Amid the ongoing economic upheaval, the US will be utterly lost without a strategy that does not eventually implement the smart integration of transportational infrastructure. For, it is whoever explores a broader definition of infrastructure who will dominate tomorrow’s megacomplex of infrastructures. The wave effects? Overdependency on the car may be finally curbed while making the concept of public transportation more alluring. The developmental patterns in urban programs and zoning will follow the initiatives of the newly integrated transportation system. STREAMLINE pushes for a strategy that topples the concept of a standard, linear transportation infrastructure. It proposes a complete linear upgrade for existing transportation infrastructures instead of perpetuating the traditional hub that has led our current transportation networks into a state of despair. Constructed of visible and invisible lines, this revived role of infrastructure invites the experimental while anticipating growth in a new era of urban achievement.

The existing lines of transport are punctuated by points of contact where people board and depart to go to work and conduct daily life. The goal of the proposal is to be able to merge these points of contact, allowing commuters greater flexibility to switch from one line of transport to the other. Developed from existing transportation routes, STREAMLINE is composed of a layered typography. The individual layers are not only able to simplify or even solve the chaos of traffic, they simultaneously create exotic interiors for the city. Merging structure and circulation allows for a unique program that stays within a compact footprint. Moreover, the reconstituted structure provides a platform to support sustainable technologies for harvesting energy as well as enhanced conduit systems. STREAMLINE not only generates highly efficient linear urban programs, it presents the opportunity to preserve and strengthen existing infrastructures as well.

The idea is to align people and city along existing infrastructural flow lines in order to establish a more formal and physical intimacy. People become spatial instruments of the city’s infrastructure, constantly riding with the fluctuating levels of urban densities and passage of time.

On the waterfront of Stockholm lies an intricate composition of trafficways, railways, waterways, bus lines, and metro lines that was at once a successfully functioning hub of activity for its users. Otherwise known as Slussen, its flow lines gradually began to overlap and cross, abandoning its originally efficient system and giving way to the suffocating processes of daily commuter needs. In 2007, the problem became such a nuisance that the government elected to eliminate the area altogether. What Slussen needs is not a quick sweep the dust under the carpet, but the opportunity to untangle the knot it has become. Instead of treating infrastructure as a burden, our proposal plans to seize the opportunity in order redefine infrastructure as a positive factor in the city. Infrastructure ages with people, and should not bear the singular identity of a rigid beast. Infrastructure and people have always been distanced by a wall of awe, whether it is of reverence or formidable assumptions. The reason why we feel at one with ourselves is because we feel at one with the city. How much longer should we discredit the offerings of the city?
Today the bridges connecting Gamla Stan and Södermalm are exclusively part of the traffic system. Could the existing infrastructures be used to link different city parts also spatially and programmatically, for viewpoints, terraces and promenades?

The year 1642 marked the inauguration of the first lock into Stockholm. The lock was constructed by Dutch workers and was named after Queen Kristina of Sweden. Quite soon after the lock was completed however problems were becoming increasingly apparent and discussions began into the construction of another lock.

Difficulties stemming from Stockholm’s increasing traffic demand were not finally resolved until 1755 when another lock was finally introduced. Again however problems were apparent not long after its completion this time caused by the rapid development in ship sizes, design and construction. A competition was launched into possible solutions, and this among other things resulted in the construction of a canal and lock, completed in 1850.

In 1935 the now, and current Slussen lock was to be inaugurated. It was named Cloverleaf road system and Lock, and was an ingenious solution to the pictures of the past. It was also easily adapted to the changing road regulations of 1967 where traffic transported on the left hand side of the road.

Today however the Cloverleaf road system and lock has deteriorated, become out-dated and is not used as it was previously intended. It is mainly used for shipping, and is mainly only useful for small pleasure crafts and passenger boats. Larger boats use pass through the Hammarby lock, which bigger ships pass through the Port Macquarie Channel.
Linking the two islands
Minimize the built surface area over the water
Using the existing infrastructures
Create meeting lines for every season
The proposal is to transform the three existing transportation corridors – train, metro, and automobile, into a truly inhabitable platform. Each transportation corridor will accommodate various degrees of density and periods of occupancy, depending on the amount of proposed structure and weather conditions. Local and regional entities acting as tenants of the commercial and public spaces will eventually gain control of the structure by common ownership.

We build over the existing infrastructures to minimize the build footprint over the water. We continue the historic typology of the "Inhabited Bridge" with different layers for vehicle traffic and pedestrians. We connect the different commercial and cultural activities on each side and create landscapes on top with panoramic views over the sea and the city.
We complete the green topography of the Södermalm cliff and link it over a new green terrace over the Centralbron: the Terrace of Mälaren.

