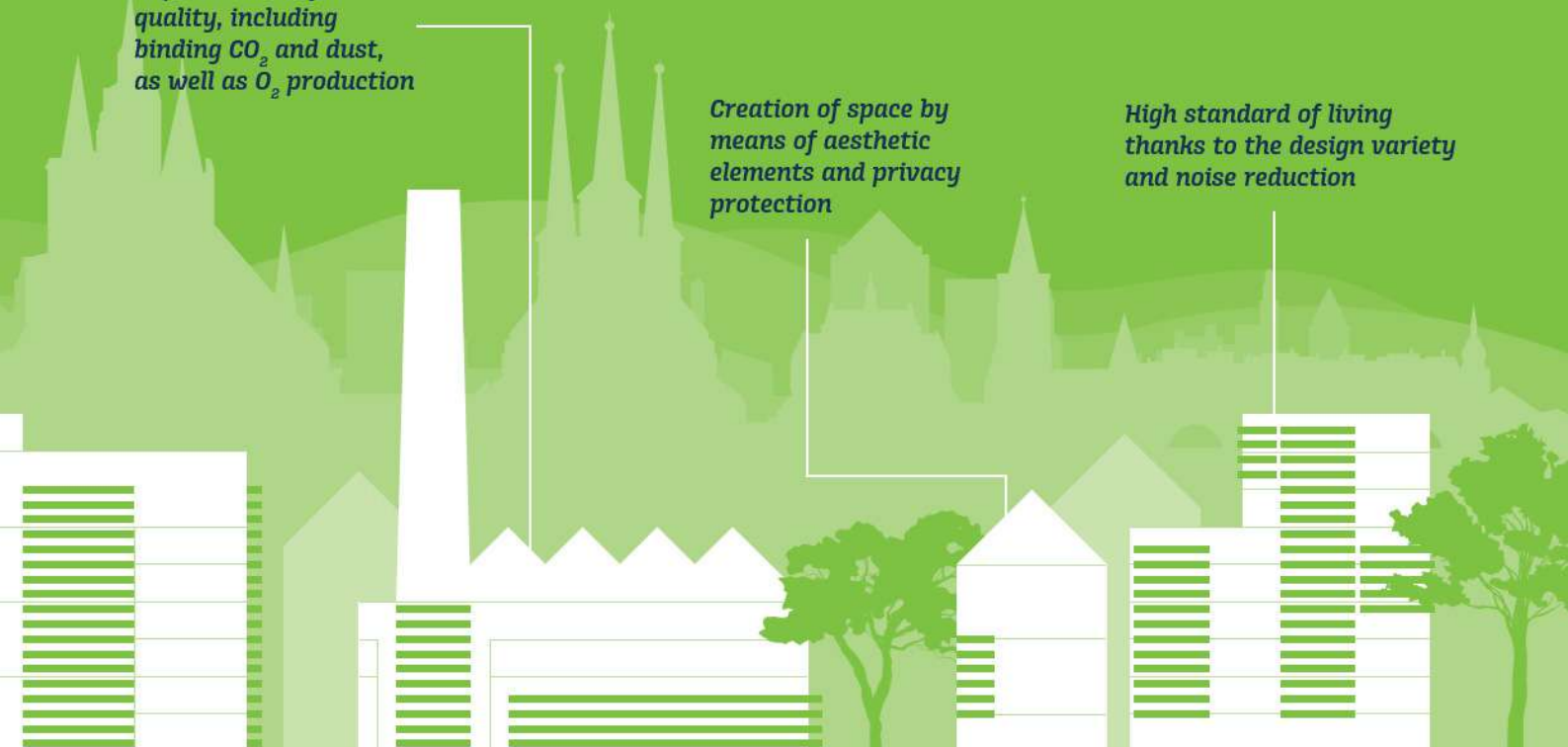
The result

- The necessary replacement ecosystem will be mounted directly on the building using cityLam systems.

Improvement of air quality, including binding CO_2 and dust, as well as O_2 production

Creation of space by means of aesthetic elements and privacy protection

High standard of living thanks to the design variety and noise reduction



cityLam as an all-inclusive solution

Innovative modular technology meets low-maintenance greenery.

How is the façade greening from cityLam integrated?

The trick is that the modules are integrated into the façade as a 'second skin'. The external 'skin' of this double façade comprises modular systems with embedded seedlings. The modular systems comprise extruded aluminium profiles and the planted modular sections are installed vertically as a curtain façade. The system also incorporates an automatic supply of water and nutrients for the plants (requires an existing water pipe).

The best solution is a combined solution.

cityLam is open for almost any conceivable modular systems. A combination of modules offering protection against the sun or bad weather is particularly useful. But of course, classic glass modules are also suitable. If the climate is appropriate and there is enough available space, cityLam modules can even produce 'green energy', when used in conjunction with a photovoltaic system.



