Planning for the Future
University of Denver Campus Plan

Executive Real Estate Roundtable Discussion
April 11, 2017
AGENDA

- Team Introduction
- Master Plan Process
- Case Study
- Initial Observations
- Discussion
Ayers Saint Gross is exclusively focused on working with cities, universities, academic medical centers, and research institutions to create vibrant, mixed-use communities built on a foundation of discovery, innovation and entrepreneurial activity.
100% of our work is for mission-driven clients.
Interdisciplinary
Data & Design Based
One DU / One Integrated team

PRIME

Ayers Saint Gross
Campus and Urban Planning
Landscape Architecture
Space Analytics
Graphics, Signage, Wayfinding
Housing
Project Management

CORE CONSULTANTS

HR&A Advisors, Inc.
Market & Economic Analysis

GBSM
Public Affairs and Engagement

Fehr & Peers
Transportation

Denver-based
Campus Planning Experience

Arizona State University
Carnegie Mellon University
Duke University
Emory University
Georgetown University
Harvard University
Johns Hopkins University
Ohio University
Swarthmore College
University of Arizona
University of Chicago
University of Maryland
University of Notre Dame
University of Southern California
University of Virginia
University of Wisconsin
Virginia Commonwealth University
Washington University in St. Louis
Edge of Campus/College Town & Innovation District Planning

Arizona State University
Brown University
Carnegie Mellon University
Drexel University
Duke University
Emory University
George Washington University
Harvard University
Johns Hopkins University
Ohio State University
Ohio University
Purdue University
Swarthmore College
University of Arizona
University of Maryland
University of Notre Dame
University of Pennsylvania
Wake Forest University
Washington University in St. Louis

Indiana University, Purdue University 16 Tech Innovation District

Brown University / URI Providence Innovation District

University of Southern California Graduate Housing
MASTER PLAN PROCESS
DEFINE & ASSESS
WORKSHOP #1
KICK-OFF & STAKEHOLDER INTERVIEWS

WORKSHOP #2
STAKEHOLDER INTERVIEWS / OBSERVATION SUMMARY

TEST
WORKSHOP #3
THEME: ECONOMICS OF THE EDGES

WORKSHOP #4
THEME: HOUSING / DRISCOLL

WORKSHOP #5
THEME: MOBILITY
FINDINGS: HOUSING / DRISCOLL

WORKSHOP #6
THEME: PLACE / WAYFINDING / SUSTAINABILITY

WORKSHOP #7
CORE / TEACHING & RESEARCH

SYNTHESIZE
WORKSHOP #8
PLAN RECONCILIATION & PHASING

WORKSHOP #9
DRAFT PLAN

WORKSHOP #10
FINAL PLAN PRESENTATIONS

DEFINE the challenges the community is facing

ASSESS how the campus functions today

ENVISION planning principals and a conceptual framework

TEST a series of scenarios

SYNTHESIZE an integrated solution
CASE STUDIES

Washington University
Anchor institution solidifying its relationship with the community

- Campus is an iconic touchstone to be protected and preserved
- Inward-facing pattern of buildings and grounds reinforces campus community but limits opportunities to engage externally
- Develop strategies that leverage investments and have a positive influence in the community
Washington University / CORTEX Innovation District
INITIAL ASSESSMENT | LIMITING ATTRIBUTE | WORLD CLASS ATTRIBUTE

INSTITUTIONAL PARTNERS
SURROUNDING COMMUNITY CONTEXT & AMENITIES
ABILITY TO ATTRACT RESEARCH
ENTREPRENEURIAL ENVIRONMENT
COMMUNITY CONNECTIONS
PLACEMAKING OF CORTEX DISTRICT
Placemaking & Urban design

Goals

- Create a hub of activity dedicated to collaboration, creativity, and opportunity.
- Establish a nexus for exchange of ideas and partnerships among universities and businesses.

Build a neighborhood to live, work, and play within walking distance of transportation.

Develop a building network providing views of academia and private industry interacting at work.

Initiate a catalyst for job creation and economic development.
Placemaking & Urban design
Placemaking & Urban design

Urban design is the process of designing and shaping cities, towns and communities.
In contrast to architecture, which focuses on the design of individual buildings, urban design deals with the larger scale of groups of buildings, streets and public spaces, whole neighborhoods and districts, and entire cities, with the goal of making urban areas functional, attractive, and sustainable.
The Innovation Precedents – Kendall Square
Creating an Innovation Program

Pipeline of Activity

LEARN  INCUBATE  ACCELERATE  GROW  PARTNER
The Innovation Ecosystem
The pre-existing site in Central St. Louis is ninety-five percent hard-scape.