GREEN TABLE OVER WATER
At the moment, the Terrace of Mälaren is a busy passageway of four lanes of cars and buses. The mission is to redefine the terrace as a nested table that stands over its existing structure. Event-based spaces are spread out on a large table, which are activated by sport fields and mitigated by wandering spectators. During times of non-event, the table simply functions as an open green space open for all. The noise and vibration from the traffic below is essentially subdued and contained by water walls, allowing the casual passerby to forget about urban chaos. Wind turbines on the sides of the bridge will generate enough electrical power to operate adjacent businesses at a 1 MW output per unit.
Extending across the river is the metro line between the Gamla-stan and Slussen stations. We propose an urban lounge underneath a lightweight canopy structure to be projected directly above the existing subway line. The lounge is based on keeping people socially connected by offering a mix of recreation and supporting commercial spaces. It is a place where age doesn’t matter - play areas, internet cafés, temporary performance stages, and reading rooms are all under one roof. Instead of the traditional urban square where people either take the role as casual spectator or passerby, the lounge allows the spectator and passerby to take on a combined role, offering a more direct exposure through its linear spatial sequences. Points of access are announced by subway stops and boat taxis.
As the most complex of the three corridors, the quay provides the base for a series of concatenated commercial spaces which will span across the harbor and is fortified by elevated segments of program above. Currently, the dense merchant strip between the north end at Västerlångatan and the south end at Götgatan are breached by the Strömmen River, denying the two areas of any sort of connection. Additionally acting as spillover space for railway passengers, the commercial street patches the gap over the river with a dense link of restaurants, toll houses, cafés, bars, kiosques, and galleries. Against the white noise of the city, the quay becomes an extruded grand promenade where people visually identify each other with extensive views of the city.
This option basically replicates the existing situation with Gamla Stan connected to Södermalm at the quay and top of cliff levels. The volumes of traffic crossing Slussen and circulating around Gamla Stan may be expected to remain as at present, 43,000 vehicles cross per day, or 19,500 use Munkbron and 27,500 Skeppsbron.

The merging of lower and upper traffic at Slussen requires eight traffic lanes due to the complicated intersection on Gamla Stan. This is a major piece of infrastructure in one of the most sensitive places in the City and its very size will make it highly intrusive.

Traffic circulating around Gamla Stan effectively cuts off the urban development from the water. This is particularly problematic at the Monkbrunn/Skeppsbron junction where six lanes on Skeppsbron and four on Munkbron need to be traversed.

The traffic plan does nothing towards allowing the whole area to achieve its great potential contribution to the life of the City.

We have no data but can conjecture, with confidence, that the traffic crossing from the upper level is predominantly local to Södermalm while that using the lower level is mainly medium and longer distance traffic from the south-eastern and western suburbs. Both upper and lower traffic streams mainly traverse Gamla Stan to enter the City Centre. The limited parking on Gamla Stan inter-alia leads to this conclusion.
Why is an architectural approach to urbanism needed? Transportation systems have been adapted to accommodate for transient populations, any interruption causes the diversion of flows, forcing them to seek alternative and often indirect paths. Efficiency, however, does not rely on absolutes, as any deviation is coincidental or accidental. Originally a thick line between the powers of authority and citizens, infrastructural projects are now far out of the hands of our government. The owner of most of our bridges and roadways today is Macquarie Infrastructure Group of Australia, who only began their hunt in America’s vast landscape of crumbling infrastructures. A single example shows that Macquarie’s profit for the Indiana Toll Road Lease could reach $133 billion over its 75 year lease, while barely allowing Indiana to lick the plate with $3.8 billion.

The mention of infrastructure, notably our roadways, has become unbearable that our band-aid solution was diverted to the automobile industry, who gave us lap-of-luxury experiences, an instantaneous feeling of control – a false sensation. In recent years, locals, professionals, and students alike have relied on makeshift alternatives like the Chinatown bus now popularizing the West coast. At the pinnacle of a paradox-parody, this has been our idea of progress. And yet we keep eating from the hand that feeds us, most of us indifferent to the notion of real change. For the rest of us, getting there is not worth the toil or wait. We’d rather hop on the next plane.
We're all looking for sunny days ahead. Long gone is the glorious yesteryear of US infrastructure during the turn into the 20th century - a time when civil engineers triumphantly built our roads, waterways, and bridges. For the past decade, it has been a steep descent. We have been anxiously waiting for the next move, but we are only met with more bad news. Four years ago, the last assessment from the American Society of Civil Engineers estimated a public and private investment of a trillion and a half dollars over a period of five years in order to bring our infrastructure up to acceptable levels. This past January, the new estimate reveals a shameless new figure of $2.2 trillion.

Some analysts have been searching for loopholes. Maybe it started with the National Interstate and Defense Highways Act, which paved our country with an instantaneous highwayscape. The ball started rolling, and the automobile industry quickly picked up on our dependency on a single mode of transportation for the next fifty years. Will the dream of a high-speed rail network ever transcend our fantasies? American infrastructure was conceived to serve booming populations during prosperous times, but it ignored what really makes a city work: its people. And their success depends on the dynamics of density.

When was the last time we heard Americans talk about a relaxing trip to enjoy Yellowstone, the Grand Canyon, or other internationally famed domestic vacation spots? The answer is, less than ever. Foreign tourists now make up almost 40% of total tourists, in part because it requires a great deal of planning that Americans would rather not deal with. The problem is only worse in large cities where people sacrifice countless hours day and night, mired in the infrastructural failures of transportation planning. Meanwhile, demands only increase, as trucking traffic is expected to grow by 40% in the next 8 years. At least 20% of the 116,000 NHS (National Highway System) bridges are impaired in one way or another, with over 6,000 structurally deficient, more than 17,000 functionally obsolete, and more than 760 NHS bridges that are load-posted, forcing trucks to use alternative, often circumlocutory routes. From the Georgia Institute of Technology in Atlanta to the toll areas between the US and Canada in Detroit, the strategies of STREAMLINE provide enhanced access and services for the city. The gradual transfer of ownership to local entities and developers will improve long-term maintenance of infrastructural contracts.

STREAMLINE is ready to be implemented at diverse scales, whether applied at shorter segments or taking part within a larger network as part of an urban macrostrategy. The US deals with one of the most complicated class structures in the world, meaning homogenous solutions won't stand a chance at addressing its transportation problems. To replace a monolithic problem with a monolithic solution will only disseminate any countereffect to other areas and other aspects. The city of the future is resilient and responsive; its attitude emerges by performance, not by documenting its incapacities.