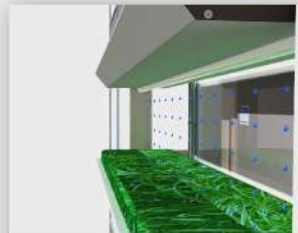
Closed module

When closed, the green slats form an opaque and natural-looking green façade and a positive climate footprint.



Open module

When open, the green slats create an attractive and functional 'see-through green surface'.



Watering the module

When positioned horizontally, the modules can be watered automatically. All of the plants on offer are easy to be care for.



Module on the building

The individually planted modules are installed on the building façade, or as 'room dividers', for example in train stations.



cityLam introduces:

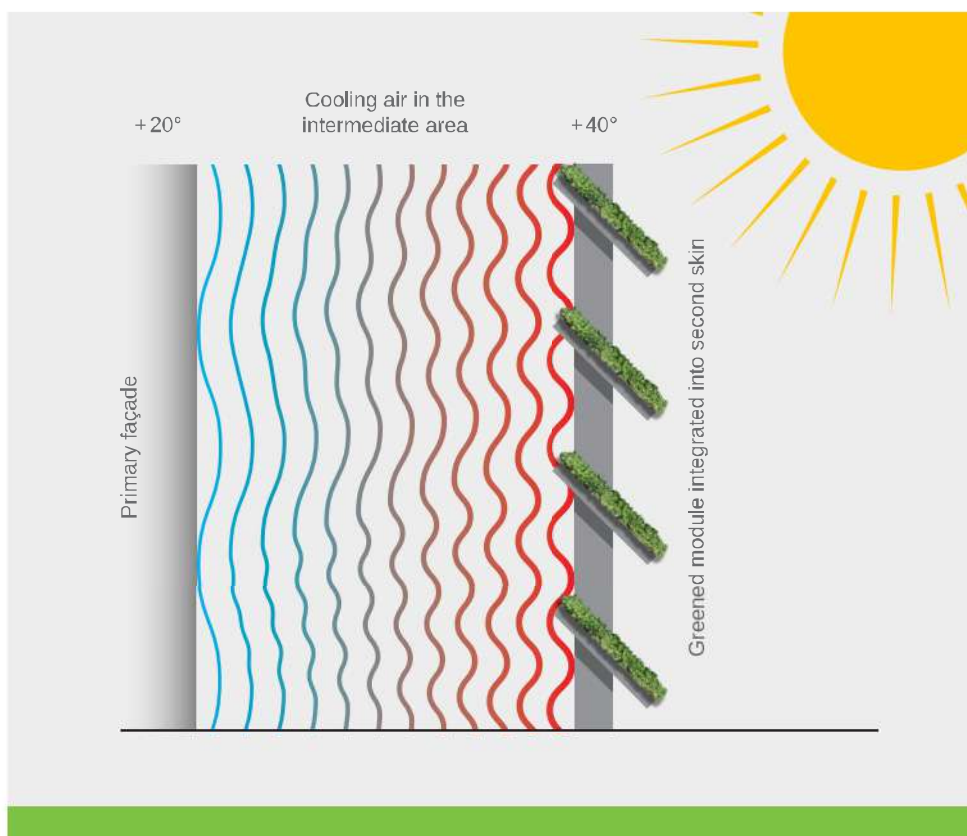
Three products for your climate change

Minimus – forms an approximately 15cm deep mat, comprising small, dark green 1cm leaves. This evergreen dwarf shrub places hardly any demands on the location and is extremely frost-resistant.

Cotoneaster – a fast growing creeper plant providing groundcover. It can grow up to 20cm tall into a carpet of dark green, shiny leaves with seasonal flowers and berries.

Sedum – an absolute all-rounder in terms of façade greenery. It actively binds and metabolises fine dust, absorbs noise and offers optimal protection as a green anti-noise screen. As sedum is good at storing water and yields it slowly, it hardly requires any care.

cityLam – how the active façade cooling works:



cityLam in a nutshell

- Effectively shades the façade and prevents it from overheating.
- The temperature of incoming air adapts to the interior temperature. This makes it possible to draw in fresh air, even in extreme temperatures.
- Simplifies air exchange even in locations with predominantly bad weather.
- Establishes a connection to nature in tall buildings even in windy areas.
- The second skin ensures effective noise protection and increased privacy.

cityLam System Greening is a subsidiary of EuroLam GmbH.

This family-run business from Thüringen has 50 employees and is one of the leading innovators in the field of developing and producing systems for ventilation, smoke and heat extraction in façades and roof constructions (including louvre windows) and individual sun protection systems.

You can visit cityLam's website at www.citylam.de

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