Existing Buildings
THE PROPOSED PLAN - A VIBRANT, 24-7, LIVE-WORK-PLAY-LEARN INNOVATION COMMUNITY.
Implementation

Although the master plan is a long-term planning document, it needed to address immediate placemaking challenges. Initial investments focused on establishing a dense core and concentration of activity at the heart of campus. Key developments included the creation of Cortex Commons (the district’s central park), flexible research and lab space in new and renovated buildings around the park, and tree-lined, walkable streets. Prioritizing engagement around a central node—rather than spreading development across the district—enabled people to visualize a true Cortex community. Now, Cortex is working on the next phase of mixed-use development projects, including a mix of renovation and new construction for housing and research.
Cortex Innovation Community Master Plan

Cortex is the Center of Research, Technology and Entrepreneurial Exchange, a not-for-profit consortium formed by Washington University, Saint Louis University, the Barnes-Jewish Hospital Foundation, the University of Missouri-St. Louis, and Missouri Botanical Garden.

3.8 million
GSF LAB/ OFFICE

1,400
RESIDENTIAL UNITS

700,000
GSF RETAIL

400,000
GSF HOTEL

BUILDING AREA (CSF): FULL BUILD-OUT CAPACITY

Existing Campus
CATEGORY

Private,
Research
INSTITUTION TYPE

St. Louis,
Missouri
LOCATION

3,600 Jobs
TOTAL POPULATION

2012
COMPLETION DATE

$140,000
INO

200 acres
SITE AREA

Net-Zero Water
District Goal;
LEED Platinum
SUSTAINABLE RATING
Five Issues of Decision Making

1. Master Planning Process
A year before starting the plan, the architect and developer team embarked on a rigorous examination of the university-affiliated research park. Their goal: to shift the paradigm from the inflexible, standalone, single-use suburban research park to an accessible, adaptable, and active center of academia and research. The team organized a think tank that met every Friday over a six-month period. The discussion revolved around four key drivers: industry innovation, finance and venture funding, community outreach, and physical planning. They spent time in Mission Bay and Kendall Square. This research laid the groundwork for the call to action and ongoing successful transformation of the district.

2. Programming
For years, research campuses stressed functional and economic considerations. The model for Cortex relies on a mix of uses that extends beyond strict research functionality. Alongside lab and office space is a growing community of retail, housing, and open space that creates a dynamic live-work district. The developer recruited partners to populate the newly-renovated @4240 building alongside Washington University. Cambridge Innovation Center (CIC), the Center for Emerging Technologies, and TechShop are part of the growing network of incubators and open-access maker spaces that have been critical to building an entrepreneurial environment at Cortex. The expansion of CIC to St. Louis is the company’s first venture outside of Cambridge.
3. Circulation, Parking, Traffic, and Public Transportation
Prior to the master plan, the site was a mass of industrial silos with no green space, neglected streets, and few transportation and pedestrian links. In order to connect people to the district, the plan called for a comprehensive redevelopment of transit. Two-way bicycle lanes and tree-lined streets create inviting routes for commuters. A new MetroLink (light rail) stop at the Commons is underway. A $30 million MODOT I-64 interchange currently under construction will serve as a new gateway into the district. The team rallied around a community-minded approach to parking development that turned individual, fast, cheap fixes into deliberate and mutually-beneficial progress.

4. Open Space and Pedestrian Circulation
The idea of community is deeply rooted in public space. The district is anchored around Cortex Commons, the unifying green space and iconic center at the district’s heart. The two-acre park, which stretches between Clayton and Boyle Avenues, provides a memorable identity for the district and a place for tenants to congregate and stage events. The Commons, which was completed in the fall of 2015, is planned as a vibrant hub of activity with farmers markets, live music, yoga classes, and networking events intentionally-designed to bring people together. The Commons is also essential to meeting the district’s net-zero water district goal.

5. Image and Identity Enhancement
The plan transformed a mass of inwardly-focused buildings surrounded by pavement into an active hub of bioscience and technology innovation. Architecturally, the plan revitalizes historic industrial buildings, opening them up to create dynamic and open work areas to support flexible workplace arrangements and a maker-economy mindset. Active and transparent ground-floor spaces support retail, restaurants, cafés, and “street science” - visible work places exposing scientific and research activities to people passing by.
Think Like a Community

1. Innovate and Collaborate
2. Connect Ideas and People
3. Generate, Attract and Grow Companies

Act Like A Community

1. Place-Making Matters
2. Create Nodes of Activity
3. No Back Doors

In a Community, Every Decision Counts...
Results

Just over three years since the completion of the master plan, the rapidly growing district has helped to propel St. Louis to become one of the fastest growing startup cities in the country, averaging 5.6 percent growth between 2014 and 2015. Cortex is now home to a network of 200 companies (nearly 150 are startups), over $500 million in investment and 3,600 new jobs. Two years from now it is projected to have 5,000 jobs and $750 million in investment. The anchor institutions have experienced a boost in recruitment of faculty and graduate students to St. Louis, and the plan has initiated a massive neighborhood revitalization. A full build-out of the Cortex Innovation Community is expected to create 13,000 permanent technology-related jobs.

