information filtration
Washington D.C.’s white marble monuments and public buildings are markers of honor, achievement and pride, yet their democratic symbolism contrasts with the blight of many of the city’s neighborhoods. With every political administration comes a shift in focus and initiatives. Recent attention to conditions and sustainability of urban infrastructure make it apparent that the manner in which cities function and economically survive is an urgent and pressing matter. Our nation’s capital should be an environmental, social and informational model for cities, both domestic and international. Washington was constructed on soft wetlands and through will and ambition made itself a symbol of something much greater than its condition. What democratic vistas and actions will the next generation demand from our nation’s capital?

*information filtration:* Information sharing is one of the great enablers and services in our culture today. Primarily consumed through the internet at unbelievable speeds, information is filtered through news feeds, blogs, videos and other agents. Employed by dot-com companies, corporations, and government offices computer servers are the archival, processing and powering agent behind every byte of information we click on. Many of us have no idea the volume of space needed to store data servers, or where the warehouses and buildings that hold them are located.
In keeping with the grand scale of L’Enfant’s urban plan for Washington, and the need to engage both residents and neighborhoods throughout the city, we propose a data server belt be constructed underneath the open space axis anchored by the Lincoln Memorial and RFK stadium. Bound by the Potomac and Anacostia rivers the server belt runs under landmarks and urban fabric that make the city unique and provide a national identity.

Underground data servers will transform the open spaces above them into green roofs. They will be the power source for government search engines, civic agencies, wifi hotspots, polling centers, community information kiosks, bike exchange points and other information networks. These search engines will be part of web-based programs to make legislation transparent, comprehensible and digital data searchable. In addition to networks, nodes and points of interests, we envision a new model for community centers, schools, parks and research institutions. A model that will use retrofitted buildings, urban in-fill slots and parking lots to make servers more than digital archives but places at different urban and social scales with a variety of programs.

*Information filtration* distributes data locally and globally, supporting social, ecological and economic interactions.

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**Server Sites**: repurposed/retrofitted buildings

**Server Belt**: Washington D.C.’s existing open space system is capable of transforming into green roofs that cover thousands of servers while retaining their function as valuable and emblematic landscapes.

**Solar Panel Sites**: The servers must be powered in addition to cooled. Parking lots provide excellent large sites for solar fields.
**Urban watershed + strategies:**
The Anacostia watershed collects waste, and run-off from nearly half of the city.

- Information Kiosks:
  - historical database, tourist services,
  - maps, local services

- Anacostia River

- Solar field parking lot sites

- Wifi Hotspots
**Filtration/ Cooling/ Heating Water Flow:**

Information should be empowering and productive; servers generate large amounts of heat and require extensive cooling and ventilation. This is an opportunity to engage the Potomac and Anacostia Rivers in a cooling system that filters and cleans water. The water system provides both a mechanical and an ecological service.

1. Anacostia River enters
2. Water is cleansed in a sand filtration park and wetland
3. Water is directed into a separate water system under Capitol Hill
4. Cold water cools below ground server rooms
5. Heat is transferred to a system that warms the Smithsonian Museums
6. The Washington Monument is retrofitted into a large vent for excess heat and ventilation
7. Warm water enters the Reflective Pool to cool to a suitable temperature
8. Cool water exits into the Potomac

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**Washington Monument Redux:**

Monuments can be productive in addition to serving as landmarks. The Washington Monument, the tallest structure in the city, can have the added function as a vent in the proposed server heating and cooling system. Adding to the spectacle of this tourist destination, excess steam and heat can be released high above the street level.
A New Monument
At the end of Constitution Avenue, the under used RFK Stadium is transformed into a research center and new federal department dedicated to the study of urban sustainability. The new terminus of L’Enfant’s grand axis sits on the Anacostia River, a new monument in the new center of D.C.

The D.U.S. maintain satellite research centers throughout D.C, creating an extensive network of local knowledge. These stations are attached to public schools and are focused on education and data-gathering. The main offices and laboratories are housed here in the RFK facility. The D.U.S. consists of four bureaus: Agriculture, Climate, Ecology, & Energy.

The RFK facility takes the common urban problem of old stadiums, parking facilities, and under used waterfront, and inverts the private use for public benefit. In addition to the office and laboratories at D.U.S., a large portion of the upper deck tiers are used to grow food crops and experiment with vertical and strip urban farming techniques. The facility is also the junction point of the filtration park and the server storage belt, and celebrates both in its design.
Think Globally, Act Locally
While providing data storage for the same power, the informational infrastructure this investment for D.C.’s most distressed communities.

Healing the Divide
The District is a divided city, with rates of poverty highest in the eastern and southeastern wards. Recently, foreclosure rates have been highest in these areas. As a new federal institute at RFK Stadium, the district is seeded in these schools and access to information is often the hardest to reach.

Seeding Social Equity
These research satellites and hotspots provide jobs, improve schools, and create a federal presence that usually turns away from these areas. The amenities are the following: urban fresh markets, smart-bike locations, in-fill rowhouse community centers, pocket parks.
The seat of government and international affairs creates a feedback loop that leverages information for community-led neighborhoods.

...of unemployment, poverty, and most relatives in the American-born half of the city. This proposal establishes a vibrant network, with satellite research offices located in the commercial corridors. The new information is displayed in polling places and health clinics, where it is easiest to obtain.

...are community-driven interventions that promote safety by taking advantage of the federal government’s support. Among the proposed improvements is a tightening of control over the city’s problems. Among the posit...
Information is the most important commodity in our society and will only become more important in the future. As the demand for information becomes greater and greater, so does the demand for storage, and the energy needed to support it. Yet access to this information is not equal in all places or for all people. In some parts of our urban centers, this lack of access to the new economy has added to longstanding problems of unemployment, poverty, and a deteriorating environment. This proposal seeks to leverage the demand for this new information infrastructure to tackle pre-existing issues and to think about urban sustainability holistically.

Washington, D.C. provides an ideal setting in which to propose this integrated approach. The brownfields and polluted watershed of the Anacostia Tidal River are also home to some of the nation’s most distressed neighborhoods. Just across the river is the nation’s capital, home to power, influence, and policy. This proposal seeks to bring these two worlds together. The water-filtration park cleans the river while enabling a new information network. This network is centered in a new Department of Urban Sustainability that uses the full ceremonial power of D.C. to draw attention to its research and policy.

Urban environments are complex ecosystems and an interconnected combination of systems. This proposal serves as a model for how to think about the design of cities in a more sustainable way and how to leverage infrastructure to serve multiple purposes.