Cortex is a model for a university-affiliated innovation district that harnesses a single urban location to build a culture of collaboration and discovery. In contrast to past models of research parks as isolated suburban enclaves, the plan for Cortex recognizes the equal importance of function, community, and artistry. Each building, each lobby, each green space, is intentionally designed and choreographed so that people bump into each other, share ideas, and create connections.

Growth at Cortex

- **2002**
  - Cortex is Created
  - 2 Buildings Completed
  - 18 Tenants/Companies Added

- **2012**
  - 2012 Cortex Master Plan infuses vision
  - 2014 @4240 Renovation complete now 98% occupied
  - 2014 Light rail/transit commitment
  - 2015 Park opens (Cortex Commons)
  - 2014 Cambridge Innovation Center opens in St. Louis
  - 2015 IKEA opens

- **2016 Projected**
  - 5 Buildings Completed
  - 200 Tenants/Companies Added
  - $280M New Development Projects

Cortex has catalyzed more than $1.1 billion in investments — both within Cortex and in the surrounding neighborhoods.
EIGHT MILES OF PROGRESS


With strong anchors and emphasis on transit, grown central corridor is heart of city's success.

BY TIM BRYANT
umbryant@post-dispatch.com
314-342-6260

St. Louis and some inner suburbs lost population during the last decade, but convincing that trend is the robust corridor that begins at the Arch and runs eight miles west.

That corridor is a narrow stretch from the riverfront to Interstate 170, roughly bounded by Delmar Boulevard to the north and Interstate 64 (Highway 40) to the south. Yet this is where St. Louisans fill offices, run companies, conduct medical research, visit museums, attend plays and concerts, dine, study, go to court, ride mass transit and launch startups. They live in grand old homes, vintage or modern high-rises, lofts and modest houses.

In short, it's where St. Louis succeeds as a city. And it's growing, led by a boom in life-science research and health care. As elsewhere, St. Louis is benefiting from the changing perception that cities are good places to live.

The 2010 census shows that the corridor's population approached 60,000, an increase of more than 10 percent since 2000.
Washington University in St. Louis

Integrated on- and off-campus planning
- Real Estate Study
- Del Mar Loop Plan
- Arts & Architecture Space Needs
- Business School Study
- Athletics Master Plan
- Chemistry-Bryan Hall and Bridge Design
- Engineering/Applied Science Master Plan
- Arts & Sciences Master Plan
Working to Create a College Town

University of Kentucky
Princeton University
University of North Carolina
University of Georgia
Georgetown University
Duke University
Arizona State University
University of Virginia
### Populations

<table>
<thead>
<tr>
<th></th>
<th>Athens</th>
<th>South Bend</th>
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<tr>
<td>Town</td>
<td>89,458</td>
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<td>University</td>
<td>38,952</td>
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<td>Students</td>
<td>29,748</td>
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<td>Undergraduate</td>
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<td>Faculty/Staff</td>
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<td>4,215</td>
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### Campus Acreage

<table>
<thead>
<tr>
<th></th>
<th>Athens</th>
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<tbody>
<tr>
<td>Total Commercial</td>
<td>665</td>
<td>1,250</td>
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### Retail District

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<tr>
<td>Total Commercial</td>
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<tr>
<td>Retail</td>
<td>240,000 SF</td>
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<td>Restaurants</td>
<td>167,000 SF</td>
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<td>Hotel/Service</td>
<td>108,800 SF</td>
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<tr>
<td>Entertainment</td>
<td>50,000 SF</td>
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### Ratio of Students to Commercial Space

19 SF/student
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<th></th>
<th>Chapel Hill</th>
<th>South Bend</th>
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<td><strong>Populations</strong></td>
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<tr>
<td>Town</td>
<td>43,336</td>
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<tr>
<td>University</td>
<td>52,229</td>
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<tr>
<td>Students</td>
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<tr>
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<td>Graduate</td>
<td>6,764</td>
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<td>Faculty/Staff</td>
<td>9,049</td>
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<tr>
<td><strong>Campus Acreage</strong></td>
<td>576</td>
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<td><strong>Retail District</strong></td>
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<td>Total Commercial</td>
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<td>Restaurants</td>
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<tr>
<td>Entertainment</td>
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<td></td>
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<tr>
<td><strong>Ratio of Students to Commercial Space</strong></td>
<td>26 SF/student</td>
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### Populations

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<td>Town</td>
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<td>University</td>
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<tr>
<td>Students</td>
<td>6,351</td>
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<tr>
<td>Undergraduate</td>
<td>4,600</td>
<td>8,254</td>
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<tr>
<td>Graduate</td>
<td>1,751</td>
<td>2,400</td>
</tr>
<tr>
<td>Faculty/Staff</td>
<td>7,651</td>
<td>4,215</td>
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### Campus Acreage

- Princeton: 500 acres
- South Bend: 1,250 acres

### Retail District

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<th>Princeton</th>
<th>South Bend</th>
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<tbody>
<tr>
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<td>Restaurants</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Hotel/Service</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Entertainment</td>
<td>-</td>
<td></td>
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### Ratio of Students to Commercial Space

- Princeton: 27 SF/student
- South Bend: 27 SF/student
Single Loaded Retail Occurs on the North Side of the Street – Facing South
An average of 1,200 linear feet of retail, and 80,000 total Square Feet
Student Population Only Provides 20% of Sales for Retail
Commercial College Town Street has
~20,000 Cars per Day
Reinforce an authentic urban experience that is complementary to the collegiate – “explode the bubble”

Provide room for a wide diversity of program/building types/amenities

Create partnership opportunities – academic, outreach, development

Create a safe, vibrant, student experience that supports Delmar

Connect Wash U to the broader community

Reinforce the transit investments and bike-ped infrastructure
Enliven Metro Station and North Campus
Retail Demand Analysis

- Grocery: 32,000 SF
- Non-Food Retail: 78,000 SF
- Food & Beverage: 45,000 SF
Tenanting Strategy, Recruitment, & District Marketing
Grocery, diner opening in $80 million Delmar Loop project

Two retail tenants plan to open shop in The Lofts of Washington University, an $80 million retail and student apartment complex opening on the Delmar Loop.
Purdue Innovation District
HOUSING OPTIONS FOR FULL MIX OF PEOPLE
PEDESTRIAN & BIKE FRIENDLY
CONVENIENT & ACCESSIBLE PARKING
ARTS, CULTURE, & PERFORMANCE
PRESERVE TREES
COMPLEMENT TWO DOWNTOWNS
EXPAND & CONNECT TRAIL SYSTEM
COMMUNITY GARDENS
MARKETPLACE
NET ZERO & NET POSITIVE BUILDINGS
PLAYGROUNDS & FAMILY AMENITIES

TRANSIT CONNECTIONS
UNIQUE SENSE OF PLACE & LOCAL IDENTITY
VARIETY IN SCALE & DENSITY
CONNECT TO NATURE
MIXED-USE
URBAN AGRICULTURE
INTERNATIONAL FOODS
SUSTAINABILITY & EFFICIENCY
RETAIL & RESTAURANTS
ON-SITE ENERGY PRODUCTION

STAKEHOLDER INPUT
Central Park & Pavilion
Main Street Corridor
Franklin & Marshall
Existing Campus - 2004

- Edges & Entries – First Impressions
- Residential Life
- Future Academic Space
- Athletics
Campus Plan

• Edges & Entries – Re-established
• Residential Life – 855 new beds
• Future Academic Space – 300,000 gsf
• Athletics – Consolidate & Expand
INITIAL OBSERVATIONS
Looking outside in

- The new plan should “guide our campus development and envision a vibrant and interactive community district...starting with the edges and looking outside in.”
Many view the campus as closed off and difficult to access, although there is rapid development around the campus.

Chancellor Chopp wants the campus to be “the Union Station of engagement, service, and transformation promoting ideas, innovation and connections …… a great university dedicated to the public good.”
“Campus should be welcoming for everyone.”

- Welcoming and clear entry
- Visitor Center
- Clear wayfinding and signage
- Make campus comfortable for a diverse population
- Campus where you see activity, even between semesters
- Add night lighting so campus looks alive to adjacent communities

THEME: Place/ Wayfinding / Sustainability
“We need to mess-up campus a little.”

THEME: Place/ Wayfinding / Sustainability
“Campus should feel like it is part of Denver and the West.”

- Celebrate the Power of Place
- Campus does not connect to Denver and the West as well as it could
- Connecting to the place is part of the student expectation
- Facilities have done a good job of highlighting views that celebrate context

THEME: Place/ Wayfinding / Sustainability
“Anything fun is off-site.”

- Make campus a destination for City of Denver
- Feel like a College Town or Village

THEME: Economics of the Edges
“I want to be able to walk to a place where I can buy an avocado and a pair of socks.”

- Mix of Uses
- Retail
- Housing—grad and faculty
- Clinics
- Hotel
- Innovation

THEME: Economics of the Edges
DISCUSSION